



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

AUG 28 1991

Dr. John A. Bernard, Chairman
Executive Committee
National Organization of Test,
Research, and Training Reactors
Massachusetts Institute of Technology
138 Albany Street
Cambridge, Massachusetts 02139

Dear Dr. Bernard:

This is in response to your letter dated June 4, 1991, concerning the draft Examiner Standard for the, "Administration of NRC Requalification Examinations at Non-power Reactors (NPRs)," and including the comments received from seven members of the National Organization of Test, Research and Training Reactors (TRTRs).

I regret that additional volunteers to complete the pilot program have not materialized. Nevertheless, we plan to proceed with the requalification examinations for TRTR facilities as discussed in the letter from the Executive Director for Operations (EDO) to Mr. T. Raby, TRTR Executive Committee Chairman, of April 11, 1988.

With respect to the revisions to license, inspection, and annual fees in 10 CFR Parts 170 and 171, the Commission has decided to continue the current exemption provision for nonprofit educational institutions. As such, non-power reactors owned by nonprofit educational institutions will not be subject to Part 170 or Part 171 fees. The revised fee regulations were published in the Federal Register on July 10, 1991.

Please note that the Examiner Standard is not a substitute for nuclear reactor operators' licensing regulations. The purpose of the Examiner Standard is to provide policy and direction to NRC licensing examiners and to establish procedures and practices for implementing regulatory requirements. I appreciate the comments provided by the TRTR national organization members. Some of the comments indicate that some clarification of the standard may be needed, and

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Dr. John A. Bernard

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I have enclosed responses concerning specific comments. As always, we hope to work closely with the TRTR community in the administration of the regulatory process.

Sincerely,

Original signed by:

Robert M. Gallo, Chief
Operator Licensing Branch
Division of Licensee Performance
and Quality Evaluation
Office of Nuclear Reactor Regulation

Enclosure:
As stated

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COMMENTS ON NPR REQUALIFICATION EXAMINATION STANDARD

Comment - General Atomics

Administrative Controls (Section C.1(a) and (b)). The intent of the NRC on examination scheduling - other than a general statement on scheduling "to coincide with the requalification training cycle of the facility, if possible" - is unclear and can be problematic, especially for facilities with a large number of operators. For example, we have 17 licensed SROs and ROs. The license effective dates for our operators are scattered throughout the year, with the present six year expiry dates varying from 1993 to 1996 because of our necessity to hire or upgrade operators on an essentially continual basis. As a result, our requalification cycle requires examinations to be administered at least once a year in order to meet the requirements of our own requalification program, which calls for biennial examinations. I think a more definitive statement, which would define how often the NRC would administer exams, would allow for better scheduling, preparation, and selection of operators. At this time, it is unclear how we would select operators for a particular exam date to ensure that they would be taking the NRC administered exam only once during the six year period of their license.

Response - Section C.2.b states that "The NRC will in consultation with the facility select individuals...." On this basis, the facility itself can ensure that the examination is only taken once during the six-year licensing period.

Comment - General Atomics

Facility Involvement (Section C.1(d)(1)). The facility employee(s) who will assist the NRC in the preparation and administration will generally be licensed SROs themselves. From the ES, it unclear how the NRC proposes to examine such employee(s) during their six-year cycle. Or, is the NRC proposing to grant a waiver to such employee(s)? Furthermore, the ES states that the Chief Examiner may allow more than one employee to be member of an examination team. I presume this will be done on case by case basis, but examples of what criteria are acceptable to have more than one employee on the team need to be stated.

Response - The facility employees who assist the NRC in a particular examination cannot themselves be tested during that same examination, but can be tested at some point during their six-year license period, at a time when they are not assisting the NRC. We recognize other examination preparation arrangements may be necessary to allow some individuals to be examined.

Comment - General Atomics

Implementation (Section D.2(b)(1)). The facility responsibility - as stated - is to provide "sufficient test items to prepare an examination of twenty questions per section. At least 50 percent of the items are expected to be objective questions." Here, several statements need to be defined and/or clearly stated in order to avoid problems later during implementation of the standard. First, what is a "sufficient" number of test questions? This needs to be quantified. Second, an "objective question" should be defined so that there is no doubt what such a question is. At this time, I do not know what the staff considers an objective question to be. Third, I presume a "test item" is an examination question. If so, it should be called as such! I think the NRC has chosen to use "test item" and "test question" interchangeably, but one can never be sure!

Response - Fifty to seventy test questions are considered to be sufficient, with the number determined on the basis of facility complexity. The NRC generally considers that multiple choice and matching questions are acceptable objective test questions. There is no distinction between "test item" and "test question." The Examiner Standard will be revised to improve consistency.

Comment - MIT

A procedure should be established for quality assurance of NRC question banks. For example, if a technical specification is revised or a procedure updated, how can one be assured that questions based on it have been updated? NRC would do this for questions on a given exam by having the facility representative check that particular exam. But many URRs (MIT among them) may not send a representative to review an exam prior to its being given. Reasons for this vary but include lack of travel funds and lack of staff. Even if a representative is sent, only those questions on the exam are checked. Questions that are no longer valid could remain in the bank. There should be a systematic way for periodically verifying the relevancy of a question bank.

Response - It is not necessary for a facility representative to travel to work with the NRC in writing and reviewing an examination. These tasks can be accomplished by mail and telephone. With regard to question banks, the facility is best qualified to verify the relevance of the data bank and to maintain its integrity. The facility representative is a member of the examination team and can best ensure the fidelity of the examination.

Comment - MIT

Removal of an operator for a grade of less than 70% is unreasonable because many factors affect performance on an exam. At MIT we do the following:

- a) All operators review any missed question regardless of score.
- b) Operators with less than a grade of 80% receive upgrading and take a second test in the appropriate area.
- c) Failure of the exam is defined as grade of less than 70% in any section. But this does not necessarily result in removal from duties. If the operator revealed a weakness in reactor physics, he'd be tutored. If he showed weakness in fuel handling, he'd be suspended from refuelings. There is no set action unless the grade is truly abysmal (<60% overall). Rather, we review the operator's total performance and take appropriate corrective action. The crucial issue is that the situation be addressed promptly and that the remedial action be effective. Perhaps for grades of 60% - 70%, the NRC could require a written letter on the facility's plan to upgrade the operator but leave the decision on what to do to the facility.

Note: MIT also has operators take open-book mini-tests on radiological controls, abnormal procedures, and emergency procedures during the year. These are not required by the requal program and are not a substitute for the annual exam. They force operators to keep studying material on a more or less continuous basis.)

Response - Only an overall grade of less than 70% results in a failure. A grade of less than 70% in a single category does not in itself constitute a failure.

Comment - MIT

We question the wisdom of not discriminating between the RO and SRO written exams. ROs need to know systems and have some understanding of procedures. SROs need to have a full understanding of procedures. There is a big difference between the two licenses.

Response - Differences between RO and SRO knowledge levels, particularly with regard to procedures, are accounted for during the operating portion of the examination, as is currently done in initial examinations.

Comment - MIT

Excess reliance is being placed on multiple choice questions. Such questions are difficult to write in that several answers may be plausible. This can create difficulty in that exceptionally well-qualified operators will recognize many facets of a problem and not be able to select a given answer. The option should exist for an examinee to write out an explanation for his decision on a multiple choice question.

Response - There is no question that writing meaningful and unambiguous multiple choice examinations is difficult. This format was created specifically to reduce subjectivity (as in essay questions) in the examination process. Facility representatives have the option of commenting on questions and answers.

Comments - Others

Comments from the other respondents generally mirror those discussed above. For all facilities, a request may be made to the NRC for relief from specific procedures in the standard.

Dr. John A. Bernard

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Sincerely,

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