October 23, 2006

MEMORANDUM TO: Stacey L. Rosenberg, Chief
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

FROM: Michelle C. Honcharik, Project Manager **/RA/**
Special Projects Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF SEPTEMBER 28, 2006, MEETING WITH INDUSTRY FOCUS GROUP ON OPERATOR LICENSING ISSUES

On September 28, 2006, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting at the Nuclear Energy Institute in Washington, DC, with the industry focus group on operator licensing to discuss a number of operator licensing issues. Enclosure 1 lists the attendees at the meeting; no members of the general public were present.

This meeting was the latest in a series of meetings intended to promote efficient, effective, and consistent preparation and administration of initial operator licensing examinations. The discussions addressed issues related to the implementation of Revision 9 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," licensed operator requalification programs, simulator fidelity and testing, and other operator licensing issues. The discussion topics are summarized in Enclosure 2. The meeting handouts are available in the NRC's Agencywide Documents Access and Management System at Accession Nos. ML062840683, ML062780422, ML062910317, and ML062910320.

Representatives of the NRC and the industry agreed that this meeting was useful for the exchange of information and agreed to continue the periodic meetings.

Project No. 689

Enclosures: As stated

cc w/encls: See next page

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ADAMS Accession Number: ML062780425
Meeting Handouts Accession Numbers: ML062840683, ML062780422, ML062910317, and ML062910320
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Dated: October 23, 2006

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JMunro
GUsova
RPelton
DMuller
MSykes
PPresby
JMoorman
RHaag
HPeterson
VGaddy
RJasinski

| List of Attendees - NRC / Industry Focus Group Meeting on Operator Licensing<br>September 28, 2006 | |
|---|---|
| Name | Organization |
| Bruce Boger | NRC / HQ |
| Nancy Salgado | NRC / HQ |
| John Munro | NRC / HQ |
| George Usova | NRC / HQ |
| Fred Guenther | NRC / HQ |
| Richard Pelton | NRC / HQ |
| David Muller | NRC / HQ |
| Marvin Sykes | NRC / RI |
| Peter Presby | NRC / RI |
| James Moorman | NRC / RII |
| Bob Haag | NRC / RII |
| Hironori Peterson | NRC / RIII |
| Vincent Gaddy | NRC / RIV |
| Jack Roe | Nuclear Energy Institute (NEI) |
| Tony Harris | NEI |
| Carol Berrigan | NEI |
| Chuck Sizemore | Nuclear Management Company |
| Pat Wiley | Arizona Public Service |
| Tim Hurley | South Texas Project |
| Kent Hamlin | Institute of Nuclear Power Operations (INPO) |
| Kurt Rauch | Southern California Edison |
| Jeff Hansen | Exelon |
| John Steely | Duke Energy |
| Christine DiMuzio | Westinghouse |
| Charles Sawyer | Duke Energy |
| Rich Brooks | PPL Susquehanna |
| Jim Kelly | FirstEnergy Nuclear Operating Company |
| John Fraser | Canadian Nuclear Safety Commission (CNSC) |
| Richard Cawthorn | CNSC |
| Tom Henderson | Ontario Power Generation (OPG) |
| Ken Nadeau | OPG |
| Paul Hippely | Westinghouse |

ENCLOSURE 1

DISCUSSION SUMMARY

GENERIC ISSUES

NRC Form 396 - Medical Conditions

The U.S. Nuclear Regulatory Commission (NRC) staff updated the attendees regarding the latest revision of NRC Form 396, "Certification of Medical Examination by Facility Licensee," which became effective at the beginning of 2006. The NRC staff noted that it has received a number of questions from the industry related to a new license condition that requires affected operators to take medication as prescribed to maintain their medical qualifications. The NRC staff encouraged attendees to review those questions and answers that have been posted on the NRC's operator licensing web site and to submit additional questions, if necessary. The Nuclear Energy Institute (NEI) representative acknowledged having no issue with the NRC staff's response to the posted questions.

The NRC staff indicated that it had received a letter from the Strategic Teaming and Resource Sharing (STARS) Alliance in response to a February 2006 solicitation for public comment on the Office of Management and Budget (OMB) clearance (No. 3150-0018) that covers Part 55 of Title 10 of the *Code of Federal Regulations* (10 CFR), in general. The NRC staff informed the attendees that the comments should have been submitted during the earlier solicitation for comments on the revised NRC Form 396 and that the comments will be addressed during the next revision of the associated OMB clearance (No. 3150-0024).

The NRC staff also raised a concern related to the conduct of Licensed Operator Requalification Program Inspections, per Inspection Procedure 71111.11, during which inspectors confirm that facility licensees and individual licensed operators are in compliance with medical requirements. The NRC staff noted that in some instances the inspectors are given access to personal privacy information that has no bearing on the operators' ability to safely perform licensed duties, while in other instances it is difficult for them to determine whether the facility licensee has evaluated all of the medical criteria and requirements in ANSI/ANS-3.4, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants." Consequently, the NRC staff encouraged the attendees to reconsider a recommendation that was first included in the answer to Question #87 in NUREG-1262, "Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operators' Licenses," which documented a number of public meetings in connection with the 1987 amendments to 10 CFR Part 55. Specifically, the NRC staff requested the industry to consider developing a standardized medical examination form that would track the ANSI standard requirements to ensure that all the pertinent criteria are evaluated and documented for NRC review while, at the same time, minimizing the inspectors' exposure to private medical information that has no bearing on the operators' ability to safely perform licensed duties. The NEI representative indicated that the industry would be willing to take the initiative to develop such a form.

Simulator Fidelity and Testing

The NRC staff discussed the current status of the simulator fidelity and testing issue with respect to the on-site Scenario-Based Testing (SBT) demonstrations that the NRC staff recently observed at the H. B. Robinson (Robinson) and Vermont Yankee facilities. The NRC staff indicated that the SBT process at both facilities included the use of a scenario guide and a test/operating crew to verify the simulator response and procedural implementation. Although the overall process at the two facilities appeared to be similar and reasonable, there was one significant difference: the Robinson facility retained a marked-up copy of the implemented procedures as part of the SBT documentation package, while the Vermont Yankee facility simply retained a one-page checklist that indicated all the procedures were implemented without exception. From the NRC staff's perspective, the Robinson approach is clearly preferred as it provides better insight into what was actually done during the SBT and greater confidence that the simulator will not contribute to negative training for the facility's operators. The industry representatives acknowledged the NRC staff's feedback and offered three concerns that need to be addressed with respect to SBT: exactly what value is added by the additional check-offs and documentation; where would the NRC communicate its expectations with respect to documenting SBTs; and what other simulator testing can a facility eliminate if it decides to adopt the SBT approach? The NRC staff agreed to continue working with the industry to resolve these concerns and develop a standardized approach to the SBT process prior to an industry-wide workshop, to be coordinated by NEI and supported by the NRC staff, in early 2007. The NRC staff also reiterated the desire to have all facility licensees adopt a common standard and the plan to endorse the upcoming revision to ANSI/ANS-3.5, "Nuclear Power Plant Simulators for Use in Operator Training and Examination," with a regulatory guide.

New Reactor Licensing

The NRC staff provided a brief overview of its involvement in the new reactor licensing process, including the revision of construction inspection procedures and the Standard Review Plan. An NEI representative indicated that she is facilitating the industry's development of generic licensing submittals and preparing comments on Draft Regulatory Guide DG-1145, "Combined License Applications for Nuclear Power Plants (LWR Edition)."

The representative from the Institute of Nuclear Power Operations (INPO) noted that the new reactor training programs would initially be accredited based on their "process" description before they are actually up and running; the expectation that the facility would likely have completed its job task analysis provided some confidence that the implementation would be satisfactory; every training program would subsequently undergo a second evaluation and accreditation board decision prior to loading fuel.

The NRC staff agreed to work with NEI, INPO, and the other industry representatives to develop a time line for the activities associated with training and licensing personnel for new reactor facilities and support the establishment of an on-going working/focus group, similar to the existing group for operator licensing, to monitor and facilitate new reactor licensing activities, including possible revisions to 10 CFR Part 55. The NRC staff updated the industry on the establishment of the Office of New Reactors and the expectation that additional staff will be hired to support the new reactor work without impacting operating reactor programs.

2005 Annual Training Report

The NRC staff informed attendees that the 2005 Annual Training Report has been posted on the operator licensing website and responded to industry questions regarding the source of data, i.e., the NRC's Human Factors Information System, which compiles human performance issues identified in licensee event reports (LERs), inspection reports (IRs), and licensed operator examination reports (ERs). The NRC staff indicated that facility licensees may contact the Operator Licensing Program Office if they want a spreadsheet summarizing the information for their facility.

INITIAL LICENSING ISSUES

NUREG-1021, Revision 9, Supplement

The NRC staff informed the industry that it is in the early stages of preparing a supplement to Revision 9 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," to address a number of minor issues, including the following:

- the correction of typographical errors identified since Revision 9 was issued,
- updating position titles to conform with the NRC staff reorganization,
- the incorporation of website guidance provided in response to post-Revision 9 feedback requests (e.g., questions related to submitting electronic applications, freezing procedures in advance of a licensing examination, and reporting changes in medical status),
- updating the examination approval letter so that facility licensees understand that their credibility may be questioned if they ask to invalidate an examination that they previously wrote or approved,
- to clarify and possibly limit the allowance to separate the written and operating tests,
- changes necessary to conform with the planned revisions to the NRC's Knowledge and Abilities (K/A) Catalogs,
- to clarify the policy related to proficiency watches for licensed operators in excess of the minimum staffing required by the regulations (and technical specifications (TS)), and
- industry concerns related to the limits on repeating materials between successive operating tests for senior operators limited to fuel handling.

The NRC staff indicated that the revision process will likely take six or more months, that it would be coordinated with the K/A Catalog update project, and that the industry would be invited to comment on the draft changes. The industry acknowledged the information and suggested that it might be appropriate to add this to the agenda for the national workshop that is being planned for early 2007 (see the simulator discussion above).

K/A Catalog Project Update

The NRC staff reviewed the background on the project to update Section 2 of NUREGs-1122 [and 1123], "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Pressurized Water Reactors, [Boiling Water Reactors]," Revision 2. Then a facility representative provided a brief overview of its current status as described in the meeting handout (Agencywide Documents Access and Management System (ADAMS) Accession No. ML062840683. The representative indicated that the Operator Licensing Focus Group had already endorsed the Joint (pressurized water reactor (PWR) and boiling water reactor (BWR)) Owners Group's (JOG's) recommendation to revise the Catalogs, that the JOG's final report and proposed

NUREG change package would soon be sent to the NRC for consideration, and that the JOG is planning on making a formal presentation to the NRC staff later this year. The industry also noted that it is working on a proposal to revise the examination outline generation software to conform with the recommended changes. The NRC staff concurred that the industry has made a valuable contribution to the examination process and noted that it expected to have the combined NUREG revision package (with NUREG-1021 as discussed above) ready in six to nine months.

Exam Projections/Budget for 2007 - 2008

The NRC staff called the industry's attention to the recently published Regulatory Issue Summary (RIS) 2006-15, "Preparation and Scheduling of Operator Licensing Examinations." The NRC staff noted that 2007 will be a particularly busy year (with a budget for 37 facility-prepared, 10 NRC-prepared, 4 shared, 5 retake examinations, and a total of about 640 applicants) and encouraged facility licensees to submit their examination needs estimates to ensure that the NRC staff budgets sufficient resources during the upcoming budget cycle for fiscal years 2008 and 2009.

September 2006 Generic Fundamentals Examination (GFE) Results

The NRC staff opened the discussion by distributing and reviewing graphs (ADAMS Accession No. ML062780422) that summarize the BWR and PWR GFE results from 1991 through June 2006 and a table (ADAMS Accession No. ML062910320) summarizing the results of the most recent examination in September 2006. The NRC staff noted that the examination results, which have been quite stable over time, are indicative of a moderately discriminating but not particularly difficult examination, and that the overall results of the September examination were largely driven by three facilities (one BWR and two PWRs) that had unusually low grades and high failure rates. The NRC staff indicated that the development process for the September examination was no different from previous examinations and that the small number of post-examination comments failed to substantiate a need for any grading changes. The NRC staff noted that the industry had not taken the opportunity to review this examination before it was administered but opined that the absence of a review likely had no bearing on the outcome; the focus group members acknowledged their oversight and expressed a renewed interest in exercising the pre-review option that the NRC had previously implemented at the industry's request. Therefore, the NRC staff concluded that the poor results may be attributable to changes in the candidate screening or training programs at the subject facilities. Based on historical data with respect to candidate performance on new, modified, and bank questions, the industry requested, and the NRC staff agreed, to provide information on which examination questions are newly developed, modified from existing bank questions, or taken directly from the examination question bank so that facility licensees can better track their candidates' performance and adjust their training programs. Finally, the NRC staff reminded the focus group that the examination development time line for industry review of the GFE through 2006 was available as Attachment 5 to the January 2005 meeting summary (ADAMS Accession No. ML050670251) and agreed to post the review time line for subsequent years on the operator licensing web site.

REQUALIFICATION ISSUES

Examinations (Uniform Conditions)

A focus group member opened the discussion by distributing copies of the "Principles and Practices for Licensed Operator Requalification Examinations" (ADAMS Accession No. ML062910317), which the industry had developed, in collaboration with the NRC staff and at the NRC staff's encouragement, to help maintain the quality and consistency of requalification examinations. The INPO representative indicated that the document has been distributed to all site Vice Presidents and training managers and that the same principles, with further clarification, are being incorporated in the National Academy for Nuclear Training document (ACAD) that provides guidance related to requalification training programs. The representative further noted that facility licensees are expected to assess and adjust their programs, as necessary, and that a knowledgeable individual has begun reviewing these items during the INPO site visits. The NEI representative provided an official endorsement of the industry action during the meeting, and the NRC staff agreed that these meeting minutes would obviate the need for a formal written endorsement.

The NRC staff complimented the industry for taking the initiative in this area and opined that its actions will go a long way toward improving requalification examinations and training, which tends to rise to meet the demands of the examination. The NRC staff sought clarification on one of the principles related to the use of higher cognitive level and open reference questions on written examinations. The focus group indicated that they had gotten a number of questions on that item and agreed with the NRC staff that the restriction on using any direct look-up questions on an open-reference examination overrides the nominal 50 - 60 percent criterion for higher cognitive level questions; in other words, all open-reference questions must be written at the higher cognitive level.

License Proficiency Watches

The NRC staff briefly reviewed the history of this issue, including the NRC staff's proposal and draft white paper discussed during the November 2005 meeting and NEI's May 6, 2006, written response (ADAMS Accession No. ML062480247) to the proposal. The NRC staff noted that NEI had generally supported the proposal, but disagreed with how staff were interpreting the 10 CFR 55.4 definition of "actively performing the functions of an operator or senior operator." The NRC staff acknowledged that it has since re-reviewed both the regulation and NUREG-1262, "Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operators' Licenses," and concluded, based on the guidance in the preface of the NUREG, that operators in excess of the TS minimum staffing requirement may maintain an active license provided they "engage meaningfully and fully in the functions and duties of the positions required by the TS." The NRC staff offered the following specific proposal for the industry to consider:

(1) If a facility licensee operates at TS shift staffing levels, then all the TS shift licensed operators receive proficiency credit.

(2) If a facility operates ABOVE TS shift staffing levels, then the facility licensee should have in place the following procedural administrative controls that:

(a) Define what positions are the minimum required “TS” positions, AND

(b) For operators in excess of the minimum required “TS” positions to receive active watchstanding credit, then either:

(i) describe how the excess licensed senior operators (SROs) and/or reactor operators (ROs) fill a position(s) that qualifies for engaging "meaningfully and fully in the functions and duties” of the analogous minimum position(s) required by TS, e.g., the second SRO Control Room Supervisor/Shift Foreman on a single control room, dual unit facility, who has complete command and control of the second unit.

- OR -

(ii) have the excess licensed SROs and/or ROs “rotate” into one of the TS minimum staffing requirement positions over the course of the quarter such that these licensed operators are “actively performing the functions of an operator or senior operator” in these positions for a minimum of seven 8-hour, or five 12-hour, shifts per calendar quarter. The excess SRO’s and ROs will only receive credit for the watches when they “rotate” into one of the minimum required TS positions.

The NEI and focus group representatives expressed general agreement with the concepts outlined during the meeting, but reserved final judgment until they could review the written proposal in the meeting minutes. The NEI representative indicated that they would prepare a supplement to their May 2006 letter, and review the wording with the NRC staff, to ensure that the terminology is accurate. The NRC staff reiterated that the facility’s administrative procedures would have to explain how the “excess” operators at the facility are “meaningfully and fully” engaged or how they will be rotated through the TS positions to maintain proficiency. In closing, the NRC staff requested the industry’s feedback regarding the administrative burden associated with maintaining operator proficiency records; the NEI representative indicated that they would have to get back to the NRC staff with an answer.

FOCUS GROUP ISSUES

The focus group raised three minor issues that were not on the meeting agenda:

The first issue involved a perceived inconsistency with respect to evaluating RO knowledge of TS limiting conditions for operation and a question whether ROs need to know them from memory. After some discussion and a review of Section 2 of the K/A Catalog, it was agreed that K/A 2.2.22, “knowledge of limiting conditions for operations and safety limits,” with an RO importance rating of 3.4 provided adequate justification for including such items on the RO licensing examination.

The second issue involved the use of non-licensed staff as surrogate operators during the dynamic simulator operating test. The NRC staff pointed out that ES-302 of NUREG-1021 clearly permits the use of non-licensed surrogates as long as they are have the knowledge and abilities required to assume the roles they will fill during the operating test.

The last item involved a question of whether the NRC staff would consider some minor changes to the RO and SRO eligibility guidelines that the industry would describe in a white paper and discuss in detail during the next meeting. The NRC staff responded that it would be willing to consider such a proposal and advised the focus group to coordinate with INPO, since the eligibility guidelines are contained in an ACAD document, and to consider the need for a conforming change to the associated industry standard.

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