UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 7, 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 *Peter C. Wen*
Generic Issues, Environmental, Financial
and Rulemaking Branch
Division of Regulatory Improvement Programs
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF DECEMBER 16, 1999, MEETING WITH THE NUCLEAR ENERGY INSTITUTE REGARDING OPERATOR LICENSING ISSUES

On December 16, 1999, representatives of the Nuclear Energy Institute (NEI) and Institute of Nuclear Power Operations(INPO) met with Nuclear Regulatory Commission (NRC) staff at the NRC offices in Rockville, Maryland. Attachment 1 lists attendees at the meeting. The purpose of the meeting was to discuss options related to the future implementation of Operator Licensing Examinations.

This meeting was convened to review NEI-proposed options for future development, implementation, and evaluation of operator licensing examinations. It was emphasized that the options presented were for discussion only and that no decisions on any option would be made until a complete analysis of each had been undertaken. All options focused only upon the written examination. Option 1 maintained the current status quo and Option 2 opted to return to the full NRC examination development mode. Options 3 and 4 described more far-reaching options giving industry greater roles in written license examination development. A complete list of options presented and discussed during the meeting is provided in Attachment 2.

After discussing all the options, it was generally agreed that the staff and the industry would commit to making the present program, as structured in NUREG-1021, Revision 8, successful. Notwithstanding that commitment, NEI and INPO agreed to further develop Options 3 and 4 and the NRC agreed to review the proposed options with senior management and provide feedback.

In conclusion, the meeting discussions were open and were considered beneficial in exchanging information.

Attachments: As stated
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PDR REVGP NEI

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NRC/NEI MEETING ON OPERATOR LICENSING ISSUES
LIST OF ATTENDEES
December 16, 1999

NAME	ORGANIZATION
Bruce Boger	NRR/DIPM
Robert Gallo	NRR/DIPM/IOLB
Dave Trimble	NRR/DIPM/IOLB
George Usova	NRR/DIPM/IOLB
Fred Guenther	NRR/DIPM/IOLB
John Munro	NRR/DIPM/IOLB
Steve Dennis*	RI
Brian Holian*	RI
Chris Christensen	RII
David Hills*	RIII
Jay Hopkins	RIII
John L. Pellet*	RIV
James Davis	NEI
Bob Post	NEI
Mike Levitan	INPO

*via telephone

Attachment 1

DISTRIBUTION: MTG. NOTICE W/NEI on Operator Licensing Issues
Hard Copy
Central File
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JJohnson
DMatthews/SNewberry
CCarpenter
SWest
BBorger/FGillespie
DTimble
JBirmingham
R Conte,RI
C Christensen, RII
D Hills, RIII
J Pellet, RIV
M Tschiltz, OEDO
OPA

Questions to be answered:

Who issues the license?

Is the written exam part of the license process per 10 CFR?
(YES/NO)

Who writes the exam?
(FAC/NRC/INPO)

Who approves the exam?
(FAC/NRC/INPO)

Who Provides oversight of the program?
(NRC/INPO)

Type of oversight
(Before/During/Post Exam) or (Special Program/Accredited Program)

How are appeals handled?
(FAC/NRC/INPO)

Restraints:

1. **The relationship between INPO/NRC must be considered when determining oversight methodology.**

2. **Candidate must not be subject to post-exam scrutiny. (i.e. "once qualified, always qualified").**

3. **Chief Nuclear Officers feel strongly that the NRC maintain the licensing decision.**

Operator Licensing Written Exam Options

NRC senior management has indicated that they desire that the industry accept more responsibility for operator licensing process. The practice of having either the industry prepare ILO written exams (reviewed by the NRC staff) or having the regional staff prepare the exams is resource intensive. NRC senior management has requested that NEI explore the possibility of having the ILO written exam be wholly written, approved and administered by the utility as part of ILO training in preparation for the NRC administered ILO exam (JPM's and operating exam).

Option 1. Maintain the "status quo" of voluntary written exam preparation by utilities, submitted to the NRC prior to approval.

Issues:

- ⇒ Uncertainty in "volunteer" rate.
- ⇒ Utilities are competing for examiners/exam dates.
- ⇒ No rulemaking required.
- ⇒ Cost (NRC charge-back to utilities ~440 man-hours for utility prepared, 880 man-hours for NRC prepared).
- ⇒ Utility preparation time ranges from 800-2500 man-hours.
- ⇒ Need to improve efficiency and predictability

Option 2. Return to NRC preparation and administration of ILO written exams:

Issues:

- ⇒ Would require a resultant increase in NRC examiners to support examinations.
- ⇒ Represents a step backwards.
- ⇒ Industry competition for exam dates would occur to satisfy the utilities needs for replacement licenses.
- ⇒ Use of contractors is not a good answer.
- ⇒ Cost (NRC charge-back to utilities ~880 man-hours for NRC prepared).
- ⇒ Would require a resultant increase in NRC budget.
- ⇒ Some utilities are happy with the current process and would resist returning to this method. They would rather prepare the exams since they are the "technical experts" for their plant, feel that they can prepare a better exam, and desire to have control of the process.

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

Issues:

- ⇒ Reduced number of NRC examiners to support examinations.
- ⇒ NRC staff focused on oversight/inspection of process (similar to requalification program inspections).
- ⇒ Rulemaking would be required.
- ⇒ Increased utility arbitration/litigation from appeals/filing grievances?
- ⇒ Utility must have demonstrated the ability to successfully prepare/administer exam? (Successfully prepared an exam under NRC scrutiny/review).
- ⇒ Resistance to the process would be generated if there is the possibility that the adequacy of the written exam (which was given by the utility w/o required NRC approval) would be second-guessed by the NRC during administration of the JPM's and simulator exams.
- ⇒ NRC maintains licensing determination. To do so otherwise, would result in an unacceptable increase in utility liability.

Option 4. **Utility preparation and administration of written exam under the accredited program with INPO oversight.**

Issues:

- ⇒ Less NRC involvement during the written exam.
- ⇒ More NRC emphasis on JPM's/Operating test and inspection.
- ⇒ Major Rule change would be required.
- ⇒ Would allow elimination of a large portion of NUREG 1021.
- ⇒ Exam based on SAT process with format and content other than that dictated by NUREG 1021.
- ⇒ Test could be designed based on the SAT process instead of the K/A catalog.
- ⇒ Very efficient for all involved.
- ⇒ NRC maintains licensing determination.
- ⇒ Public Perception?

Points germane to the alternatives:

Current "Requalification Process" (utility prepared and administered with periodic NRC inspection) is working well. Utility managed exams can be effective, especially if the utility has successfully demonstrated the ability to do so via direct NRC oversight while preparing exams since the inception of the pilot process.

How does the proposed INPO maintained "National Question Bank" fit into the picture? Where would "new questions" approved by the NRC come from?

When does the applicant obtain the right to appeal? Currently a candidate can challenge the results of a written exam through the appeal process. If the exam is given as part of the training program, what are the implications? Could the candidate challenge the results through an internal "grievance process"? Would this result in an increase in utility legal fees for arbitration? Appeals for JPM/Operating exam failure would be continued to be addressed by the NRC IAW the current process?

At what point would the final applications be due? Currently the preliminary applications are due at –30 days and the final applications are due at -14 days (typically after the utility administered audit exam). The "official" license application would be made by the utility after the applicant had successfully completed the written examination before the JPM/Operating exam was administered?

Rules currently require the NRC to approve written examinations:

§55.40 Implementation.

(a) The Commission shall use the criteria in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors,"(1) in effect six months before the examination date to prepare the written examinations required by §§55.41 and 55.43 and the operating tests required by §55.45. The Commission shall also use the criteria in NUREG-1021 to evaluate the written examinations and operating tests prepared by power reactor facility licensees pursuant to paragraph (b) of this section.

(b) Power reactor facility licensees may prepare, proctor, and grade the written examinations required by §§55.41 and 55.43 and may prepare the operating tests required by §55.45, subject to the following conditions:

(1) Power reactor facility licensees shall prepare the required examinations and tests in accordance with the criteria in NUREG-1021 as described in paragraph (a) of this section;

(2) Pursuant to §55.49, power reactor facility licensees shall establish, implement, and maintain procedures to control examination security and integrity;

(3) An authorized representative of the power reactor facility licensee shall approve the required examinations and tests before they are submitted to the Commission for review and approval; and

(4) Power reactor facility licensees must receive Commission approval of their proposed written examinations and operating tests.

(c) In lieu of paragraph (b) of this section and upon written request from a power reactor facility licensee pursuant to §55.31(a)(3), the Commission shall, for that facility licensee, prepare, proctor, and grade, the written examinations required by §§55.41 and 55.43 and the operating tests required by §55.45. In addition, the Commission may exercise its discretion and reject a power reactor facility licensee's determination to elect paragraph (b) of this section, in which case the Commission shall prepare, proctor, and grade the required written examinations and operating tests for that facility licensee.

(d) The Commission shall prepare, proctor, and grade the written examinations required by §§55.41 and 55.43 and the operating tests required by §55.45 for non-power reactor facility licensees.

Appeals:

ES-502 would require changes.

§2.103 Action on applications for byproduct, source, special nuclear material, and operator licenses.

(a) If the Director of Nuclear Reactor Regulation or the Director of Nuclear Material Safety and Safeguards, as appropriate, finds that an application for a byproduct, source, special nuclear material, or operator license complies with the requirements of the Act, the Energy Reorganization Act, and this chapter, he will issue a license. If the license is for a facility, or for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, or if it is to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to part 60 of this chapter, the Director of Nuclear Reactor Regulation or the Director of Nuclear Material Safety and Safeguards, as appropriate, will inform the State, tribal and local officials specified in §2.104(e) of the issuance of the license. For notice of issuance requirements for licenses issued pursuant to part 61 of this chapter, see §2.106(d) of this part.

(b) If the Director of Nuclear Reactor Regulation or Director of Nuclear Material Safety and Safeguards, as appropriate, finds that an application does not comply with the requirements of the Act and this chapter he may issue a notice of proposed denial or a notice of denial of the application and inform the applicant in writing of: (1) The nature of any deficiencies or the reason for the proposed denial or the denial, and (2) The right of the applicant to demand a hearing within twenty (20) days from the date of the notice or such longer period as may be specified in the notice.

APPLICABLE HISTORY

11/2/94 NRC denied Virginia Power's proposal to allow utilities to develop exams and stated that: "The NRC is bound by the Atomic Energy Act to prescribe uniform conditions for licensing individuals as operators and to determine the qualifications of such individuals."

3/24/95 SECY-95-075 announces pilot program for changes to ILO process. *"Facility licensees will draft and in part conduct initial licensing examinations with NRC oversight."*

6/95 The rule, 10 CFR 55 does not indicate who prepares or administers the ILO examination. There was extended discussion between the NRC staff, INPO and NEI on how the process should be modified. From that discussion:

- The NRC staff was interested in reducing their resource commitment.
- The NRC staff felt they needed to observe each candidate, to form a basis for the Commission issued license. They felt this could be accomplished by conducting the operating test.
- Confirmation that the rule did not dictate who would conduct the various pieces of the exam. Rulemaking was not required.
- Chief Nuclear Officers felt strongly that INPO should not take over the entire process since a Commission issued license was important from a legal perspective.

6/27/95 A working group meeting (held at INPO) discussed the NRC's desire for increased utility responsibility in the ILO process:

Currently, accreditation of the ILO program ends with the culmination of the training program. Although there are some general examination requirements for NLO training, there is nothing that could be quickly upgraded to cover any part of the examination process. This is a direct result of a longstanding policy that INPO not get involved in regulatory areas.

There was great concern over the NRC giving up the approval process. Any process that would subject the utility to post examination review or audit would be unsatisfactory. The examination needs to be fully acceptable to everyone before it is given.

Utilities stated that they don't want dual guidance. Some in the working group felt they would get a general SAT approach form the National Academy (ACAD guidance) and a prescriptive process from the NRC. The net result might be then, that an exam writer might violate one or the other no matter how the examination was prepared. The concern for dual guidance was frequently stressed during the rest of the discussion. At the time of the 6/27/95 meeting several utilities felt that there was adequate guidance in the NUREG and there was no need for more guidance from INPO on exam preparation.

5/23/98 Hugh Thompson, in discussions with Mark Peifer (INPO), suggested that the industry propose taking over the Initial Licensed Operator (ILO) written examination as part of the INPO accredited program. Thompson was looking for alternative approaches in addressing weaknesses the NRC was seeing in utility prepared examinations (the exam questions were not meeting the higher review standard the NRC was applying), and in addressing restrictive instructor isolation requirements.

9/8/98 SECY-98-206 was approved by the commission (3 for, 2 against) to continue allowing licensees to voluntarily prepare Initial Licensed Operator Exams.

Who Issues the license?	Part of 10 CFR?	Who writes the exam?	Who approves the exam?	Who Provides oversight of the program?	Type of oversight	How are appeals handled (for the written exam)?
The only acceptable answer is to have the NRC issue the license.	Yes	Facility	Facility (rule change required)	NRC	Before exam	Facility
						[redacted]
						NRC
					During exam	Facility
						[redacted]
						NRC
					Post exam	Facility
						[redacted]
						NRC
				INPO	Special program	Facility
						INPO
						[redacted]
					Accredited Program	Facility
						INPO
						[redacted]
			INPO (rule change required)	[redacted]		
				INPO	Special program	Facility
						INPO
						[redacted]
					Accredited Program	Facility
						INPO
						[redacted]
			NRC	NRC	Before exam	[redacted]
						NRC
					During exam	[redacted]
						NRC
					Post exam	[redacted]
						NRC
				[redacted]		

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					Accredited Program	Facility INPO
		NRC	NRC	NRC	Before exam	NRC
					During exam	NRC
					Post exam	NRC

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			INPO			
				INPO	Special program	Facility INPO
					Accredited Program	Facility INPO
			NRC	NRC	Before exam	Facility NRC
					During exam	Facility NRC
					Post exam	Facility NRC

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			INPO	INPO	Special program	Facility
						INPO
						[redacted]
					Accredited Program	Facility
						INPO
			[redacted]			[redacted]
		NRC				
			NRC	NRC	Before exam	[redacted]
						NRC
					During exam	[redacted]
						NRC
					Post exam	[redacted]
						NRC
				[redacted]		