

January 9, 2006

ORGANIZATION: Nuclear Energy Institute (NEI)

SUBJECT: SUMMARY OF JUNE 8-9, 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 June 8-9, 2005, the U.S. Nuclear Regulatory Commission (NRC) held a public meeting with NEI at NRC headquarters in Rockville, MD. The purpose of the meeting was to let NEI brief the NRC staff on NEI 04-01, Revision D, and to discuss the staff's approach to making first-round comments on the document. In addition, the staff discussed the review of inservice testing and inspection and fire protection operational programs in a COL application. 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 [pdr@nrc.gov](mailto:pdr@nrc.gov).

#### **DISCUSSION OF SPECIFIC SECTIONS OF NEI 04-01**

NRC slides on plant systems, electrical power, and human factors engineering topics are in Attachment 3. NRC slides on the probabilistic risk assessment (PRA) topic are in Attachment 4.

#### **Plant Systems (Sections 4.3.9.3, 4.3.9.4, 4.3.9.5, 4.3.9.9, 4.3.9.10, 4.3.9.14, and 4.3.9.16)**

NRC said that in reviewing the portions of the referenced sections of NEI 04-01 that addressed plant systems issues, it noted an apparent information gap between the COL guidance document and NRC Regulatory Guide (RG) 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants." NRC said that it would be more helpful to have additional information in Sections 4.3.9.3, 4.3.9.9, and 4.3.9.10. NRC said that in a previous meeting, NEI provided an example of a COL application section on fire protection which NRC felt was the type of information that it would like to see in the COL application by following guidance in NEI 04-01.

Further discussion clarified that NEI 04-01 is written for a COL applicant that references a certified design and an early site permit (ESP). NRC said it would be helpful to have cross-references between the DCD and COL application, such as the fire protection example. NEI said that Section 4.3.2 addresses this issue on a generic basis and that the COL applicant will follow the DCD and provide complete references.

NEI said that Appendices F & G of NEI 04-01 provide outlines of COL applications for the Westinghouse AP1000 (AP1000) and the General Electric Advanced Boiling Water Reactor,

(ABWR) respectively. The COL action items are referenced in these appendices. The information in NEI 04-01 is intended to fill the gaps/resolve inconsistencies between the DCD for a certified design and the COL items identified in the DCD. Appendix E in NEI 04-01 provides an example of a hypothetical safety analysis report (SAR) referencing the AP1000 certified design (SAR Section 8.2, "Offsite Power System"). It shows how a COL applicant should reference the DCD and how exceptions to the generic DCD would be documented in the SAR. NEI 04-01 will not provide section-by-section guidance. NEI said it believes that Section 4.3.2 provided sufficient guidance to COL applicants. The application has to provide what NRC expects to see in a COL application.

NRC asked how the ultimate heat sink inspections, tests, analyses, and acceptance criteria (ITAAC) were addressed in Table 4.3.9.14-1. NEI said that these were generic acceptance criteria and the guidance provides the COL applicant with the information needed to provide site-specific ITAAC.

NRC further discussed the information in a generic DCD, the finality of this information, and the comprehensiveness of the COL action item list. NEI said it wanted to provide aids for COL application submissions in NEI 04-01 and wanted feedback from NRC on where the guidance in NEI 04-01 is not adequate. NEI said it wants the tables in NEI 04-01 to be as complete as possible. NEI said it would consider this discussion in reviewing the NRC comments on NEI 04-01.

#### **Meteorology (Section 4.3.9.2)**

NRC said that from a compliance and adequate protection standpoint, if a COL applicant was aware of new and significant information, such as meteorological information, the applicant should modify the ESP in accordance with 10 CFR 52.39. NEI said it agreed from a compliance standpoint. However, if there is no new and significant information, the COL applicant only needs to reference the ESP. NEI said that there is no ESP update process and that maybe there should be such a process. NEI said this is also discussed in Section 6 of NEI-04-01.

NRC said that there was apparently redundant information in NEI 04-01, Section 4.3.9.2.3. NEI said this information is intended to be illustrative and is not all-inclusive. NEI said this information is possibly generic and NEI may consider including climate change and site-specific issues.

NRC said a review of Table 4.3.9.2-1 indicated some activities listed for completion in an ESP should actually be included in a COL application. NEI said the table footnotes identify the information that may have to be reviewed at the time of the COL application. However NEI will review this issue further.

NRC said that new and significant meteorological information should be identified in a COL application. NEI said this is addressed in NEI 04-01 for impacts both on the existing plant and on the new plant.

NRC said that the COL applicant should discuss the onsite monitoring program. NEI said it believes that this is complete in the ESP if it is fully described in the SAR and reviewed and

approved by the NRC. NRC said that the onsite meteorological monitoring program planned for use during plant operation may be different than the measurement program used to collect data for the ESP. NEI said that it does not believe COL applicants are required to provide a program for the COL application but a program is required for the environmental report.

NRC said that if cooling towers are to be used for heat dissipation, they may have significant impacts on local meteorology and structures, systems, and components (SSCs) important to safety and, since the specific layout and design of the facility may not be known at the ESP, it may not be possible to adequately assess the potential impact until the COL. NEI said that this may be impacted by the placement of the cooling tower.

NRC said that NEI should modify the guidance provided in NEI 04-01 regarding short-term diffusion estimates. NEI said that it was hard to discern what COL action items were in Chapter 2 of the AP1000 final safety evaluation report (FSER). In addition, there were no draft ESPs when Revision D of NEI 04-01 was issued. NRC said that NEI should modify the guidance provided in NEI 04-01 regarding long term diffusion estimates. NEI said that the information on long-term diffusion estimates came from the AP1000 DCD and these could not be changed.

#### **Electrical Power (Section 4.3.9.8)**

NRC said that when addressing grid stability, the COL applicant should consider operational experience, the draft grid reliability generic letter that is currently out for public comment, and the unit's dependency on offsite power. Although there are no new requirements, SRP Chapter 8 does not cover the issues raised in the proposed generic letter. The NRC is currently reviewing SRP Section 8.3. The draft generic letter needs to be completed before the SRP update is completed. NRC plans to complete the update to this portion of the standard review plan (SRP) in 2008. NEI said that the draft generic letter was programmatic and that the industry was looking for some additional reasonable assurance for new plants.

NRC said that qualification of electrical equipment is in SRP Section 3.11. The acceptance criteria are in this section. NEI said there are ITAAC for this section for the certified designs.

NRC said that the draft generic letter addresses how the station blackout (SBO) rule is being implemented. NRC said it needs to consider if additional guidance on SBO is needed. NRC said the current regulatory guide on SBO needs to include additional guidance in SRP

Section 8.3 on this topic. The SRP should include details on how a plant should deal with a SBO event whereas the RG should contain more current guidance.

NRC said COL applicants should review the AP1000 DCD to determine how to address the station lighting issue. The NRC would see if the areas identified for safe shutdown were addressed. If this review had been completed in the design certification review, there would be no need to review this issue in a COL application.

NRC said that referencing the applicable regulatory guides and standards applicable to electrical power in NEI 04-01 is useful to anchor the scope of the license. Any guidance used

should be referenced. NRC suggested that NEI consider adding this information to NEI 04-01, Section 4.3.9.8 and noted that similar information is included in Section 4.3.9.7.

NRC said there have been failures of uninterruptible power supply (UPS) systems, some of which have resulted in plant trips. NRC said that the UPS is more important in passive systems and is described in the review of the direct current (DC) system of the AP1000 design. NEI said there is a COL item for the DC system in the AP1000 and there may not be an item for the UPS system.

NRC said that NEI 04-01 does not contain a discussion of the emergency diesel generators (EDGs), including the qualification of EDGs. NEI said that there may be COL action items for the ABWR but EDGs were not part of the AP1000 review. NEI said it would go back and review the SBO rule.

### **Human Factors Engineering (Section 4.3.9.18)**

NRC said that guidance on human factors engineering (HFE) is contained in NUREG-0711, "Human Factors Engineering Program Review Model." This guidance has been available since the early days of the advanced reactor program. NRC said it wanted to focus this discussion on the highest priority comments. Complete comments will be provided to the NEI task force.

The NRC said that although NEI 04-01 is described as a generic document, it clearly focuses on the AP1000 design. NEI said that it has heard this comment from several NRC reviewers. NEI said that it needs to revise the document to clarify its intent. NEI said that NEI 04-01 provides general guidance up front. The AP1000 design reflects the recent NRC staff review. NEI 04-01 leaves the user to infer guidance for other designs in areas such as severe accidents, procedure development, and design reconciliation. NEI said there is much to be learned from the AP1000 example. For other designs, NEI 04-01 also directs the user to review COL action items for designs other than the AP1000.

NRC said that the references to past practice in NEI 04-01 were good. However, experience for new plant designs may be different, for instance, if the COL applicant proposes to reduce plant staffing.

NRC said that HFE applies to more than the main control room. It applies to such areas as the remote shutdown area and technical support center. NRC also said that HFE involves more than the human-system interface design.

NRC said that because NUREG-0711 was updated during the review of the AP1000 HFE design, the AP1000 design incorporates the additional guidance in Revision 2 of NUREG-0711. NRC said NEI 04-01 should recommend that the COL applicant use the latest revision of NUREG-0711. NEI said it will revise NEI 04-01 to provide more general guidance on revisions of NUREG-0711.

NRC said that the HFE program should include a discussion of the emergency offsite facility (EOF) and the technical support center (TSC). NEI 04-01 does not include this information. NEI said that this is a scope issue. NRC said that it was not expanding the scope of NUREG-0711, Revision 2. NRC said that the COL applicant should state what is within the

scope of the HFE design and that the language in NEI 04-01 on this issue was not adequate. NRC said that, unlike the main control room, the EOF will likely not require task analysis (TA). However, some aspects of the EOF may require additional analysis. NEI said it will clarify this issue in its next revision of NEI 04-01 and wanted to make sure that everyone understands that the EOF does not have the same design requirements as the main control room.

NRC asked NEI to explain what is meant by “critical concerns” with regard to the operating experience review. NEI said that the language in NEI 04-01 might be design related. The licensee should evaluate operating experience for HFE.

NRC asked NEI to clarify whether NEI 04-01 suggests changing the ITAAC. NEI said that once the ITAAC for human reliability analysis (HRA), the outputs of which are used for the control room, are completed, 90 percent of the ITAAC will be completed in the COL application. NRC said that it was looking at the AP1000 HFE ITAAC to see which ITAAC would be completed in the COL application. Although there is a detailed description in Tier 2 of the AP1000 design control document, the ITTAC are not as clearly separated.

NRC said that it was not looking for paper backups for all procedures. However, NEI 04-01 needs to go further. For example, there should be a discussion of requirements for backing up emergency operational procedures (EOPs) in the event electronic versions are lost. NEI said that criteria were needed for determining paper backups.

NRC said that if the COL applicant follows NUREG-0711, it should plan to also address performance measurement, test, and design. This is because NRC wants to eliminate semantic issues.

NEI said that because of schedules, design work in the area of instrumentation and control is currently underway. The industry is looking for opportunities for early interaction with the NRC and suggested interacting on the HRA input as well as on implementation. NRC said that a good point for interaction would be the HRA integration.

#### **Probabilistic Risk Assessment (Section 4.3.9.19)**

NEI said that it is proposing four phases for the PRA. The PRA information is different than the information in NEI 04-01 (see Attachment 7). Phases 1 and 2 will support plant licensing. Phase 3 will support plant construction/pre-start-up testing and will include Revision 0 of the PRA. Phase 4 would support plant operations. NEI said final safety analysis report (FSAR) Chapter 19 would be maintained and updated as appropriate and would not commit to a specific update frequency in Phase 4. NRC asked about adherence to American Society of Mechanical Engineers (ASME) standards, Part 52 requirements, and the actual PRAs that would be submitted to the NRC in the different phases.

NRC said that it wanted to evaluate the PRA quality, and that the Commission had directed the staff to adopt a phased approach to quality. NEI suggested PRA quality was linked to risk-informed applications and said that the PRA quality issue is addressed in the design

certification review and a separate quality review is not necessary. NRC said it would consider NEI's comments.

NEI said that it would summarize the PRA in SAR Chapter 19, including the development, scope, and approach, and would provide responses to the five COL action items (for the AP1000 design). NEI said that this may require an exemption from the regulations. NRC said that more than five COL action items were identified in the AP1000 FSER, but many of these items pointed to other portions of the FSER. NEI said it believed that a COL applicant only had to address the action items identified in the DCD. NRC said that it needed to discuss this issue further at a future public meeting.

NEI said it was proposing that, rather than conduct a seismic PRA, COL applicants instead will do a seismic margin analysis and update the analysis if necessary. NEI expects the PRA to be done sometime before fuel load. NRC said that there is a COL action item for a seismic walkdown and because the walkdown cannot be done before the plant is built, a license condition may be needed. NEI said that there may need to be a license condition for this situation.

NRC said in its presentation that several of the issues raised by the NRC had already been discussed in this meeting (see Attachment 8). NRC emphasized that PRA quality is the key to these issues. While disagreements were raised, NRC agreed that a summary of results and insights in SAR Chapter 19 would be adequate if the PRA model was also provided. However, if the PRA model was not provided, then NRC expected Chapter 19 to be a substantial PRA report. NRC said that it would like to see a substantial PRA report and an electronic copy of the PRA model. NEI questioned the need for these items and said it is an open issue and needs to be discussed further.

NRC said it liked the 3-phased approach discussed in the NEI report, but noted that NEI's presentation discussed a 4-phased approach that does not appear to provide any substantial PRA information during the COL review phase. NRC also noted that the NEI presentation indicates that the COL application will address the PRA standards as they existed 6-months prior to the COL application. As stated above, NRC sees PRA quality as a key issue. NRC said it recognizes the evolving nature of PRA standards and the length of time between COL application and initial operation. NRC raised a concern about using a particular PRA standard without a mechanism for updating to more recent standards prior to plant operation. NRC also questioned if, and how, the applicant would determine the quality of their PRA for areas in which an endorsed PRA standard did not exist (e.g., shutdown/low power, Level II, Level III, etc.). NRC said that a COL applicant should not screen items out in Phase 1. These items should be carried over to Phase 3. NEI said that the standards allow screening of certain items from the PRA. NRC said it expects good treatment of uncertainties as they are a major issue in Phase 3.

NRC said that NEI 04-01 should include an expanded discussion of severe accident mitigation design alternatives (SAMDA). The COL applicant needs to ensure that the SAMDA evaluation done for the design certification remains valid for the site. The design details are needed to do the PRA. NRC said the design details would be submitted in Phase 3. NEI said that the design certification SAMDA made assumptions about sites. The COL applicants are required to confirm that the assumptions are bounded by the site, not to reevaluate.

NEI and NRC said that they would like revisit the PRA in the July 2005 meeting on NEI 04-01.

## **DISCUSSION OF OTHER TOPICS TO BE ADDRESSED IN COL APPLICATIONS**

Attachment 3 contains NRC slides on regulatory treatment of non-safety systems and security design ITAAC.

### **Regulatory Treatment of Nonsafety Systems (RTNSS)**

NRC said that RTNSS is not discussed in NEI 04-01, although the topic is addressed in design certifications with passive safety system designs. NRC said that Section 16.3 of the AP1000 DCD concerns investment protection, which is related to RTNSS. This section is structured like technical specifications but does not have the same regulatory implications as technical specifications.

NEI said it does not use the term in NEI 04-01, although the concepts of RTNSS are discussed in Section 4.3.9.17 (quality assurance). NEI said there is quality assurance guidance in a number of locations. NEI would like to identify areas to discuss in the future and include pointers in NEI 04-01 to the revised SRP Sections 17.1-3 and 17.4. NEI said it may include additional guidance in NEI 04-01, depending on the level of detail included in SRP Sections 17.1-3 and 17.4.

NEI said that the 1996 draft revision SRP Sections 17.1 through 17.3 captured current operating fleet issues with non-safety systems and Part 21, and NEI 04-01 contains some guidance in these areas. SRP Section 17.4 contained information on new certified designs and treatment of non-safety systems. This information was discussed in a public meeting with the NRC on June 7, 2005. Open issues from that meeting include which SRP section will provide guidance on RTNSS. NEI said that because of the timing of issuance for SRP 17.4, it may have to defer updating Section 4.3.9.17, even though NRC said that it is not considering any major changes to SRP Chapter 17. NEI said it may also make modifications to Section 4.3.9.17.2 in light of these discussions with the NRC.

NEI said that the non-safety aspects of certain components are specified in the certified designs. These components were identified as not being safety significant. COL applicants would need to address these components. There are COL action items for the development of a procedure for investment protection, identified in NEI 04-01, Table 4.3.9.16. While there is no SRP for RTNSS, COL applicants would use the information provided in Chapter 22 of the NRC AP1000 FSER (NUREG-1793). NEI said it will consider adding information to Section 4.3.9.16. In addition, NEI said it would revise NEI 04-01 to reflect that an element of the design reliability assurance program (DRAP) applies to the COL applicant. This is addressed in SRP Section 17.4.

### **Security Design Inspections, Tests, Analyses, and Acceptance Criteria**

NEI said that the industry had formed a New Plant Task Force which would address site-specific security design ITAAC, as well as fitness for duty and access authorization. The task force has met and plans additional meetings in the near future. Among the topics the task

force is investigating are the timing of ITAAC implementation and the impact of new plant security requirements on a "greenfield" site versus an existing site.

Both NEI and NRC discussed the level of detail needed for the security design ITAAC, whether the ITAAC would contain Safeguards Information (SGI), and what criteria should be used for developing the ITAAC. In addition, they discussed whether generic ITAAC could be developed.

NRC said the industry needed to consider what would be important to the security design ITAAC, recognizing that they shouldn't be so specific that they would limit technological innovation, and recognizing that past ITAAC have been publicly available.

NRC asked NEI whether it would be appropriate to include the security design ITAAC in NEI 3-12. NEI said that if the information was SGI, it would be kept in a separate appendix and protected accordingly. Both NRC and NEI agreed to meet soon to discuss these issues further.

## **OPERATIONAL PROGRAM TOPICS**

NRC slides on operational program topics are in Attachments 3 and 4.

### **Implementation of Operational Programs**

To facilitate the review of implemented operational programs by inspection, NRC proposed that each COL issued have a license condition related to the implementation of operational programs. NRC said that one of the key challenges for review of operational programs was making a reasonable assurance finding on an operational program before a plant is constructed and operated. In addition, once the license is issued, NRC must ensure that the key elements of the operational program used to make the reasonable assurance finding are implemented in the operational program. NRC said that because the time period could be several years between the COL issuance and the implementation of the operational programs, there was a concern that the program could be implemented without the key elements, which would mean the program was no longer fully described.

NRC said that changes to an SAR were allowed by the regulations (10 CFR 50.59). Other change processes are specified in the regulations for certain programs. While there are requirements for periodically reporting these changes, the current regulations do not account for the fact that the FSAR will be issued years before the plant is built and operated. Therefore, a mechanism is needed to ensure that operational programs that do not have ITAAC are fully described and retain the key elements that NRC used to support its reasonable assurance finding.

NRC discussed some controls to mitigate the challenges in this area. These include possible controls on changes to operational program descriptions in the SAR after a COL is issued, timely exchange of information on SAR changes, performance of inspections of operational programs, and a process to resolve findings from these operational program inspections. NRC discussed a range of options to implement these controls. NRC discussed one option, the "informative license condition," in greater detail. The license condition would provide a schedule of the implementation of each operational program identified in the SAR, including operational programs implemented in phases. Licensees would have to send NRC SAR updates periodically and when inspectors arrived on site to inspect a particular operational program.



NRC said there were ongoing parallel public meetings on the radiation protection operational program. These meetings showed that the information in NEI 04-01, Revision D, was inadequate for the staff to evaluate the radiation protection program. NEI and NRC are discussing changes to NEI 04-01 in these public meetings while the NRC is using this public interaction to inform its update to SRP Section 12.5. NRC said that the industry needed to ensure that all operational programs described in the COL application provide the level of detail necessary to fully describe the program and its implementation so that the NRC could make a reasonable assurance finding on the program.

NEI presented information on operational program reviews (see Attachment 5). NEI said that the descriptions in the SAR should be consistent with past practice and current guidance. The objective was to minimize the need for NRC to request additional information. Based on the NRC presentation, NEI will reconsider the issue and much of the information in its handout will be revised. NEI said that it would consider the NRC proposal and provide its own proposal in the July NEI 04-01 public meeting.

### **Training/Operator Training**

NRC said operator and non-operator training programs must be in place prior to implementation. Areas of interest for NRC are discussed in SRP Sections 13.2.1 and 13.2.2 and include coordination with the Institute of Nuclear Power Operations (INPO), program accreditation, inspection, and implementation. Specific implementation times are provided in 10 CFR 50.120 and 10 CFR 50.54(i-1).

NRC said it was evaluating what should be included in an FSAR. Current operating reactor SARs were permitted to reduce training content, if their training programs were accredited and based on a systems approach to training. NRC said it was discussing new reactor training with INPO.

NRC said that the COL application should provide commitments to current NUREGs, standards, and other training related guidance documents. While the facilities are different, the fundamentals of training program development are the same. In addition, NRC said that

because it was not known when a COL applicant would be accredited, NRC wants to ensure the applicant is committing to the appropriate standards.

NEI asked NRC to provide information on updates to the SRP in the training area. NRC said that draft Revision 2 of SRP Sections 13.2 (training) and 13.5.2.1 (operating and emergency operating procedures) would be issued as final by the end of 2005. The information needed to review current training programs is the same as the information needed for new reactor training programs. NEI asked if NRC would consider the submission of a plant-specific topical report that would be converted into a NUREG as an option for evaluating the training program. NRC said this was possible but made no commitment.

NRC and NEI discussed development of the plant referenced simulator (the simulator) and the schedule for using the simulator to train the plant staff. NRC expected that plant staff would be trained and licensed before fuel load, but would consider this in a reasonable manner. For

instance, the NRC would not expect someone hired the day before fuel load to be fully trained prior to fuel load. NRC said that human systems interfaces and designs would also need to be tested, using the simulator, making the scheduling of simulator training more difficult. The COL holder will have to be ready to conduct licensed operator exams prior to fuel load.

NRC said that 10 CFR 50.120 identifies the training programs for 9 non-licensed positions which shall be implemented 18 months prior to fuel load. In addition, operator licenses must be issued 6 months prior to fuel load. NRC noted that licensed operators would be needed to perform core alterations. Operator licensing requirements are specified in 10 CFR 55. NEI asked if NRC expected all reactor operators and senior reactor operators to be licensed prior to fuel load. NRC said the number of licensed operators would depend on the licensee's shift staffing requirements and shift rotation. NRC said it would expect licensees to stagger licensed operator training and licensing to avoid having 40-50 people in one license class. NEI said that it would expect a COL applicant to have a proposed training schedule in the COL application.

NRC said that it was important to have the simulator available for both training and licensing of operators. The NRC license examiners would also need to be trained and qualified on the new technology. NRC said that this training and qualification could take 2 years and would require access to the simulator. NEI agreed that NRC needs time on the simulator and use of the simulator needs to start right after COL issuance since the new facility will likely be built in 4 years.

NRC and NEI discussed information that would be included in the FSAR. NEI said it expects applicants to put together timelines for a nominal training/operator training program. NRC suggested that these timelines be included in NEI 04-01 as guidance to applicants. NRC expects the application to contain enough information for the NRC to understand the program and how it would work in the absence of INPO accreditation. NEI said a model may be in the SARs issued prior to INPO accreditation of training programs, and could include accreditation type information. NRC said that accreditation is not a requirement for fuel load. The COL applicant needs to meet the regulations.

A representative from Westinghouse said that there would not be a complete simulator until later in the plant construction. A simulation of the control room will be available on a laptop. Westinghouse understands that licensees will need the final plant referenced simulator to issue operator licenses. Westinghouse asked NRC if the early simulators would be acceptable for performing early control room studies and wanted to know what simulator features NRC needed at what time. At some point, Westinghouse will have a simulator. NRC said it understood these concerns.

### **Containment Leak Rate Testing**

NRC said it does not expect a containment leak rate testing program in place when the COL application is submitted. NRC expects that the application will contain a high-level description of the program. In addition, it is expected that every penetration will be described in the FSAR. The COL applicant will have to decide whether to pursue Option A or Option B in 10 CFR Part 50, Appendix J. NRC expects that new plants will choose Option B as most operating plants are currently using Option B. NRC said that the AP1000 DCD discussed what the NRC is looking for but lacked details on implementation. NRC said it would not need to look at

procedures.

NEI said that a COL applicant commented that a draft NRC Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program" (ML003740058) reflected the use of Option B. NEI said that the implementation training is controlled by reactor vessel head installation and is not tied to fuel load. NEI noted that the first startup would not be on irradiated fuel.

NEI said that all AP1000 penetration components are listed in the DCD. In addition, there is a COL action item to select either Option A or Option B.

### **Qualification of Mechanical and Electrical Equipment**

NRC said that there were ITAAC for equipment qualification (EQ). NRC said that SRP Section 3.11 would be updated by 2008 and that it did not anticipate any significant changes in this update. Certain topics such as grid reliability, offsite power, and station blackout would be addressed in a future SRP update.

NRC said that there would be inspections of EQ. It expects a detailed description of the EQ master list and supporting documentation and analyses, including component evaluation worksheets and EQ test reports. NRC plans to audit the central EQ file.

### **ELECTRONIC SUBMISSION OF COMBINED LICENSE APPLICATIONS**

NRC described the process currently used for submitting a license renewal application: a compact disc (CD) formatted for submission to ADAMS, a second CD formatted for the NRC website, and a third CD for use by the NRC reviewers. This third CD contains active links and boundary drawings. The transmittal letter must describe the three CDs and state that the first CD to ADAMS is the official copy of the license renewal application. While the letter is under oath and affirmation, the oath only applies to the official application. NRC said that providing the website and NRC reviewer CDs was completely voluntary and that NRC could replicate these documents with only the ADAMS copy provided by the license renewal applicant.

NEI said that it understood the license renewal process but believed there would be a unique process for a COL application. NEI discussed two issues: 1) providing the NRC staff and the public with official versions to use and 2) hearing concerns. NEI said that an intervener could try to admit a contention to the COL hearing based on the differences between the official ADAMS COL application and the voluntary copy provided for the NRC reviewers. NEI said that it expected COL applications to include approximately 30,000 pages of documents and that pagination issues might make the documents appear to be different.

NEI said that COL applicants wanted to submit applications with active links that would link the SAR to the DCD of a certified design and the site SAR of an ESP. NRC guidelines for submission of electronic documents specify that there should be no active links to outside documents in the electronic files. This requirement would impact the industry's plans for electronic submission of COL applications. NEI said it wanted NRC to issue additional guidance stating the use of active links in certain situations is acceptable.

NEI said that during one of the ESP reviews, an NRC reviewer had requested files with a format that was not acceptable to ADAMS. The industry requested that reviewers not request such files.

After additional discussion, NRC and NEI agreed to discuss this topic further at the next NEI 04-01 public meeting in July 2005.

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- Attachments:
1. List of attendees
  2. Agenda
  3. June 8-9, 2005, NRC Meeting Slides - NEI 04-01 (ML051640424)
  4. June 8-9, 2005, NRC Meeting Slides - Review of Operation of Operational Programs in a Combined License Application (ML051640425)
  5. June 8-9, 2005, NEI Meeting Slides - COL Application Guidance (ML051640427)
  6. June 8-9, 2005, NEI Meeting Handout - Nominal Human Factors Implementation Timeline (ML051640386)
  7. June 8-9, 2005, NEI Meeting Slides - FSAR Chapter 19, Probabilistic Risk Assessment Information and Plant-Specific PRA (ML051640388)
  8. June 8-9, 2005, NRC Meeting Slides - FSAR Chapter 19 And Plant-Specific PRA (ML051640390)

Project No. 689

cc: See next page

NEI said that during one of the ESP reviews, an NRC reviewer had requested files with a format that was not acceptable to ADAMS. The industry requested that reviewers not request such files.

After additional discussion, NRC and NEI agreed to discuss this topic further at the next NEI 04-01 public meeting in July 2005.

*/RA/*

Joseph Colaccino, Senior Project Manager  
New Reactor Licensing Branch  
Division of New Reactor Licensing  
Office of Nuclear Reactor Regulation

- Attachments:
1. List of attendees
  2. Agenda
  3. June 8-9, 2005, NRC Meeting Slides - NEI 04-01 (ML051640424)
  4. June 8-9, 2005, NRC Meeting Slides - Review of Operation of Operational Programs in a Combined License Application (ML051640425)
  5. June 8-9, 2005, NEI Meeting Slides - COL Application Guidance (ML051640427)
  6. June 8-9, 2005, NEI Meeting Handout - Nominal Human Factors Implementation Timeline (ML051640386)
  7. June 8-9, 2005, NEI Meeting Slides - FSAR Chapter 19, Probabilistic Risk Assessment Information and Plant-Specific PRA (ML051640388)
  8. June 8-9, 2005, NRC Meeting Slides - FSAR Chapter 19 And Plant-Specific PRA (ML051640390)

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\*See previous concurrence

ADAMS ACCESSION NO. ML051730107-Package

OFFICE	PM:NRBA*	PM:NRBA	SC:NRBA
NAME	JThorp	JColaccino	LDudes
DATE	11/07/2005	01/06/2006	01/09/2005

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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,  
 Wednesday, June 8, 2005  
 8:30 a.m. - 5:00 p.m.  
 Thursday, June 9, 2005  
 8:30 a.m. - 5:00 p.m.  
 NRC Headquarters Conference Room T-2B3**

Name	Organization
Joseph Colaccino	NRR/DRIP/RNRP
Dale Smith	Duke Power
Dan Williamson	Exelon
Mark Smith	USEC, Inc.
Al Passwater	EPRI
Charles Pierce	Southern Nuclear
Patricia Campbell	Morgan Lewis
Geoffrey Quinn	Bechtel
Eddie R. Grant	Exelon
Joe Hegner	Dominion
Tom Hayes	Westinghouse
Christian Araguas	NRC
Juan Peralta	NRC
Tom Houghton	NEI
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Guy Cesare	Enercon/NuStart/COLATF
Peter Hastings	Duke Energy
Anne Cottingham	Winston & Strawn
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Fred Guenther	NRC
Paul Lewis	NRC
Mark Rubin	NRC
Donnie Harrison	NRC
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## Agenda

June 8, 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

8:30 a.m.	Introductions/Opening Remarks	NRC/NEI
8:40 a.m.	Security Design ITAAC	NRC/NEI
9:10 a.m.	Plant Systems (NEI 04-01, Portions of Section 4.3.9.3, 4.3.9.4, 4.3.9.5, 4.3.9.9, 4.3.9.10, 4.3.9.14, 4.3.9.16)	NRC/NEI
10:15 a.m.	Break	
10:30 a.m.	Regulatory Treatment of Non-Safety Systems	NRC/NEI
11:00 a.m.	Meteorology	NRC/NEI
12:00 p.m.	Lunch	
1:00 p.m.	Electrical Power (NEI 04-01, Section 4.3.9.8)	NRC/NEI
2:00 p.m.	Electronic Submission of Combined License Applications	NEI/NRC
3:00 p.m.	Break	
3:15 p.m.	Implementation of Operational Programs	NRC
5:00 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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## Agenda

June 9, 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

8:30 a.m.	Summary of June 8, 2005, Agenda Item Discussions	NRC/NEI
8:45 a.m.	Discusssion of Specific Operational Programs - Training - Operator Training - Containment Leak Rate Testing - Qualification of Mechanical and Electrical Equipment	NRC/NEI
10:00 a.m.	Break	
10:15 a.m.	Human Factors Engineering (NEI 04-01, Section 4.3.9.18)	NRC/NEI
12:00 p.m.	Lunch	
1:00 p.m.	Probabilistic Risk Assessment (NEI 04-01, Section 4.3.9.19)	NRC/NEI
3:00 p.m.	Break	
3:15 p.m.	Followup on NEI 04-01 and Operational Program Discussion Topics	NRC/NEI
4:30 p.m.	Discussion of Future NEI 04-01 and Operational Program Review Meetings	
5:00 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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