

June 18, 2007

MEMORANDUM TO: Darrell Roberts, Chief  
Operator Licensing and Human Performance Branch  
Division of Construction and Operational Programs  
Office of New Reactors

FROM: Richard Pelton */RA/*  
Operator Licensing and Human Performance Branch  
Division of Construction and Operational Programs  
Office of New Reactors

SUBJECT: SUMMARY OF MAY 24, 2007, CATEGORY 2 PUBLIC MEETING WITH  
THE NUCLEAR ENERGY INSTITUTE (NEI) TO DISCUSS NEW  
REACTOR OPERATOR LICENSING INITIATIVES

On May 24, 2007, Nuclear Regulatory Commission (NRC) staff met with representatives of NEI, industry representatives, and vendors in a public meeting at NRC headquarters in Rockville, Maryland. Enclosure 1 provides a list of those in attendance and individuals who participated via teleconference. Enclosure 2 is the meeting agenda. Information presented by NEI and industry at the meeting is available in the NRC Agencywide Documents Access and Management System (ADAMS) under Accession No. ML071450061.

The purpose of this meeting was to discuss issues related to NRC's operator licensing program for combined license applicants. Introductions of the persons attending the meeting were conducted. The Director, Division of Construction and Operational Programs, Office of New Reactors; the Deputy Director, Division of Inspection and Regional Support, Office of Nuclear Reactor Regulation; and the Director, Operations Support, Nuclear Generation Division, NEI followed with opening remarks.

An industry representative presented the industry proposal to use limited-scope simulators for operator training because of the aggressive timelines leading to fuel loading. Plant-referenced simulators are not projected to be available for reactivity manipulations and reactor start ups until eighteen months prior to a fuel load. The industry still intends, however, to conduct actual licensing exams on a plant-referenced simulator. Appendix D, "Guidance on Part-Task and Limited-Scope Simulator Features and Fidelity," of ANSI/ANS-3.5-1998, "Nuclear Power Plant Simulators for Use in Operator Training and Examination" will be used to demonstrate the limited-scope simulator possess a sufficient degree of completeness and accuracy when such devices are used to satisfy operator training learning objectives. This will apply where use of a systems approach to training methodology has determined that the use of a limited-scope simulator is appropriate.

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Existing licensed operator eligibility requirements were discussed. During the discussion, industry representatives highlighted the potential difficulty of meeting the current licensed operator eligibility requirements for the licensed operator applicants expected for the first wave of examinations. NEI proposed to have the industry develop alternative requirements that leverage technology such as virtual reality. NEI also suggested that Regulatory Guide 1.8, "Qualification and Training of Personnel for Nuclear Power Plants," be updated to address the new construction conditions. It was noted that the National Academy for Nuclear Training guidance for the initial training and qualification of licensed operators is in the process of being modified and will include alternative eligibility guidance.

Anticipated problems with 'cold licensing' of operators were discussed. Cold license examinations are administered before completion of pre-operational and initial startup testing. The industry believes that instructors and training programs will need to be creative in providing trainees with on-the-job training prior to a fuel load. Difficulties include conducting systems training prior to construction of the systems, reactivity manipulations without a plant or plant-referenced simulator, and meeting operator experience guidance found in ANSI/ANS-3.1-1993, "Selection, Qualification, and Training of Personnel for Nuclear Power Plants." The industry expressed a strong desire to present a uniform industry approach and NEI stated a technical paper will be developed and forwarded to the NRC through NEI.

Changes to NUREG 1122, "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Pressurized Water Reactors" and NUREG 1123, "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Boiling Water Reactors" (KA catalogs) may be necessary after completion of the new reactor job analyses. Sections that may require changes at that time include plant systems, emergency plant evolutions and abnormal plant evolutions. The industry representative indicated that generic KAs would probably not need to be changed. An NRC representative stated that the generic fundamentals portion of the KA catalog is 97% applicable to the new reactors, needing primarily adjustment in the components area for digital controls. Industry representatives stated those training materials will be developed as designs advance and that benchmarking trips have been conducted to Japan, France, and to non-nuclear industries in the US.

NEI proposed, at the conceptual level, the topic of industry administered initial exams and asked whether NRC would be receptive to further discussion on the topic. NEI proposed that roles and responsibilities be changed in the Generic Fundamentals Examination (GFE) for all reactor types and in the initial license examination process for new reactors. NEI specifically proposed that (1) INPO be given "management" responsibility of the GFE and that (2) utilities be allowed to develop, administer, and grade license examinations without any prior NRC review or approval, and submit to NRC a package of results with the pass/fail recommendations. At that time, the NRC would either agree with the recommendations to issue an operator's license or return the package to the facility for applicant reexamination. The NRC raised questions regarding the reduced government role in the exam development process, the qualifications and objectivity of the utility's examination teams, the ability of the licensee to independently author high quality examinations, the potential for examination development biases, public confidence in the process, and the potential for significant resource allocations necessary to effect such a change. The NRC discussed the problems encountered in migrating to the 'industry prepared/NRC administered' examination model which is in use today. The NRC mentioned, as an alternative, that further efficiencies in the NUREG 1021 licensing processes were possible and could be pursued. NEI further stated that it would

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research how other agencies license operators, e.g., Canadian Nuclear Safety Commission, Federal Aviation Administration, and Électricité de France.

In closing, NEI agreed to submit additional information pertaining to new plant experience requirements, simulator training for new plants, cold licensing of operators, and additional details on industry administered initial exams. NRC agreed to review the industry submittals. No final positions were taken during the meeting. Additional public meetings may be held after NRC has reviewed the submittals being prepared by NEI.

Enclosure:

1. List of Attendees
2. Meeting Agenda

cc: w/all enclosures:  
Service List

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ADAMS Package Accession Number: ML071650266  
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Office	DCIP/COLP	DCIP/COLP
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Date	06/18/2007	06/18/2007

Official Record Copy

\* See previous concurrence.

Public Meeting with the Nuclear Energy Institute (NEI)  
Discussion of New Reactor Operator Licensing Initiatives  
May 24, 2007  
Meeting Attendees

<b>Name</b>	<b>Organization</b>
Glenn Tracy	NRC
Stu Richards	NRC
Gene Imbro	NRC
Barry Westreich	NRC
Darrell Roberts	NRC
Nancy Salgado	NRC
Michael Marshall	NRC
Rick Pelton	NRC
Fred Guenther	NRC
Terry Beltz	NRC
George Usova	NRC
Mark Lintz	NRC
Jim Bongarra	NRC
Susan Uttal	NRC
Brett Klukan	NRC
Ron Aiello (per telcom)	NRC
Frank Ehrhardt (per telcom)	NRC
Kathleen O'Donohue (per telcom)	NRC
Peter Presby (per telcom)	NRC
Hironori Peterson (per telcom)	NRC
Pedro Salas	AREVA
Mark Paul	Dominion
Charles Sawyer	Duke Energy
William Shelly	Entergy
Corey Goff	Exelon
Julia Longfellow	General Electric

<b>Name</b>	<b>Organization</b>
Clair Goddard	INPO
Michael Marler	INPO
Tony Harris	NEI
Danny Johnson	NEI
Jack Roe	NEI
Chris Earls	NEI
Hamer Carter	Progress Energy
Frank Quinn	South Texas Project
Jim Calvert	South Texas Project
Ted Amundson	Southern Nuclear
Gregg Ellis	UNISTAR
Paul Hippely	Westinghouse
Deann Raleigh	Sciencetech
Sarah Lynch (per telcom)	GAO

## AGENDA

### FOR MEETING WITH INDUSTRY FOCUS GROUP (FG) ON OPERATOR LICENSING ISSUES

MARCH 22, 2007

<u>TOPIC</u>	<u>LEAD</u>
Introductions and Opening Remarks	NRC/NEI
Public Input	Public
New Plant Experience Requirements	NEI
Simulator Training for New Plants	NEI
Cold License Process	NEI
Knowledge & Ability Catalogs	NEI
Industry Administered Initial Exams	NEI
Public Questions and Answers	Public
Closing Remarks	NRC/NEI

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Nuclear Energy Institute

cc:

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