

September 1, 2000

MEMORANDUM TO: Cynthia A. Carpenter, Chief
Generic Issues, Environmental, Financial
and Rulemaking Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

FROM: Peter C. Wen, Project Manager **/RA/ Signed by P. Wen**
Generic Issues, Environmental, Financial
and Rulemaking Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF AUGUST 16, 2000, MEETING WITH THE NUCLEAR
ENERGY INSTITUTE REGARDING OPERATOR LICENSING ISSUES

On August 16, 2000, the NRC staff participated in a public meeting with the Nuclear Energy Institute (NEI) in their offices at 1776 I Street (NW), Washington, DC, to discuss issues related to the implementation of Revision 8 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and the significance determination process (SDP) for issues identified during licensed operator requalification program inspections. Attachment 1 lists attendees at the meeting.

This was the latest in a series of public "focus group" meetings intended to promote the efficient, effective, and consistent preparation and administration of initial operator licensing examinations now that facility licensees are preparing approximately 75 percent of those examinations in accordance with 10 CFR 55.40. The meeting focused primarily on the status of outstanding issues, including the proposed NUREG-1021 Supplement, Revision 3 of Regulatory Guide 1.8, "Qualification and Training of Personnel for Nuclear Power Plants," proposed long-term examination options, NUREG-1262, "Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operators' Licenses," the Generic Fundamentals Examination, the proposed reactivity manipulation rule change (65 FR 41021), and the requalification significance determination process. These issues had been raised during prior meetings (the last of which was held on April 26, 2000; refer to ADAMS Accession Number ML003711211 for a summary of that meeting). A brief synopsis of each issue is provided in Attachment 2.

During the meeting, NEI provided a draft concept paper that outlined a possible future revision of the initial operator licensing written examination process. This concept paper expands upon the "Option 3" concept that was first proposed by NEI during a meeting on December 16, 1999 (refer to ADAMS Accession Number ML003674091 for a summary of that meeting), and is included in Attachment 3. Attachments 4 and 5 include an industry-developed list of questions in NUREG-1262, that the industry would like to see incorporated into the frequently asked questions on the NRC's operator licensing web site and NRC-developed graphs plotting the average scores on the BWR and PWR generic fundamentals examinations from October 1991 through July 2000.

Project No. 689

Attachments: As stated
cc w/atts: See next page

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J Pellet, RIV

OPA

PUBLIC MEETING WITH NEI REGARDING OPERATOR LICENSING ISSUES
August 16, 2000

| List of Attendees | | | |
|-------------------|-------------------------------|-----------------------------|--------------|
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| Tom Houghton | NEI | | 202-739-8000 |

Operator Licensing Meeting With NEI on August 16, 2000

| Agenda Item | Discussion Summary |
|---------------------------------|--|
| <p>1. NUREG-1021 Supplement</p> | <ul style="list-style-type: none"> - The industry representatives indicated that the Supplement 1 change that eliminates the need to track the repetition of questions from training quizzes is proving to be a “tremendous burden reduction.” However, they raised four areas of concern that will be addressed in the industry’s formal comments on the proposed supplement: (1) they would like the NRC to clarify the guidance for selecting SRO-only questions because examiners are rejecting questions that the licensees believe are based on randomly selected knowledges and abilities (K/As) that are correctly linked to 10 CFR 55.43; (2) they would like to implement the 80 bank / 10 modified / 10 new question distribution as soon as possible; (3) they suggested that the NRC consider combining Categories A and B of the operating test as part of the supplement; and (4) they requested the addition of a fourth option for preparing the audit examination (i.e., by an independent team). - The NRC staff indicated that it would consider the industry’s feedback. The staff also stressed the need to confirm that the written exam sample plans are being randomly developed and implemented with randomly selected questions that conform with the selected topics, as that will provide the basis for continuing with Supplement 1 and may set the stage for other streamlining measures in the future (e.g., possibly increasing the upper limit on bank questions from 50 to 80 percent, which the staff emphasized is not a part of the Supplement 1 pilot program). The staff acknowledged the industry’s desire to combine the operating test categories, but noted that it, too, is not being considered as part of current pilot program. - The NRC staff reported that more facility licensees have been requesting the NRC to develop the random written exam sample plans and inquired whether the industry saw a need for the NRC to enhance its capability in that area. The industry indicated that it would determine how many licensees are using the random sampling programs developed by the owners’ groups. - The INPO representative provided an update on the national exam bank, indicating that it now contains about 3200 unverified questions and about 2000 that have been verified against the hard copies. They are adding about 500 new questions per week. There was some discussion regarding the minimum data required to support each question and the best mechanism for sending the electronic exam files to INPO for processing. NEI indicated that it would lend its support to standardizing the question format. |

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| <p>2. Regulatory Issue Summary (RIS); Regulatory Guide (RG) 1.8, Revision 3</p> | <ul style="list-style-type: none"> - The NRC staff summarized the proposed changes to the license application (NRC Form 398), including the need to document those areas in which the applicant's qualifications fail to meet the current guidelines established by the National Academy for Nuclear Training. The staff noted that no comments had been received in response to the recent <i>Federal Register</i> notice published pursuant to renewal of the associated OMB information collection clearance. - The NRC staff indicated that the RIS on license eligibility is expected to be issued in the next several months, which the INPO representative noted would coincide with the effective date of the National Academy's eligibility guidelines. The staff indicated that it would try to expedite any license amendments requested to conform with the National Academy guidelines and RG 1.8, Revision 3. - The NRC staff also noted that it will soon be issuing another RIS soliciting voluntary estimates of licensee examination needs for fiscal years 2001 through 2004. |
| <p>3. Proposed Long-Term Examination Options</p> | <ul style="list-style-type: none"> - The industry representatives distributed and discussed an outline (Attachment 3) of the process, assumptions, pros, and cons of long-term examination Option 3 (utility preparation and administration of the written exams with NRC oversight and inspection similar to the requalification program but without prior NRC review), a concept that was originally introduced during a public meeting on December 16, 1999 (Accession No. ML 003674091). They noted that the industry expected to formally submit papers describing Option 3 and Option 4 (a similar process with INPO oversight) in about a month and enquired how best to proceed after the NRC has had an opportunity to review both options. - The NRC staff indicated that it would have to get back to NEI regarding the appropriate vehicle for initiating the proposed changes. The staff emphasized the need to maintain safety and expressed the following concerns: (1) the NRC will likely need a clear indication of strong industry support before it would be willing to dedicate the resources that will be necessary to amend the regulations and develop the necessary implementation guidance; (2) the industry's desire to make Option 3 voluntary would make it more difficult for the NRC staff to manage its resources because licensees would have three ways to license their operators; (3) the NRC's resources are not sufficient to pursue Option 3 or 4, while at the same time continuing to refine the current examination process; (4) there is not much data to support assumption 3 (see Attachment 3) - the staff's experience, to date, suggests that the turnover of exam preparers will result in inconsistent quality even if the licensee has institutionalized the process, and there does not appear to be industry support for exam author training; and (5) inspecting the exams after the licenses have been issued creates a dilemma if the exam is determined to be invalid. |
| <p>4. NUREG-1262 Update</p> | <ul style="list-style-type: none"> - The industry representatives distributed a handout (Attachment 4) identifying those questions in NUREG-1262 that they would like to see incorporated into the frequently asked questions on the NRC's operator licensing web site. - The NRC staff indicated that this activity was of lower priority than other operator licensing issues and that it would review the industry's proposal as resources permit. |

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| <p>5. Generic Fundamentals Examination (GFE) Update</p> | <ul style="list-style-type: none"> - The NRC staff indicated that it is planning to implement the 80-10-10 (bank, modified, new) question distribution on a trial basis starting in February 2001 and pointed out that this will likely result in a slight increase in the average grades because the examinees have historically scored higher on the previously- validated, bank questions. To illustrate this point, the staff distributed graphs (Attachment 5) summarizing the BWR and PWR average scores on bank, modified, and new questions since October 1991. - The NRC staff indicated that it was considering the possibility of decreasing the GFE from 100 to 50 questions and inquired whether the industry would have any concern with such a change. The industry representatives agreed to poll their peers regarding the proposal. - The industry representatives raised a concern that the GFE examinations have become more difficult over time and that some of the questions are going beyond the intended scope of the GFE. They indicated that applicants are taking longer to complete the exams and that some licensees have lengthened their generic fundamentals training programs or delayed their applicants' GFE until after they have had more systems training. The NRC staff noted that the post-examination comments and results have not been indicative of a problem and encouraged the attendees to submit examples of questions that they believe to be inappropriate to the NRC staff for evaluation. The industry agreed to confirm that this is a valid issue by collecting data and examples that support the anecdotal accounts. The industry also proposed that the NRC consider allowing some neutral facility licensees (i.e., ones that will not have any applicants take a particular GFE) to validate new questions before they are used on an exam. |
| <p>6. Reactivity Manipulation Rule Change Update</p> | <ul style="list-style-type: none"> - The industry representatives suggested that the wording of the regulation should be changed to require that the simulator core model reasonably represent the actual core at the time that the reactivity manipulations are performed rather than at the time of the operating test. They intend to include this recommendation in their formal comments on the proposed rule. - The NRC staff indicated that it is tentatively planning to conduct a workshop at White Flint on October 18, 2000, to discuss the rulemaking and the process for requesting exemptions from the requirement to perform five significant control manipulations on the reactor. |
| <p>7. Requalification Significance Determination Process (SDP) Comments</p> | <ul style="list-style-type: none"> - The NRC staff discussed and clarified several questions and comments that have already been submitted and are being resolved (e.g., the need to define issues and thresholds; individual and crew failure criteria). - The NRC staff indicated that it was considering adding a 75% overall all pass criterion so that the SDP is consistent with the programmatic performance measures in ES-601 of NUREG-1021. - The NRC staff and NEI discussed the possibility of implementing a performance indicator to report licensed operator requalification examination failures, but no consensus was reached. |

ILOTF Option 3 Concept Paper

Option 3: Utility preparation and administration of written exam without prior NRC review (NRC oversight and inspection similar to the Requalification Program)

The purpose of this concept paper is to outline the Option 3 process as the Industry would suggest it be implemented. This concept paper therefore outlines the model, assumptions and pros/cons involved with implementation of the option for utility preparation and administration of ILO written exams with NRC oversight.

The Model

1. A written examination would no longer be conducted during the NRC initial license examination process. The NRC Initial License Exam would consist of an Operating Examination as currently outlined in NUREG 1021, ES-301 through ES-303.
2. The facility would develop a comprehensive final written examination in accordance with NUREG 1021 and administer the examination through each utility's established program.
3. Successful completion of the written examination would be an activity necessary for utility certification as a license candidate on the final application.
4. Challenges to the written examination would fall under the process the utility would normally utilize for any other written exam challenge; the NRC would no longer be involved in written exam challenges or issues. In cases where the NRC would provide the written examination, the current process as outlined in 10 CFR 55, including appeals, still applies.
5. The NRC would provide oversight of the program through an inspection process similar to that established and utilized for the Licensed Operator Requalification program.
6. The NRC would maintain final licensing authority through implementation of the Operating Exam process. The development and administration process for the Operating Exam remains unchanged.
7. This process as defined above would be voluntary for utilities and therefore would not be subject to the "backfit rule".

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Assumptions

1. The individual candidate/license holder will not be subject to any post-exam scrutiny by the NRC as a result of their inspection process. Any issues developing from an NRC inspection process would be treated programmatically.
2. The NRC maintains the licensing decision.
3. The utility has demonstrated the ability to successfully prepare and administer a comprehensive final written examination in accordance with NUREG 1021.

Pros and Cons of Option 3

The following table outlines potential benefits and issues with the Option 3 concept. Every attempt has been made to consider both the NRC and Utility position in developing this table.

Pros

- A similar successful process (for Licensed Operator Requalification) has already been established and is familiar to both the NRC and utilities
- Reduced utility costs through elimination of audit exam duplication, development time and NRC billable costs
- Reduced NRC resource requirements for examination review
- Reduced scope, cost, and number of appeals under 10 CFR 2.103
- Reduced candidate stress
- Consistency in development of the written exam is maintained through continued use of NUREG 1021 and the K/A catalogs
- NRC maintains oversight and control of license issuance
- Program flexibility is enhanced to allow for remediation and retest
- Only candidates who have successfully completed the final comprehensive written exam are administered an operating exam by the NRC

Cons

- NUREG 1021 and K/A Catalog still cumbersome and complicated; continued revisions to both documents and processes would need to continue
- Requires a rule change and associated administrative changes (and costs) for the NRC
- Change management issues similar to those experienced during requalification program changes

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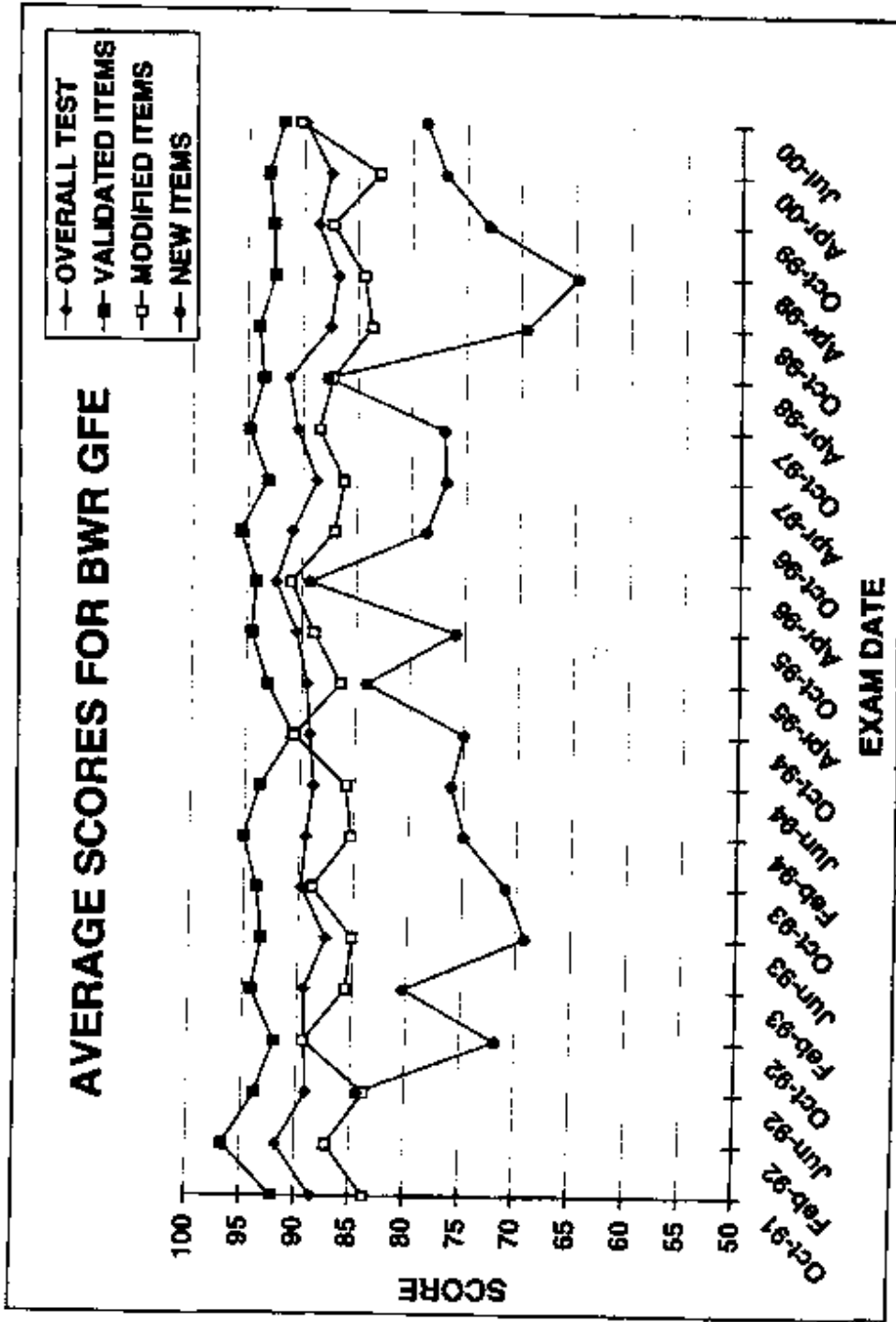
Review by ILO TF. August 16, 2000

NUREG 1262 Mark-up

NUREG 1262 was reviewed to determine which questions the ILOTF believes remain valid and worth keeping. This list will be presented to the NRC at the next FG meeting. The NRC does not plan on revising the NUREG, but will entertain "retiring it as a historical document". The items identified by the ILOTF will be considered for incorporation into the OL Website FAQ section. Based on a review of the NUREG, it was determined that the ILOTF would recommend that the following questions be retained/incorporated into the OL Website FAQ section:

Question numbers: 13, 14, 15, 16, 17, 22, 23, 24, 25, 26, 27, 28, 29, 41, 50, 56, 60, 63, 64, 65, 79, 80, 84, 89-94, 100, 103, 115, 136, 141, 142, 144, 145, 146, 168, 180, 190, 192, 193, 196, 199, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 268, 270, 271, 272, 275, 278, 279, 280, 281, 282, 283, 284, 286, 287, 288, 289, 291, 292, 293, 327, 333, 335, 351, 354, 355, 397, 398, 399, 402, 415, 417, 418, and 419.

Attachment 4



AVERAGE SCORES FOR PWR GFE

- OVERALL TEST
- VALIDATED ITEMS
- MODIFIED ITEMS
- ◆— NEW ITEMS

