NUREG-1262

Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operators' Licenses

U.S. Nuclear Regulatory Commission

Office of Nuclear Reactor Regulation

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NUREG-1262

Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operators' Licenses

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ABSTRACT

This document presents questions and answers based on the transcripts of four public meetings (and from written questions submitted after the meetings) conducted from April 9 to April 20, 1987 by the staff of the U.S. Nuclear Regulatory Commission. The meetings discussed implementation of the Commission's final rule governing Operators' Licenses and Conforming Amendments (10 CFR Parts 55 and 50). The rule became effective May 26, 1987 and is intended to clarify the regulations for issuing licenses to operators and senior operators; revise the requirements and scope of written examinations and operating tests for operators and senior operators, require a simulation facility; clarify procedures for administering requalification examinations; and describe the form and content for operator license applications.

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I PREFACE

On March 25, 1987, the U.S. Nuclear Regulatory Commission published in the Federal Register (52 FR 9453) revisions to 10 CFR 55 to meet NRC responsibilities under Section 306 of the Nuclear Waste Policy Act of 1982. The rule, Operators' Licenses and Conforming Amendments, became effective on May 26, 1987 and is intended to:

1. clarify the regulations for issuing licenses to operators and senior operators;

2. revise the requirements and scope of written examinations and operating tests for operators and senior operators;

3. require a simulation facility;

4. clarify procedures for administering requalification examinations; and,

5. describe the form and content for operator license applications.

From April 9, 1987 to April 20, 1987, the NRC staff held four public meetings to discuss implementation of the requirements of this rule and related issues. Those attending asked numerous questions which the staff answered. This document presents the answers to those questions taken from the transcripts of the four meetings, as well as to written questions which were submitted at the conclusion of the meetings. The questions are grouped to eliminate excessive duplication. However, where different questions addressed similar concerns, they were retained in this report if they provided clarification or a different perspective. Questions related to Regulatory Guides, industry standards, and other documents associated with the rule are included with the applicable portion of the rule.

This report attempts to retain the intent, tone, and nuance of each question without reproducing each verbatim from the transcripts. In some cases, questions submitted or recorded by the transcriber contained unintended or inadvertent factual errors. When identified, these errors were corrected. Similarly, verbatim answers in the transcripts have been edited where necessary for clarity and conciseness.

NRC staff discussions held since the final public meeting indicate that the answers provided to questions in the area of "Conditions of Licenses," specifically the proficiency requirements in 10 CFR 55.53(e), may have conveyed the impression that the staff advocated minimum shift staffing, and that this might have been construed to be counterproductive to safety. The apparent confusion stems from the definition of "Actively performing the functions of an operator or senior operator" in Section 55.4 of the regulation, which appears to tie the proficiency issue to a minimum staffing requirement in the facility licensee's technical specifications. The intent of the 10 CFR 55.53(e) requirements regarding maintenance of active operator or senior operator status is that personnel maintain proficiency by actively performing the functions and duties of the licensed operator positions. Because facility licensees assign to a shift more than the minimum number of operators required by their Technical Specifications, concerns have been raised since the public meetings that

10 CFR 55.53(e), if implemented in the manner discussed at these meetings, might discourage utilities from augmenting shift crews.

It is not NRC's intent to discourage augmenting shift crews; clearly, this practice can result in a significant safety enhancement. However, assigning a large number of operators to a shift could reduce the range of responsibilities of any one operator to a level where sufficient experience in directing shift operations and/or in manipulating controls is not being obtained. NRC's intent in 10 CFR 55.53(e) is that operators taking credit for watchstanding on shift to maintain an active license engage meaningfully and fully in the functions and duties of the positions required by the Technical Specifications. The intent is not to have licensees augment a shift with a contingent of operators whose main purpose is to acquire the minimum number of watches to meet 10 CFR 55.53(e) requirements. Their role is to fulfill the duties that the facility licensee judges are necessary and prudent for safe operations.

Facility licenses can take credit for more than the minimum number of watchstanders required by Technical Specifications provided that there are administrative controls which assure that functions and duties are divided and rotated in a manner which provides each watchstander meaningful and significant opportunity to maintain proficiency in the performance of the functions of an operator and/or senior operator as appropriate. Normally, more than one additional watchstander at each Technical Specification position would not be considered acceptable with respect to the proficiency issue.

Any answers to questions on this subject that were raised during the public meetings, and which might have conveyed the impression that NRC advocated such minimum shift staffing, have been revised in this report to reflect the staff's position as clarified above. Such answers are identified in this report by an asterisk next to the question number.

Similarly, NRC staff discussions held during the preparation of this report have identified a number of answers given during the public meetings which either misstated an NRC policy or may have been open to misinterpretation. These answers have been revised for this report and are identified by an asterisk next to the question number.

The views expressed in this report represent office practices and policies on how the staff will implement the rule. These views are intended as guidance and are meant to reflect the rule and its statement of considerations. The views expressed are not intended to interpret the rule or any of its provisions. Although any request for formal interpretation should be sought from the Office of General Counsel under 10 CFR 55.6, the NRC staff may provide informal guidance as needed and as appropriate. This report does not impose any requirements on facility licensees nor does it replace or supersede any existing regulations.

II INTRODUCTION

This rule (10 CFR 55) represents a significant move toward less prescriptive regulatory requirements for utilities that have accredited training programs and acceptable simulation facilities. It attempts to differentiate clearly between training programs sponsored through industry initiatives by the Nuclear

Utility Management and Resources Committee (NUMARC) and the Institute for Nuclear Power Operations (INPO), and Nuclear Regulatory Commission (NRC) licensing and examination requirements. One of the most important changes to the regulation is the flexibility it affords licensees in reviewing the content of continuing training (requalification) programs, and tailoring those programs to the needs of the job incumbents. This degree of flexibility represents a major change from the way NRC has implemented regulations in the past in that it relies on industry initiatives to provide both training and qualifications for license applicants. With this rulemaking NRC has moved out of the area of specifying training program content and qualifications for instructors.

INPO Accreditation

It is a precedent-setting move, and NRC is pleased that the industry has taken this initiative to improve its training of licensed operators and others. Although moving out of the training areas potentially leaves a void, particularly as it relates to some of the more prescriptive requirements used in the past, NRC has placed great importance in the INPO accreditation process. In its review of INPO accreditation criteria, the staff has concluded that they are equivalent to NRC's. If a utility implements an accredited training program, the accreditation will constitute the basis for NRC acceptance of that certification from a responsible utility officer, as indicated in Generic Letter 87-07.

The Appeal Process

NRC is also implementing a change to the appeal process for operator license candidates to clarify the process. The following figures describe the proposed appeal process.

Figure 1. NRC's appeal process has always permitted both informal reviews and hearing rights on issues which were in dispute between the candidate and the examiner. Informal reviews were conducted by regional management and, when requested, further review was conducted at NRC headquarters. The exercise of hearing rights, described in 10 CFR Part 2 of the Commission's regulations, becomes operable should there be a license application denial.

Figure 2. Informal reviews and hearing rights are available to the candidate for any adverse action, whether for a failure of the written examination or operating test, or for an application rejected for other reasons. The informal review will go first to the regional Division Director responsible for the operator licensing function, and then, should the candidate so choose, to the Director, Division of Licensee Performance and Quality Evaluation (DLPQE).

In the past, on occasion, NRC has not completed action on appeals in a timely manner and, in some cases, candidates have not submitted information that is necessary to review an appeal. We have tightened up the schedule by allowing 20 days for the candidate to decide to appeal and 30 days for informal management review.

Figure 3. Those schedules will work as follows. The day that the candidate gets the notification letter of a failure or notification of a rejected application, we have called day zero. He has 20 days to decide whether to request an informal review.

If the candidate does not act within that 20-day period, the notification letter automatically converts to a Proposed Denial of License Application, which will avail him of hearing rights under 10 CFR Part 2 of the Commission's regulations. If he requests an informal review, he submits the information to the responsible regional division director, who reviews it, and either sustains or overturns the examination failure or the rejected application.

If it is sustained such that the situation is still adverse to the candidate, he may, then, request another informal review. The second letter he received would, in the manner similar to the first, become a proposed denial after 20 days. If, during the 20-day period after he receives the letter from the regional Division Director, he decides to ask for an informal review, he submits the requested information to the Director, DLPQE, where another review of the merits of his contentions would be conducted.

If the candidate's examination failure or application rejection is sustained, a Notice of Proposed Denial of License Application will be issued. The candidate can then request a hearing under 10 CFR Part 2.

When a Proposed Denial has become effective, the applicant can choose to accept the Proposed Denial, waive his hearing rights, and have the denial become final. It takes an affirmative action by the candidate to waive his hearing rights through an NRC form letter which provides information about the date of his examination, his docket number, and the like. He simply signs the letter and returns it to NRC.

Or, the applicant may request a hearing. In order to implement the hearing process, he would have to notify the NRC Office of General Counsel. The Examiner Standards will contain sample letters and procedures that describe this process. The 80-day time frame for this process does not include mailing time. We will be using certified mail, request return receipts, and will place the correspondence associated with the appeal in the docket file.

In addition, we will provide copies of all relevant correspondence to the facility licensee's authorized representative who signed the application. This will be done at the time we mail it out to the individual. The reason for this is that the authorized representative is a part of this process, in that he certified the completion of training. Further, the facility reviewed a written exam and provided comments on the exam and the answers.

Figure 4. This figure shows the proposed denial/hearing process, beginning with the administration of the examination. NRC will complete the grading, make an initial determination within 30 days, and mail the results to the candidate.

If the candidate requests an informal review, he must send in a complete information package to the responsible regional division director. He has 20 days to decide to make the request, and 10 more days to submit the information. The regional division director would review the submittal and make a determination within 30 days. If the regional division director sustains the failure or the application rejection, the candidate could at that point request an informal review by the Director, DLPQE, a hearing, or accept the results. If the candidate accepts the results, NRC would issue a final denial and put it into his

docket file. After the required length of time from the date of final denial (immediately in the case of an application denial) he could start the reapplication process.

Alternatively, if the candidate requests an informal review by the Director, DLPQE, he must submit the requested information within the prescribed time. The Director, DLPQE, would make a determination within 30 days. If the Director sustains the failure or the application rejection, NRC would issue a proposed denial. At that time the candidate would have the option of requesting a hearing or accepting the results.

This process is more formal than past practice. A candidate may not reapply under the provisions of 10 CFR 55.12 until he has a final denial in hand. The only way he can get a final denial is either to agree with the staff's proposed denial, waive his hearing rights and accept the outcome, or go to hearing, where an independent determination will be made in his case. The types of hearings under Part 2 may vary from informal to formal adjudicatory hearings. It is the candidate who controls the process. It is the staff's responsibility to ensure that the candidate understands his rights.

The review process as outlined is currently under staff review for ways in which it can be expedited.

INFORMAL APPEAL PROCESS AND HEARING RIGHTS

Can be stopped at any point by candidate accepting proposed denial and waiving hearing rights.

Candidate may reapply following examination failure only after application finally denied under 10 CFR 55.35.

- Candidate accepts Proposed Denial
- Hearing decision — Final Denial

Candidte may reapply at any time for rejection of application for reasons other than examination failure.

Figure 1

INFORMAL APPEAL PROCESS AND HEARING RIGHTS

Process has been clarified to assure candidate understands his rights

Applicable to any decision by the staff adverse to the candidate

Applicant always has the right to request

- informal regional management review
- informal headquarters management review
- formal hearing before an administrative judge

Schedule specified to ensure timely action upon informal review

- 20 days for candidate to decide
- 30 days for informal review

Figure 2

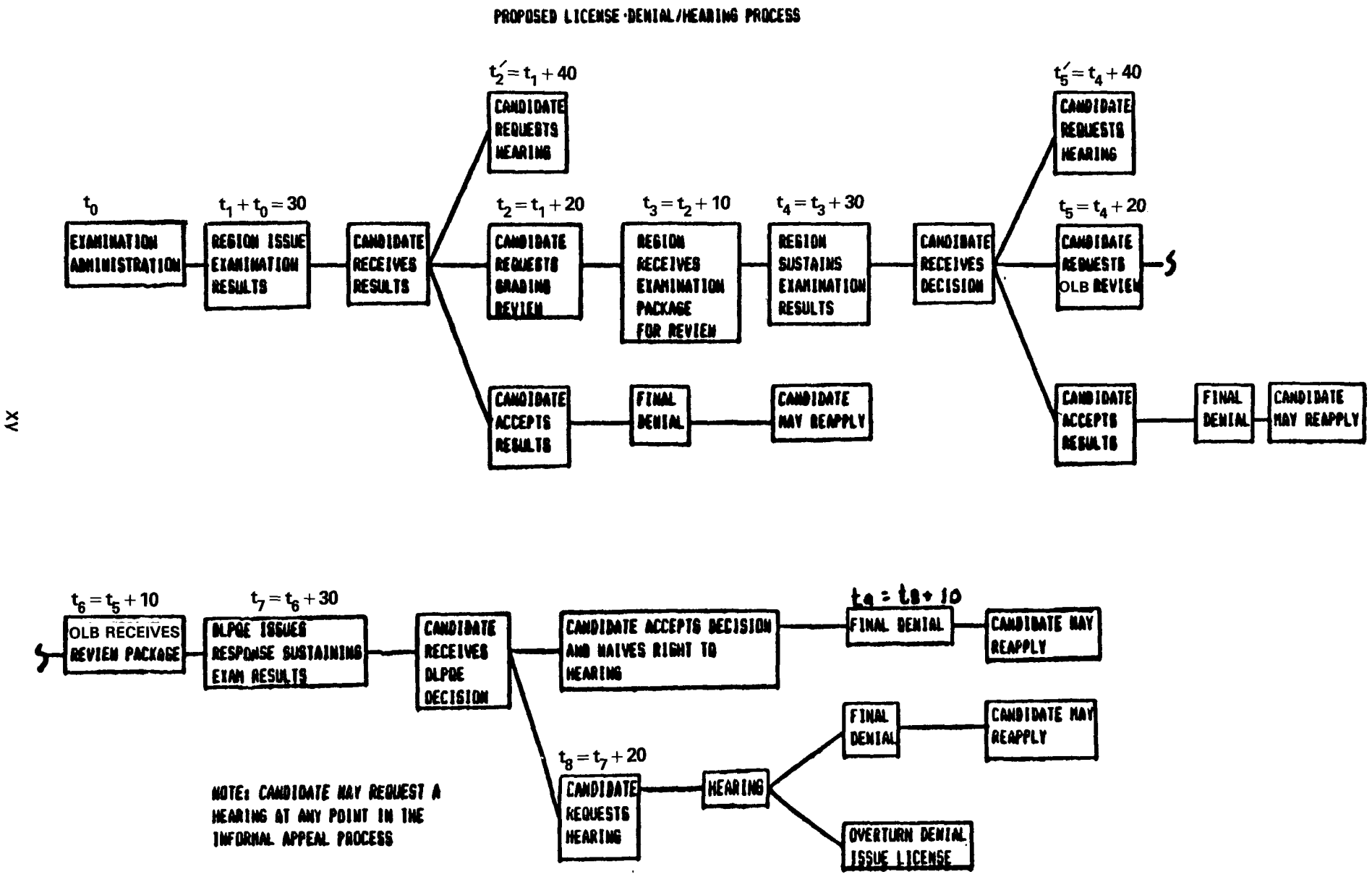
INFORMAL APPEAL PROCESS AND HEARING RIGHTS

0 DAYS	Notification of Examination failure or Application rejection
+ 20 DAYS	Request informal review by Region
+ 60 DAYS	Notification of Region's review results
+ 80 DAYS	Request informal review by Headquarters
+120 DAYS	Notification of Proposed License Denial
+140 DAYS	Request for Hearing

NOTE: Does not include mailing times

Figure 3

Figure 4


PROPOSED LICENSE DENIAL/HEARING PROCESS
t_0
EXAMINATION ADMINISTRATION
$t_1 + t_0 = 30$
REGION ISSUE EXAMINATION RESULTS
CANDIDATE RECEIVES RESULTS
$t_2' = t_1 + 40$
CANDIDATE REQUESTS HEARING
$t_2 = t_1 + 20$
CANDIDATE REQUESTS GRADING REVIEW
$t_3 = t_2 + 10$
REGION RECEIVES EXAMINATION PACKAGE FOR REVIEW
$t_4 = t_3 + 30$
REGION SUSTAINS EXAMINATION RESULTS
CANDIDATE RECEIVES DECISION
$t_5' = t_4 + 40$
CANDIDATE REQUESTS HEARING
$t_5 = t_4 + 20$
CANDIDATE REQUESTS OLB REVIEW
CANDIDATE ACCEPTS RESULTS
FINAL DENIAL
CANDIDATE MAY REAPPLY
CANDIDATE ACCEPTS RESULTS
FINAL DENIAL
CANDIDATE MAY REAPPLY
$t_6 = t_5 + 10$
OLB RECEIVES REVIEW PACKAGE
$t_7 = t_6 + 30$
DLPQE ISSUES RESPONSE SUSTAINING EXAM RESULTS
CANDIDATE RECEIVES DLPQE DECISION
CANDIDATE ACCEPTS DECISION AND WAIVES RIGHT TO HEARING
$t_9 = t_8 + 10$
FINAL DENIAL
CANDIDATE MAY REAPPLY
$t_8 = t_7 + 20$
CANDIDATE REQUESTS HEARING
HEARING
FINAL DENIAL
CANDIDATE MAY REAPPLY
OVERTURN DENIAL ISSUE LICENSE
NOTE: CANDIDATE MAY REQUEST A HEARING AT ANY POINT IN THE INFORMAL APPEAL PROCESS

ACRONYMS AND INITIALISMS

ANS	American Nuclear Society
ANSI	American National Standards Institute
BOP	Balance of Plant
BWR	Boiling Water Reactor
CE	Combustion Engineering
CRD	Control Rod Drive
DLPQE	Division of Licensee Performance and Quality Evaluation
EOP	Emergency Operating Procedure
ES	Examiner Standard
FSAR	Final Safety Analysis Report
GE	General Emergency
IE	Office of Inspection and Enforcement (NRC)
INPO	Institute of Nuclear Power Operations
K/A	Knowledge and Abilities
LER	Licensee Event Report
NLO	Nonlicensed Operator
NRC	U.S. Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation (NRC)
NTOL	Near-Term Operating License
NUMARC	Nuclear Utility Management and Resources Committee
OJT	On-the-Job Training
OMB	Office of Management and Budget
PWR	Pressurized Water Reactor
Reg Guide	Regulatory Guide
RG	Regulatory Guide
Requal	Requalification
RO	Reactor Operator
RWP	Radiation Work Permit
SAE	Site Area Emergency
SAT	Systematic (or Systems) Approach to Training
SFEP	Simulation Facility Evaluation Procedure
SRO	Senior Reactor Operator
STA	Shift Technical Advisor
Tech Specs	Technical Specifications
TSD	Training System Development
UE	Unusual Event

GENERAL ISSUES PERTAINING TO 10 CFR PART 55

Background to the Regulation

Q. 1. The Supplemental Information to NRC Generic Letter 87-07 states that, "These rules supersede all current regulations for operator licenses." Are training requirements from Mr. H. R. Denton's March 28, 1980 letter superseded by the new rule?*

A. The rule supersedes all requirements where those requirements are less restrictive. Where individual commitments are more restrictive, you must follow those commitments until you change them.

In some cases that change may require an amendment to the license. In other cases it can be done by yourself under 10 CFR Part 50.59, and you simply inform us of what you're doing. That would include any change within your authority to do under Part 50.59 that does not constitute a reduction in the effectiveness of the program, because it's being done to conform to the rule. Additionally, as a matter of interest, we are no longer, under the rule, permitted to certify instructors.

Q. 2. Will the revision to 10 CFR 55 cancel NUREG-0737, NUREG-0094, and the Denton letter? If so, will references to these documents be removed from NUREG-1021?

A. NUREG-1021, "Operator Examiner Licensing Standards," has been reviewed and the items left are required by the Regulation, or by Regulatory Guide 1.8. The items from NUREG-0737 and NUREG-0094 that are superseded have only to do with operator licensing. Items from Regulatory Guide 1.8 Revision 2, will be incorporated into NUREG-1021 when Regulatory Guide 1.8 becomes effective on March 31, 1988. Some items may be very similar to what was there in the past, due to NUREG-0737 or NUREG-0094. For example, four years of power plant experience are incorporated into NUREG-0737 and Denton's letter, and it's still in Regulatory Guide 1.8 and NUREG-1021.

Q. 3. Is it true that the NUREG-0737 requirements being incorporated in 10 CFR Part 55 are only those that relate to operator training and licensing?

A. The requirements pertain only to operator licensing, not training.

Q. 4. We also make commitments in NUREG-0737 for training and mitigating core damage of other work groups. Also, there is training related to STAs. For instance, Reg Guide 1.8 talks about the number of shifts that an STA must serve. So, nothing in this regulation affects these commitments even though there is some reference to it?

A. Yes, that's correct. It does not modify those prior commitments regarding training for STAs and other work groups.

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*H. R. Denton, NRC, Letter to All Power Reactor Applicants and Licensees. Subject: Qualification of Reactor Operators, March 28, 1980.

Q. 5. If NUREG-0737 is still applicable in areas not applicable to regulations for operator licenses, are you going to publish a NUREG that supersedes NUREG-0737 in those areas?

A. No, we'll not issue a new NUREG that applies to the areas that have not been superseded.

Q. 6. Are experience requirements in NUREG-1021 for the RO and the SRO superseded by this change?

A. No. NUREG-1021 will be revised to reflect the changes that have been adopted in ANSI 3.1 as endorsed by Regulatory Guide 1.8. We anticipate these changes will be made in about one year.

Q. 7. Can licensees file an FSAR amendment for Commission approval to modify existing initial licensing and requalification training programs?

A. Yes. See Generic Letter 87-07 for guidance on how to file such FSAR amendments.

Q. 8. What other means are available for filing for program changes?

A. You can write a letter and say that you have substituted an accredited training program, which is performance-based, for the previously NRC-approved program, and indicate the date(s) your new program was accredited. See Generic Letter 87-07 for further guidance on how to submit such a letter.

Q. 9. Our FSAR commits us to ANSI/ANS-3.1-1978.

A. Recall that this Regulation and associated documents supersede all prior requirements. The rule identifies the Regulatory Guides that are part of the rulemaking package. The implementation of Reg Guide 1.8, which endorses, with exceptions, ANSI/ANS 3.1, 1981, takes effect March 31, 1988, to allow for a phase-in period.

Q. 10. Will we do anything different in the inspection of requalification activities due to the end of the two-year moratorium in INPO accreditation? Has the new rule been timed to coincide with the end of the two-year period?

A. This issue is currently under advisement by the Commission. No decision has been made to date. Publication of the regulation was independent of the two-year period.

Q. 11. Is failure to meet an INPO program requirement that was in the benchmark-accredited program grounds for issuance of a Notice of Violation?

A. Failure to meet INPO Guidelines, or loss of accreditation status through action taken by the National Nuclear Accreditation Board, will result in further evaluation by NRC. Such failure in itself would not be grounds for a Notice of Violation. However, per the "Policy Statement on Training and Qualification of Nuclear Power Plant Personnel" (50 FR 11147), "Nothing in this Policy Statement shall limit the authority or responsibility of the NRC to follow up on operational events or place any limit on NRC's enforcement authority when regulatory requirements are not met."

Definitions (Subpart A, Section 55.4)

Q. 12. Why did you change terms from "reactivity manipulations" to "control manipulations?"

A. For the purposes of Part 55, "controls" refers to the controls that affect reactivity or power.

Q. 13. By what means are utilities to determine NRC's interpretation of "reference plant" as it applies to multi-unit plants at one site (from the same vendor and vintage)? It seems that compliance with Part 55 is contingent on a clear interpretation of this term.

A. The definition of "reference plant" has been provided in Section 55.4 of the regulation. Section D, which is the implementation section of Regulatory Guide 1.149, provides clear guidance for the use of one simulation facility for more than one plant or unit, since each plant has a unique docket number.

The greater the similarity between the units, of course, the more likely it is that you'll be able to submit one certification form for each, identifying any exceptions as necessary against ANSI/ANS-3.5.

If your operators are dual-licensed, certification, with exceptions, would be considered satisfactory for multiple units or plants. If your operators are not dual-licensed, it is still possible to certify with exceptions, although more work may need to be done to justify acceptability of the simulation facility for the conduct of operating tests.

Q. 14. In the discussion of the term, "plant-referenced simulator," mention was made of the simulator being required to use controlled copies of procedures? What do you mean by the word control?

A. Controlled copies refers to procedures that are identical to those you use in the control room of the plant, and are maintained current through administrative control.

Q. 15. Do they necessarily have to be up to date to the minute or to the hour?

A. We expect them to be up to date.

Q. 16. As far as the references go?

A. Yes.

Q. 17. Revisions?

A. Yes.

Communications (Subpart A, Section 55.5)

*Q. 18. Section 55.5(b)(2)(iv) states that applications and correspondence should be submitted to the Regional Administrator. Should copies be submitted to the Regional Section Chief for Operator Licensing?

A. No. Copies of applications and correspondence under Section 55.5 need not be sent to the Regional Section Chiefs.

Q. 19. Is Form 474 to be submitted directly to the Director of the Office of Nuclear Reactor Regulation (NRR) in Washington, D.C., as opposed to Regional Administrators?

A. Yes. We made a conscious effort to ensure that Form 474 certifications and the applications for approval be submitted to NRR at Headquarters. Officially, they should be filed in accordance with 10 CFR Part 50.4, which specifies that those submittals go to ATTN: Document Control Desk, Washington, DC 20555.

Q. 20. Who specifically receives the certification referred to in Generic Letter 87-07, the region or headquarters?

A. Generic Letter 87-07 describes the form of notification to the NRC, which basically is a letter telling us that you have an INPO-accredited program, or an otherwise systematic approach to training at your facility. That submittal is made to NRC Headquarters in accordance with 10 CFR 50.4. It comes to the Director of the Office of Nuclear Reactor Regulation, and is to be submitted in accordance with 10 CFR 50.4, ATTN: Document Control Desk, Washington, DC 20555.

Q. 21. 10 CFR 50.4 is explicit regarding written communications and volume reduction; however, this part of the regulation seems to be inconsistent with 55.5. Which regulation do we follow?

A. For communications concerning 10 CFR 55, licensees should follow 55.5.

General Exemptions (Subpart B, Section 55.13)

Q. 22. With regard to Section 55.13, can you clarify the intent behind these exemptions?

A. Yes. There are certain skills and knowledge that an operator must have, for example, to perform a reactor start up. Hopefully, he would understand some reactor theory, the effects of subcritical multiplication, and other aspects of the controls he is manipulating.

If the candidate has not completed those phases of training, he should not perform reactor startup, whether or not it's included in the instruction. That's the concept. Now, if in your program, information is transmitted to him such that he is prepared to perform the function because he understands what he is doing -- he has either had the systems training, or he's had the theory training, or he's gotten it in some other earlier program, such that you are assured that the sequence of training is appropriate and the potential for him making an error is small--then the exemption applies.

We don't want to repeat an event which occurred a few years ago where an individual performed a startup soon after entering training. They had a high startup rate, short-period transient, and the individual did not understand what he was doing. He had no appreciation for the procedure because he had not received the appropriate on-the-job training for the evolution. There were

two concerns with that event: First, they put the plant at risk because someone manipulating the controls didn't know what he was doing and, second, they provided negative training.

The sequence of training that leads to on-the-job-performance is important. That approach is consistent, by the way, with the INPO accreditation process and criteria. If you look at the objectives in INPO 85-002 for on-the-job training, you will find that they intend that the person adequately understand the task before performing it.

Q. 23. Can trainees manipulate facility controls under the appropriate supervision of licensed personnel?

A. If their training program leads to a license if carried to completion, they may manipulate controls under instruction if they have been properly trained. Properly trained means that the sequence of training that has led them up to that point is appropriate for the manipulations they perform.

Q. 24. In Section 55.13, Item 1, are you using training and education interchangeably?

A. No. Students at test or research reactors receive training on a reactor as part of a course of study to further their education. They may manipulate controls as a part of that course of instruction.

Q. 25. With respect to Section 55.13, is someone who is in a course, but from a visiting institution, considered a student? Would a group of high school students visiting a university for a couple weeks to familiarize themselves with the school be considered students; that is, could I sit them down at the control panel and tell them what steps to go through to operate the panel?

A. Both groups are considered students. There are colleges and universities that have exchange programs with high schools and other institutions where you bring students in to attend courses. If these students attend some part of classroom training, and as a part of that activity they manipulate the controls, then that's part of their instruction as students.

We want to avoid the situation where an individual comes in off the street without any training and starts manipulating the controls.

Q. 26. If the facility career path program considers all nonlicensed operators to be license candidates, can nonlicensed operators manipulate the controls under the direction and in the presence of the reactor operator's senior operator if the candidate is not currently in a hot licensed class?

A. No. The candidate must officially be enrolled in the hot license class. Simply being a nonlicensed operator on a designated career path is not sufficient to meet the intent without being enrolled in the hot license class. More importantly, the candidate must have completed the necessary classroom or simulator training in accordance with the appropriate training sequence prior to manipulating the controls of the facility.

Q. 27. If the operator is in a licensing class, has completed the classroom and the simulator portion, and has an opportunity to take part in an unplanned evolution, can he receive credit toward the training program for that participation?

A. Yes.

Q. 28. Is a senior operator license required to move fuel in a dry storage area, or away from the reactor vessel?

A. The Regulation doesn't specifically talk about the dry storage area or the refueling pool. It specifically talks about moving fuel in and out of the vessel. If there is a potential for criticality, a senior operator would be required to be there, as in some instances in a refueling pool. If not, no.

Q. 29. Can the licensed senior operator who supervised fuel handling be a senior operator licensed for fuel handling only?

A. Yes.

APPLICATIONS

How to Apply (Subpart D, Section 55.31; NRC Form 398)

Q. 30. For a person who has dropped his license, what, if anything, must be done to later upgrade his status to an SRO beyond meeting the requirements of an accredited SRO training program?

A. He must submit completed Forms 398 and 396 and be examined as an SRO.

Q. 31. Has Form 398 changed?

A. Not yet, but a change is in process. It is scheduled to be available for ordering by the end of May 1987.

Q. 32. Will the current Regional requirements for complete licensee history on Form 398 for license renewal be reduced to the data included in the OMB approval, 8150-0090?

A. If you have an INPO-accredited program with an acceptable simulation facility (approved or certified), you can eliminate giving us information under blocks 11, 12, and 13, with the exception of the five significant control manipulations. Those still must be included.

For renewal, the same rules would apply; there is a block specifically on the Form for renewal. You will only have to provide information on candidate training, education, and experience dating from that last application for a license renewal.

There will be a block on the Form 398 to indicate the number of on-shift hours, or the experience that has been received. That's all you will have to provide if you meet the two other criteria, i.e., having been INPO accredited, and having an acceptable simulation facility. If you do not meet these two check points, then you will have to provide the additional data on training, education, and experience.

Q. 33. On Form 398, since test and research reactors don't have simulators, are we required to completely fill out the form?

A. What you are currently doing will continue to be acceptable. For all test and research reactors, there is no change to the process except in terms of license operators being re-examined during the six year license.

Your requalification programs basically stay the same. We still intend for you to use ANSI 15.4 for selection, training, and medical certification. We've also adjusted the requirements for resuming an active license to six hours of parallel watch-standing.

Q. 34. I understand that the designation of the authorized representative for a facility is changing. Is that true?

A. We will accept, as the authorized representative, the senior individual on site responsible for operations. Some companies have a vice president on site, some have a site manager. Others may choose to designate someone at a higher

level, and send it off site to the corporate office. That is acceptable to us. It is also acceptable for it to be done on site. It need not be the same authorized representative who requests license amendments under Part 50.

There is, under the facility license, only one authorized representative; generally that is somebody at the corporate level, a senior vice president. If that is the authorized representative for the facility, that's who signs Part 50 license amendment requests and makes other certifications. We will accept, for Part 55 licensing, the senior person responsible for operations on site.

Please note a new requirement on Forms 396, 474, and 398. Above the signature there is now a statement that any false statement or omission in this document, including attachments, may be subject to civil and criminal sanctions, to the person signing it. The statement says: "I certify, under penalty of perjury, that the information in this document and attachments is true and correct." That's why we're adjusting the requirement so that the person on site, who's closer to the information, can be absolutely sure when attesting to the accuracy of the information.

Q. 35. Is it the intent of the Commission to limit the number of licensees at a facility to a specific position?

A. No. It is the facility licensee's decision as to whether to have a person in a licensed position or not, and how many of them are needed. We will not question the judgment of facility management.

Q. 36. Is it the NRC's intent that the facility licensee identify organizational positions as needing an NRC Operator License beyond those required by Tech Specs?

A. No. The facility licensee determines the need for whom they want licensed beyond the requirements of the Technical Specifications. However, all individuals who are licensed must be enrolled in the facility licensee's requalification program.

Q. 37. Does an applicant for a license have to be a member of the shift crew to obtain a license?

A. No. An applicant doesn't have to be a member of the shift crew to obtain it, but the facility must certify that there is a need for him to have a license.

Q. 38. In answer to the question: "Are experience requirements in NUREG-1021 for the RO and SRO superseded," you said, "no, that there were experience requirements that would still apply." Is that still in effect even if you have an accredited program?

A. The accreditation process has its own experience requirements identified within that program. For those facilities which have an INPO-accredited program and a simulation facility acceptable to the NRC, you do not have to designate on the Form 398 those experience requirements for those individuals. You need only check the blocks associated with the simulation facility and the accredited program.

Q. 39. Other than as stated in 10 CFR 55, are there any other requirements that must be included in initial or continuing training programs for licensed personnel?

A. Yes. All previous requirements are in effect unless superseded by the rule, until the training program is accredited.

Q. 40. Is accreditation by INPO's National Academy of Training sufficient?

A. As indicated in Generic Letter 87-07, if it is based on a systems approach to training, it is sufficient. We believe that a program developed following the INPO guidelines for continuing operator training for licensed operators, issued in October, constitutes an adequate basis for concluding that the program has been developed in accordance with the systems approach to training. If you follow that, and you are accredited, that's sufficient.

Q. 41. Is the systems approach to training development referred to in the new 10 CFR 55 based on the systems approach described in NUREG-1220 or on INPO standards?

A. It's both. The Commission has specifically endorsed the INPO accreditation objectives and criteria as being a systems approach to training. NUREG-1220 simply repeats the criteria that are contained in the policy statement. It then has subordinate questions that we use for information gathering to determine whether a systems approach to training is in place.

There have been questions in the past about the level of detail we are looking for in some areas. They generally relate to conditions and standards associated with learning objectives and whether you need to develop K/As or not.

We've reached agreement with INPO on that process; on how you're back-fitting existing programs that do not have K/As but have learning objectives.

In general the agreement has been that if it's a new task or new training, it should be developed with K/As. If it's an existing task or training, a panel of subject matter experts (job incumbents) could conclude that the existing training programs adequately cover the material, and therefore, it need not be back-fit.

Q. 42. Generic Letter 87-07 speaks of substituting an accredited training program for initial and requalification training programs previously approved by NRC. What if the initial training program was never formally approved by the NRC?

A. By virtue of your having been issued a license, your training program, as described in your FSAR, can be considered NRC-approved. If you subsequently submitted a change to your program for NRC approval, you can assume it was approved, unless NRC has notified you to the contrary.

Q. 43. Is this true even if it's not currently in the updated FSAR?

A. Yes. See Generic Letter 87-07 for guidance on how to revise your current training program to conform to the new regulation.

Q. 44. Programs developed using a systems approach to training are, by intent of the systematic approach, subject to revision on the basis of feedback and input to the system from legitimate sources. Once a training program is accredited and appropriate certifications are made to the NRC, do subsequent revisions to these programs need to be certified to the Commission?

A. No. For accredited programs, the particular evaluation, feedback and modification of your program is part of the process. For those programs that are not accredited or SAT-based, then, in accordance with 50.54, you will have to notify the Commission when you make changes that would decrease the scope of that program.

The program of record is the program to be implemented until such time as you change it, whether it be an SAT-based program or an NRC-approved program. We do not intend for the change process to be used after the fact, to justify what training has already been done; that is, a failure to implement your existing program -- you cannot get out of that failure-to-implement loop by going back and changing it after the fact.

Q. 45. Is it the Commission's intention that approved training programs will continue to be approved until accredited, and that the use of the simulators referenced therein will be acceptable for use until May 26, 1991?

A. Yes.

Q. 46. If a facility licensee does not include an approved systems approach to training, can operators be trained and licensed?

A. Yes. Until the program is accredited, they still have to abide by their current approved program, as upgraded by the requirements of the Regulation. We will still license those individuals.

Q. 47. When the new rule becomes effective, will all training programs previously accredited by the National Nuclear Accreditation Board be considered approved in accordance with the final policy statement on training and qualification of nuclear power plant personnel?

A. Yes, but for clarification, they won't be approved in accordance with the policy statement; they will be approved in accordance with the regulation, with the intent as expressed in the Statement of Considerations that if you have been accredited by the National Nuclear Accreditation Board, you're considered to have NRC approval.

Q. 48. Will utilities with INPO-accredited training programs be required to submit these programs to the NRC for approval?

A. No. Programs that have been accredited by INPO are assumed to have NRC approval. All that is needed is an update to your FSAR in accordance with 10 CFR 50.71(e)(4). However, programs must be available for NRC review and inspection on site.

But since it is still Commission approval that you need, there may be cases where an accredited program is not implemented appropriately and, therefore, NRC approval might be removed.

Q. 49. If the utility has an INPO-accredited operator training program, but does not yet use a simulation facility acceptable to the Commission, will an application that states that the operator training program is accredited by INPO and gives details of the simulator instructions be adequate for the license application?

A. The Form 398 will have a block on it to indicate whether or not the applicant has graduated from an INPO-accredited training program. If the answer is yes, and the facility has an approved or a certified simulation facility, then the information on education, experience, and training need not be filled out on the Form 398.

On the other hand, if the individual is a graduate of an INPO-accredited training program and the facility does not have an approved or certified simulation facility, then all that information will need to be submitted.

We would like you to begin certifying simulation facilities early on, and since nearly everyone has accredited programs with graduates, the process gets much simpler when you reach those two major milestones; otherwise, it stays difficult with you providing all of the details, which we subsequently review to verify eligibility, training and experience.

Q. 50. If the facility certifies the training program as being based on the SAT process, will NUREG-1220, "Training Review Criteria and Procedures," audit findings and comments be considered violations of 10 CFR 55?

A. If we did go to an accredited program, and we used NUREG-1220 to do a post-accreditation audit, and found problems, they would be addressed in one of two ways. Depending on their severity, they would be either left to the utility to resolve with INPO or, if they were of a more severe nature, we might ask for a performance-based inspection. Depending on the results of that inspection, there may or may not be any need for enforcement action.

Q. 51. If the SAT process is evaluated to be unsatisfactory during inspection, can operators be trained and licensed?

A. That will have to be determined on a case by case basis. If your program is deemed unsatisfactory, it would obviously depend on what the problems are.

Q. 52. When filing an application, the facility is required to provide evidence that the applicant has successfully completed the facility licensee's requirements to be licensed as an operator or senior operator.

Part of the training program is not complete prior to filing the application for the license due to the Examiner Standard (NUREG-1021) guidance to file an application 60 days prior to the examinations. This has been acceptable in the past due to the statement on the application above the facility representative signature. It states that: "The individual has or will have completed by the time of the examination all the required training." Will this continue to be an acceptable approach under the new rule?

A. No. This will not be continued. The Form 398 will be revised to remove the words "or will have."

The Commission has stated in the rulemaking that the authorized representative certifies that the individual has completed all training. It's not a future completion, and we don't want to get into situations such as "at the time I signed it I thought he was going to complete, but he didn't." You are certifying that training is complete.

We have had some experiences in the past where commitments that were made were not completed, and they resulted in significant enforcement actions associated with the failure to complete training programs, even after examining, let alone at the time of examining.

Q. 53. The Regulation requires INPO accreditation for NRC approval, while Mr. Denton's Generic letter 87-07 requires that the training program be both accredited, and based on an SAT process. Which is the governing document?"

A. The Regulation governs. The Generic Letter just restated what was in the Regulation. To receive relief under the Regulation, the program must be based upon a systems approach to training. And some of the earlier plants, which were accredited very early, were based upon the INPO guidelines, and not upon the INPO accreditation objectives and criteria as endorsed by the Commission in the Policy Statement.

In that case, what they are doing now by way of updating their program and revising it, and the fact that they now understand the process, would be the basis for them to certify to us that they have, indeed, done it on an SAT basis. They need not go back and wait until the next time through with the Accrediting Board.

Q. 54. Is a Commission-approved training program defined as an INPO-accredited training program, or are there other criteria for approval by the Commission of a utility's training program? How is a training program approved by the Commission?

A. NRC is getting out of the approval process for training programs. If there is an INPO-accredited training program, it only needs to be certified to us as indicated in Generic Letter 87-07. If a utility wishes to submit a revision to the present NRC-approved training program and asks for an NRC review and approval of that, while we are not prepared to do that now, we would probably have to deal with that using the SAT-based, performance-based approach specified in NUREG-1220.

To clarify, if a utility has a program that has been accredited by INPO, we expect that it will be the program of record. The Commission endorsed this program based upon the industry commitments to improve training, and the Commission is moving out of the role of reviewing and approving training programs.

The staff does not see that there is any need for, or value in, doing a review to come up with a lesser regulatory standard, because SAT-based programs are now the standard of record with NRC. If you are accredited, we expect you to follow the accredited program. We have revised the approach to the inspection of training programs, and we do not expect you to maintain a lesser standard for licensing with NRC than you have for training the people.

Therefore, the staff would consider a review of amendments or modifications to the cold license training program, which is SAT-based, and we would use as guidance in doing that review the kind of information that is contained in NUREG-1220, or you could propose that you have done it in accordance with the TSD process, which INPO is using. If you show that it's comparable to that, we would also consider it. That is a vehicle for getting a Commission approval of a performance-based or SAT-based program on a case-by-case basis for a cold plant. We don't mean to exclude you from being able to do performance-based training.

Q. 55. Are you still going to want Form 398 60 days prior to an examination?

A. We want to get to the point where, if you are accredited and have an approved simulation facility, all that is required is the certification. No prior review of the application will be necessary to determine eligibility, so the time between submittal of the application and the conduct of the exam could be very short.

However, until then, the Region needs time to review applications to determine whether the candidate is eligible, and to have an opportunity to interact with the training department to supplement that application in some cases. In those instances, we're still going to want to see it on the order of 60 days prior to the examination to start the review. However, we cannot take action on an application until the final completed application is filed.

Q. 56. There is one situation where you say you can administer the written exam and operating test but not issue a license until required evidence of control manipulations is supplied. It would seem a logical extension of this to allow us to put somebody up who hasn't completed all the requirements, pass him, and make the request, "Do not issue a license until he's subsequently certified." Does that make sense or is that completely prohibited?

A. The exception for manipulating the controls to which you refer is only for the individual who has not had an opportunity to perform the manipulations because the facility has been in extended shutdown. It is a condition beyond that candidate's control. However, we are moving into the role of accepting facility certification, and we want that certification to be unconditional. So the two situations are not comparable.

Q. 57. With respect to the logistics of submitting NRC Form 398 only after all program requirements have been completed, and; in addition, having to submit it 60 days prior to the examination date, would a reasonable compromise be to submit the 398s, unsigned by the facility, merely for a screening by the region, given that the the 60-day requirement is due to the time involved in such a screening? We could then follow them up once the program's been completed, maybe a day or a week before the examination, for approval by the Region.

A. Although those types of issues need to be worked out on an individual basis, it is preferable not to have licensing decisions made upon draft materials, particularly when there may be changes to them during the 60-day time frame. Advance copies (unsigned) may be submitted on a case-by-case basis if there is a concern about a particular candidate's eigibility, experience, or training.

However, what we review and base our licensing decisions on should be the application as it is submitted. The R lation does not provide for review of drafts and other documents along thos ines.

The time between submission of the document and when the candidate takes the examination appears to be the issue that's of greatest concern. There is one way you can shorten that time frame. Certify your simulation facilities early. That's one of the things that we would like people to pursue. The other thing we can do is to expedite the review, give the applications a review when they first come in, and see if we can't shorten the time needed since we can shorten the submission times between the time it has to come in and when we finalize for the exam. In other words, we will reconsider the 60-day time frame that was in the earlier version of the examiner standards in light of this requirement.

Q. 58. If a facility has an accredited initial program that's SAT based and has a plant-referenced simulator acceptable to the staff, then the time between submittal of the application and the exam can be of the order of a couple weeks?

A. Well, we're going to need to know well in advance of that how many candidates there are for licenses, but the review for eligibility, training and experience requirements is significantly reduced if all we have to do is look at two blocks on the form.

The intent of the rulemaking is to make the application process easier, and to put the burden of the determination of completion and eligibility on the facility, rather than on the staff, and accept that certification.

The issue that is significant is one of managing our own resources and knowing how many candidates are going to be put up and how many examiners we have to arrange for. Because it's a resource-intensive effort, we have to know, at about the time of the 90-day letter, how many candidates you are going to have for an exam on a given date. However, we don't need to know the specifics of who is being scheduled for the exam at that point.

Q. 59. Is there any difference between an "approved simulation facility" and a "certified simulation facility?"

A. In the context of applications, there is no difference. An acceptable simulation facility is one that is either certified or approved.

*Q. 60. What is a significant control manipulation?

A. Significant control manipulations are defined in Regulatory Guide 1.8. Examples can be found in items A-F of 55.59(c)(3) (On-the-Job Training for Requalification), although that's not an inclusive list. Basically, "significant control manipulations" involve situations that affect either power or reactivity, and that require manipulation of controls. Therefore, the plant should not be shutdown when these manipulations are performed, except for those manipulations required for fuel handling.

Q. 61. Will manipulations on a simulator be adequate?

A. Those five control manipulations have to be performed on the plant, unless the plant has not completed preoperational testing and is in its initial start-up test program.

Q. 62. Where does the requirement for five reactivity manipulations on the plant come from? Why can't they be performed on the simulator?

A. The control manipulation on the plant has been required for some time. That's not a change. We have now put it in the Regulation to make it explicit. In fact, for a long time, if you had not performed a start up and shut down of the plant, we actually had you perform them as a part of the NRC examination. So this is not, per se, a change in practice.

Q. 63. Must the five control manipulations be different?

A. Regulatory Guide 1.8 asks for diversity. Therefore, the intent is to have different manipulations; however, this is not necessarily required. If reactivity manipulations are repeated, this fact should be indicated in the comment section on the application.

Q. 64. As far as the five significant control manipulations are concerned, what's going to constitute evidence?

A. Documentation on the OJT qualification cards consisting of a simple "performed" code next to the signature of someone on shift is sufficient evidence.

Q. 65. What constitutes an extended shutdown?

A. An extended shutdown would be anything that is long enough to prevent an applicant from completing required manipulations or training prior to taking the examination.

As an example, if the plant is in a refueling outage that lasts for a year and the candidate did not get an opportunity to perform the control manipulations because the plant never got to Mode 2 or Mode 1, we would consider giving that individual an exam, and even issuing him a license limited to shutdown conditions.

When he completes the control manipulations on a hot plant, we would then remove the condition on his license that limits it to shutdown. We do not intend to penalize individuals because of an extended outage, but we also don't intend to give waivers for what's clearly a requirement of the regulations.

Q. 66. If you have to complete the initial simulator and classroom training prior to allowing a nonlicensed operator to manipulate the controls from the control room, how can a person get their initial license? After the time needed for your simulator and classroom training, and for the NRC exam, there is not much time left to complete the five reactivity manipulations.

A. This applies only to a hot license. If the individual has not had the opportunity to perform control manipulations on shift because of an extended shut down, we would consider examining him. And if he passes that exam, we may issue a license which is limited to shutdown.

Q. 67. Will startup and shutdown experience gained on a certified simulation facility be considered adequate experience for operator and senior operator candidates?

A. Yes. The same answer applies to the use of an approved simulation facility. The application goes to whatever is in your NRC-approved training program, or your INPO-accredited program for startup and shutdown experience.

Q. 68. How much time can pass before the five control manipulations must be completed before the written exam and operating tests are completed?

A. Up to six years. If, for example, we had given a shutdown license to a plant experiencing an extended shutdown, and we had given a license to a candidate who was constrained to shutdown mode, he could actually serve out the term of that license for a period of six years.

Q. 69. Does NRC intend to make start-up certifications a part of the operating test for every new licensed applicant? If so, what is the status of the present start-up certification?

A. Start-up certifications are done on an audit basis, and it is left to the chief examiner to determine which initial license candidates will be audited. Therefore, there are no changes from our past practice.

Q. 70. For NRC licensing examinations which have already been scheduled for the remainder of 1987, will relief be granted from the new requirement that all training program requirements be 100 percent completed prior to the submittal of NRC-398 and NRC-396 forms? These 1987 licensing exams were scheduled in the fall of 1986.

A. Forms 398 submitted after May 26, 1987 must comply with the new regulation.

Q. 71. What kind of "written request" is discussed in paragraph 55.31(a)(3)?

A. An authorized representative of the facility licensee is required to request that the written examination and operating test be administered to the applicant. This request may be included in the transmittal letter forwarding the applications to the NRC. In order for the NRC to approve such a request, the facility licensee must provide suitable facilities for the administration of the written examination and operating test.

Q. 72. If an approved training program based on SAT is used for initial or requalification training pursuant to 55.31(a)(4) and 55.59(c), are there <u>any</u> NRC imposed minimum training requirements? Of specific interest is the 3 months of on-th-job training for initial training and the annual requirements of 55.59(c)(3)(i) and (ii)?

A. There are no additional requirements provided that the response cited in Generic Letter 87-07 is filed and the facility plans to or has incorporated INPO guidelines 86-025 and 86-026. We are aware that INPO guideline 83-022 "PWR Control Room Operator, Senior Control Room Operator and Shift Supervisor Qualification" does contain the three months on shift training period.

Q. 73. Reg Guide 1.8 endorses ANSI/ANS 3.1 for ROs and SROs. In reviewing the ANSI/ANS 3.1 annual and biennial manipulation requirements, it was noted that the ANS 3.1 manipulation list does not agree with the 10CFR55 manipulation list for five manipulations. This deviation was not stated as an exception in Reg. Guide 1.8. Please clarify whether Regulatory Guide 1.8 should have taken exception to this deviation.

A. The five manipulations specified in the rule are necessary for eligibility, not for requalification.

Q. 74. At a minimum, five significant control manipulations must be performed which affect reactivity or power level. For a facility that has not completed pre-operational testing and the initial startup test program as described in its FSAR, the Commission may accept evidence of satisfactory performance of simulated control manipulations as part of a Commission approved training program by a trainee on a simulation facility. If the facility is in an extended shutdown, the NRC may administer the examinations, but may not issue the license until the required evidence of control manipulations is supplied.

Do we need to submit waivers since we don't have full power license yet? Does this apply only to initial license candidates, or to all license holders, e.g. renewal? Does the NRC accept in lieu of the above simulator manipulations the use of a research reactor?

A. If a plant has not completed the initial startup test program, successful completion of an approved training program on a simulation facility satisfies this requirement, and no waiver is required.

These requirements apply to initial and replacement license applicants. Requirements for renewal of licenses are covered in part 55.57. For plants that have completed their initial startup test program, applicants must complete the control manipulations on their actual plant.

*Q. 75. How will NRC evaluations of INPO-accredited programs affect NRC's willingness to allow use of a Commission approved program developed by using a systems approach to training? Notwithstanding the generality of this initial question, please address the following two specific situations within the answer.

(1) How would an "unfavorable" NRC review of an accredited program affect a facility's ability to use an approved program in lieu of paragraphs 55.59(c)(2), (3) and (4) pursuant to 55.59(c)?

(2) How will the NRC determine that a requal and/or initial program is based on a SAT during their evaluations? Of particular interest is the evaluation of element (5) under the 55.4 definition of SAT.

A. For clarification, an INPO-accredited program and an NRC-approved program are the same. (1) Unfavorable NRC review may be due to a number of conditions as outlined in the Commission Policy Statement of March 20, 1985, and continuing evaluations using NUREG-1220 or examinations administered by the region.

An unfavorable review would not have any direct effect on your program. NRC would work with INPO to resolve identified deficiencies. However, NRC has discretionary enforcement authority under the Policy Statement, and this could be imposed if continuing problems were identified as a result of performance-based inspections.

(2) The criteria used by NRC may be found in NUREG-1220.

Q. 76. Will any combination of significant control manipulations be acceptable as dictated by the facility's modes of operation during which the applicant is in training?

A. Refer to Reg Guide 1.8 Regulatory Position C.1.h for guidance on what the Commission considers to be acceptable.

The acceptability of any alternatives will have to be determined on a case-by-case basis by the facility and indicated in the comments sections of the application.

Obviously, some significant manipulations may not be possible in Mode 4 of a plant. It may be possible in Mode 5 or 6, whichever you use for refueling, in the case of a fuel-handling foreman, so it's going to have to be on a case-by-case determination.

Q. 77. In the staff's presentations under Training Program Approval, it was mentioned that in order to implement §55.31(a)(4) and §55.59(c), the next annual FSAR update could delete training program details. Please clarify what (event or achievement) is meant by "implementation" of §55.31(a)(4) and §55.59(c): what would the staff expect to see in the FSAR update different from that information which would be provided under Reg Guide 1.70 and the basis for development of the information sought (Reg Guide 1.70, Standard Review Plan, etc.). Should utilities assume that besides stating that the training program is INPO accredited the FSAR should retain revised program details in accordance with details sought under Reg Guide 1.70?

A. The staff plans to revise Section 13.2, Training of NUREG-0800 to provide guidance for information contained in revisions to the FSAR. There are no plans at this time to revise Regulatory Guide 1.70. In lieu of additional guidance at this time the staff recommends that the licensed training programs which are accredited and are based on a systems approach to training only need reference Generic Letter 87-07 and the dates the programs were accredited. Plans for certification of simulation facilities should also be included. With regard to other training programs contained in Section 13.2 of the FSAR, those training programs listed in the March 20, 1985 Commission Policy Statement on Training and Qualification of Nuclear Power Plant Personnel which are accredited need to reference the date of accreditation. For those facilities which are developing programs under the accreditation process the FSAR should identify the programs and provide the dates that SERs were or are planned to be submitted.

Medical Examination (Subpart C, Section 55.21)

Q. 78. How long before administration of a license exam must an individual have had a medical exam?

A. The form verifying the medical exam should come in at the same time the license application comes in. It will be good for six months from the date it is signed by the physician; waivers, as stated in ES-111, will apply.

Q. 79. Assume a physician may not desire to release personnel medical data due to a patient-doctor relationship. What does the utility do if the information is treated as privileged by the physician?

A. The Privacy Act Statement contained in NRC Form 396, "Certification of Medical Examination by Facility Licensee," does not allow for privileged information being withheld by the facility or the physician if it is requested by NRC. It is the utility's responsibility to ensure that the records can be made available for inspection. Utilities should ensure that the physician understands this requirement.

Q. 80. For individuals who are currently under either license conditions or letters from the regions to submit continuing medical follow-up information (e.g., quarterly blood pressure readings) for review and analysis, do these conditions continue to apply after May 26, or should the individual submit this information to the utility's physician for evaluation and analysis (without a copy to the regions)?

A. Continue to report quarterly blood pressure or other restrictions. High blood pressure or other restrictions are usually associated with some remedial programs (diet, medication, or a combination) and should result in normal or acceptable conditions. At that time the physician can request termination of these reporting requirements.

Certification (Subpart C, Section 55.23; NRC Form 396)

Q. 81. Has NRC Form 396 changed?

A. Yes. A copy of the new version has been distributed to everyone at the public meetings.

Q. 82. Must a Form 396 be submitted for every license application?

A. Yes, but the detailed medical information only has to be submitted when a conditional license is requested.

Q. 83. Under the new Rule will you receive a Form 396 only upon license renewal?

A. That is correct. We expect to receive a Form 396, "Certification of Medical Examination by Facility Licensee," at the end of the appropriate license period, when the renewal application is submitted.

Q. 84. Is the examining physician an authorized representative of the facility licensee and thus allowed to complete and sign an NRC Form 396?

A. No. The Form 396 does not have a place for the physician to sign. The physician's name and license number are required, but the authorized representative is the highest level of corporate management who signed the application. That will be the same person who signs the Form 398.

Q. 85. Can Form 396 be held by the licensees for the two-year update or do they have to be submitted to the Commission? If the latter, how often do they have to be submitted?

A. You don't have to keep the Form 396 on file, but you must keep some documentation that the medical exam was performed and that the operator meets the ANSI standard. The Form 396 is only the means by which you transmit that information to us upon renewal of a six-year license.

Q. 86. For a multiple-unit site, can the signature on the application be from the individual responsible for operations, the highest ranking individual at that site? So that you could have different signatures; i.e., Sequoyah applications would different signatures than those of Brown's Ferry?

A. Yes.

Q. 87. Will the Commission develop a protocol to ensure that detailed medical records will be forwarded to the NRC medical experts and not made available to lay persons?

A. This is an issue for which industry initiative may be appropriate, and it has been discussed by NRC, INPO and the accrediting board.

The staff needs to have assurance that the medical examination was done in accordance with the ANSI standard. The staff does not need to see the private medical record from the doctor, because it may include other medical information not related to the standard, or may get into the area of privileged information between doctor and patient.

It might be appropriate for the industry to develop an examination form which would track the standard, such that the doctor would provide a statement to the responsible officer that the examination had been completed and which would identify the areas evaluated. Such a report would be all that is necessary for the individual's file, and it would be available on site.

If, in the case of a request for a license condition based upon some medically disqualifying condition that can be accommodated through medication, therapy, or something else, the doctor would submit the examination form and any additional supporting information for the staff medical doctor to review to make a determination as to whether to issue a conditioned license.

That information would be handled in the same manner as we now handle confidential information that is covered by the Privacy Act. Once submitted to NRC, the information would be exempt from further public disclosure, and it would be the basis for our review.

We don't anticipate developing any new protocols for handling that type of information, but we recommend that you have evidence available on site showing that the medical doctors conducted the examination in accordance with the ANSI standard, or that you provide the physician a copy of the standard and let him complete whatever form you use now for that type of examination. It's only a suggestion. The actual requirement is that the examination be conducted in accordance with the standard.

Incapacitation Because of Disability or Illness (Subpart C, Section 55.25)

*Q. 88. Must the felony blocks on Form 396 be completed in order for the form to be considered complete and to be accepted by the NRC?

A. The form has been revised to delete the felony blocks. A certification is now required that the individual meets the safeguards requirements of the facility.

Q. 89. Will a standardized form be provided by the Commission for notification of disability or illness?

A. The intent is that licensees keep the records. We don't need to be involved when someone breaks an arm or may be out for an extended illness. If it's a temporary condition, no notification is required.

We ask the question, "can the operator perform licensed duties?" If the individual is going on shift, and there is any question in your mind, we would say submit a revised Form 396 to describe the condition/remedy. We may tell you it's not necessary to make a ruling on it. But you can have a problem if you don't notify us and some individual has a problem in performing licensed duties. If a person is to resume duties after a disabling condition, then we would need to be notified with a Form 396.

Q. 90. What is the relationship between the facility licensee and the individual with regard to responsibility for notification on medical issues? The Regulations indicate that we have a 30-day notification period upon learning the diagnosis. The question really is, what's the mechanism for the facility to become aware of the diagnosis; and what responsibility does the individual licensee have to make that notification to the facility? There's the potential to get into a problem if we don't learn of a licensee's medical condition.

A. It is the operator's responsibility not to operate that plant in a disabled condition. The Regulation says that the facility licensee shall notify the Commission, but we believe that, logically, the operator should have enough responsibility to tell you there's a problem. Facility procedures should be set up to ensure that that occurs.

There is nothing in the Regulation that obligates the operator, or the senior operator, to let the facility know. But there is an obligation for you, on the biennial medical examination, to identify and report disabling medical conditions.

Q. 91. If the individual has a medical problem during the period of the license, for instance a broken arm, does this need to be reported to NRC if the operator is not carrying on licensed duties? For example, if he is training individuals in a classroom, do we still have to report it, or only if he's carrying on licensed duties per the Tech Specs?

A. It's when that person serves on shift that we have to know about a disability. Usually, if he has a temporary disability that would preclude him from performing regular duties, he's not to perform those duties with that temporary disability. We need <u>not</u> know if it's temporary. When you return him

to shift duties, if he has been absent for a period of time, you control that process with the 40-hour parallel shift duties and maintain the certification on file. It's only in case of a permanent disability that we would have to be notified. In that circumstance you want to include a qualification in the license to allow the operator to perform licensed duties with the medical condition if some compensatory measure effectively offsets that condition.

Q. 92. Can an individual be returned to active licensed duties after the medical disability has been corrected if a portion of the requal program has been missed?

A. The operator must be current in the requalification program before he returns to duty, and he must receive 40 hours of parallel watch standing.

Documentation (Subpart C, Section 55.27)

Q. 93. The utilities must maintain some records in fire proof vaults. I don't feel that the physician's offices meet those requirements. Yet this is a qualification record, as defined by that ANSI Standard. Are we going to have to provide physicians some type of fire proof storage? How do we handle that aspect of this record keeping?

A. We recommended to INPO, and they are considering the development of, an examination report form which would cover the areas in the ANSI Standard and which would be submitted from the medical examiner to the facility for retention.

Q. 94. Can private physicians maintain medical records for the facility licensee, as is currently practiced?

A. You may choose to delegate that responsibility to them, but it is, indeed, your responsibility to ensure that the appropriate records are available for inspection.

Regulatory Guide 1.8 and ANSI/ANS 3.1

Q. 95. When we want to go from a non-accredited status to an accredited status, what would the step-by-step progression, and the changes in the regulatory environment be for us?

A. The date you receive accreditation from the Academy, you would send NRC a letter that says "we've been accredited on this date." You then begin that program because the previous training program is superseded. You need not tell us about it until the next FSAR update, which is required pursuant to 10 CFR 50.71(e)(4).

Simply send a letter saying that you were accredited, and the date of accreditation, and certify that your requalification program is based on a systems approach to training; this supersedes any prior commitments to NRC by way of additional training.

Q. 96. For the FSAR update following accreditation, it would not be necessary to have the extent of detail in that update, as previously was the case, is that correct?

A. That is correct. It can be blank, except for the information about the date of accreditation. It need not say anything, other than you were accredited, and the date you achieved the accreditation. All records associated with your training program, following accreditation, are available to the staff on site for review; they need not be submitted.

Q. 97. If the facility does not certify its training programs in accordance with Generic Letter 87-07, when must FSAR Chapter 13 be revised and how do I do it?

A. The Rule becomes effective on May 26th, 1987, and at that time, you must comply with the new provisions in the requalification program. So, there would need to be a change to the FSAR submitted in accordance with 10 CFR 50.54(i) and 55.59(c), to conform to the regulation, if you chose not to certify the training program.

The Commission endorsed the INPO Program for accreditation in the Policy Statement. We said we would accept a program after it was accredited and certified to be based on a systems approach to training. A utility that perceives they get some advantage by leaving an old training program on the docket because that's all NRC is going to inspect is misguided. That is not consistent with the intent of improving training in the industry. We do not require that you tell us all the details about an accredited program, but we do expect you to implement them.

We have heard rumors that some facilities intend to have one standard for NRC, and a different standard for INPO. That is not the Commission's intent in the Policy Statement and we would bring such a practice to the Commission's attention promptly. We expect you to follow the accredited program when it is accredited. Failure to implement that program will be of concern both to INPO and to NRC.

Q. 98. Will NRC be prepared to approve or disapprove FSAR Chapter 13 changes within the 60 days allowed for implementing 10 CFR 55 requirements?

A. The approval is effective automatically, if you have an accredited program and have certified that it is based on a systems approach in accordance with GL 87-07. You shouldn't expect to see any response from the Commission on changes that are implemented as a result of this rule, with the exception of any license amendments which are required because of something in your Technical Specifications. There are a number of facilities that have a more restrictive requirement in their Technical Specifications than that for which they would have to apply; amending their Technical Specifications to obtain relief is permitted under the rule. It would be an administrative change in order to conform with the Regulation. But it would not have to be acted on within 60 days and would be processed as any routine change to the Technical Specifications.

If you do not plan to certify that your program is based on a systems approach, we cannot act on it until we receive it in accordance with 10 CFR 50.54(i).

It will then be reviewed in the usual way. In this case, it would not be reasonable to expect it to be completed by May 26, 1987.

Q. 99. But in the meantime, is Revision 1 of Regulatory Guide 1.8 our commitment, as approved in our FSAR?

A. Yes. Your commitment is that which is approved in the FSAR. It is binding, as are any of the more restrictive requirements in the Rule, until you are accredited and so inform us by letter. At that point, you can make changes pursuant to 50.59 to remove things from your FSAR and your program. When you need to amend a license, you submit the application for an amendment to strike the sections in the Technical Specifications or in the license which have been superseded by accreditation.

Q. 100. Upon achieving accreditation, would we then become committed to Regulatory Guide 1.8, Revision 2?

A. No. Regulatory Guide 1.8, Rev. 2, goes into effect for all facilities, as is indicated in the implementation section of the Guide, on March 31, 1988. However, if you have an accredited program, you are no longer obligated to follow the Guide. At that point, you can put the Regulatory Guide aside, but you now must implement your commitment to the Accrediting Board. We have looked at that information, and we've concluded that INPO guidelines in this area are equivalent to the staff guidelines in Regulatory Guides.

Q. 101. This question addresses NRC approval of training programs. Do revisions to requal programs which reduce their scope require NRC review and approval per 10 CFR 50.54.i-1 if the program is INPO accredited? And can the term "reduction of scope" be clarified?

A. NRC review is not required if the program is accredited and is certified to be based upon a systems approach to training. Element 5 of the SAT includes revision of training in order to meet the needs of the job incumbents; therefore, we expect you to update your program based on this feedback.

The intent is that if you are SAT based, and are revising the program based upon an evaluation of the needs of the trainees, that the result of that evaluation is the program you are going to conduct. And you have a basis for that evaluation. Reducing the scope does not apply. The intent is to give you the flexibility to modify the program in order to provide the training that you, the facility licensee, determines appropriate for your job incumbents.

We have seen that process work through the INPO-accreditation process. We have confidence in the process. And even though we are sure that there are going to be cases where there is content left out, where we are going to have some concerns about something not having been covered, the process is there so that you can cover what's needed.

The training and the feedback process you provide will permit the training to be job-relevant. It is training which the trainees agree is important.

Probably the only exception is for the instructor who has had that training. But the old test-out exemption is gone. You can't take an exam, do well on it,

and eliminate training in a systems approach. If someone misses a portion of the training program because he has been ill or been away, you may use something like a required reading program and a test to ensure that he has covered the material. But when the Rule says training on a continuing basis, it refers to whatever cycle you have designed that has been accepted by the accrediting board.

NRC has separated itself from the training review. We would prefer, after you are accredited, that you certify you have a systems approach in place to us, and eliminate the details from your FSAR. Certification is all that we need because the periodic reviews through the accreditation process are the vehicle for keeping your training programs current. We think that the separation of training from examining is the most significant part of this rule-making.

Q. 102. There are a lot of documents involved with the accreditation process, so if an IE inspector came in and said, "We think that your program is less than the scope," what is he basing that on?

A. Regional inspectors are governed by inspection module IP 41701, which requires a performance-based inspection. If you make a change to your program through the accreditation process using the mechanisms for revising and updating your program, based upon feedback and need, and that's the reason that you're revising it, we don't see that that is an issue of lessening the scope.

The lessening of a scope issue had to do with the old program when it was regulatory-based, where we required a certain number of hours in the classroom and certain types of content. The approach now is one of modeling the program based upon performance and need, and the process is one that has been endorsed by the Commission through the policy statement. To the extent that you need to change the program based upon feedback of your own performance, that's appropriate.

If you have an approved program today that calls for administering a comprehensive written exam annually and you want to change that to a comprehensive written exam every two years, the regulation is the basis for concluding that that is acceptable; that is not reducing the scope. That is simply conforming to the regulation. You can make changes to match the regulation either through the 50.59 review process or by amending your license. There are a few facilities which have commitments to operator training programs associated with a staffing requirement section in Section 6 of the Technical Specifications. If you are in that category, you can submit an amendment request to the Commission for an administrative change to your Technical Specifications to conform to the requirements of the regulation, but you may not do less if it is, in fact, a requirement in your license now. You can't do less than what's currently in the license. If it's in your approved program, you can do a 50.59 review to conform to the regulation.

Q. 103. Let's say that in my systematic approach to training, I have determined that it doesn't take three years of experience to meet the requirements. I complete the program with whatever experience we determine is appropriate, and we've got an accredited program. Do we still have to have the experience requirements in our program? Do we still have to meet them if we have an accredited program?

A. The industry, through NUMARC, has made a commitment to NRC in both training and qualifications. We did not take exception to the three-year requirement for experience. In the past we have accepted two years for reactor operators.

On the effective date of Regulatory Guide 1.8, March 31, 1988, we would expect people to meet ANS 3.1 unless they have already committed to that.

Within the accreditation process, there is a hierarchy of guidelines just as within the regulations. An acceptable way of meeting the regulation, as it relates to experience requirements, is by conforming to ANS 3.1. Another way is through the accreditation process, which also has guidelines.

In the case of a review and approval by the Staff, we would look at any bases for waivers of those requirements and alternatives that are proposed. In the accreditation process, the mechanisms are already built in for you to do that yourselves on a case-by-case basis.

So accreditation criteria for entering into training as it relates to qualifications are described in the INPO training guidelines for each position. They articulate what the entry levels are for training and have in that process a mechanism for granting waivers to certain requirements.

The Commission, through this rule making, has said, "We will accept the candidate at the end of training if he is certified to have been a graduate of an accredited program." We have done that through promulgation of the policy statement on training and qualification and an endorsement of the accrediation program. That means that you control the review and waiver process, through your vehicle with INPO. Now, if you want to deviate significantly from the INPO guidelines, I would suggest that you need to contact INPO and they may need to contact NUMARC if you want to come up with a radically new interpretation.

But, in fact, if you have a basis for what you're doing which is documented, and you do that on an individual basis, we do not intend to second-guess your judgement. In fact, we would not see it on the application when you have both an accredited program and a simulation facility acceptable to the Commission for the conduct of operating tests.

That's a major change in the way we have done business in the past; it puts a lot of trust in the industry through the self-initiative of INPO and NUMARC in order to provide both training and qualifications.

Q. 104. Have the experience requirements to sit for an RO or SRO exam stated in Reg Guide 1.8 and NUREG-1021 changed?

A. Yes, in that the experience requirements are not operative if you have an accredited program and have certified your simulation facility. ES-109 will be changed under the revision to NUREG-1021 and under Regulatory Guide 1.8, which becomes effective March 31, 1988 for nonaccredited programs.

Q. 105. Will NRC change any of the eligibility requirements in the Examiner Standards for taking the SRO exam discussed as a result of implementing 10 CFR 55? This question is being asked in light of the fact that 10 CFR 55 supersedes previous regulations. Specifically, will NRC require that someone have one

year of experience as an RO before entering the training program for an SRO? ANSI/ANS 3.1-1981 requires a minimum of six months.

A. Yes, there is a change to the eligibility requirements except if a facility has an accredited program and an acceptable simulation facility. In that case, the requirement goes away because it becomes part of your accredited program.

Q. 106. The way I understand the Examiner Standards presently, the experience requirement to take a reactor operator exam is two years of power plant experience, one of which is nuclear. ANSI Standard 3.1-1981, specifies three years of power plant experience, one of which is nuclear. The two remaining years should be as a nonlicensed operator, and of that, six months should be as a nonlicensed operator at the facility for which you seek the license. So, that would be, in my interpretation, a three-year requirement now, whereas in the past it was a two year. Is that correct?

A. That is correct. The standard had not been imposed across the board in 1981. There are some facilities that have committed to that standard in their application, and were reviewed against that standard. A previous version of the Examiner Standards was based upon ANSI N18.1-1971, because we had not endorsed ANSI 3.1. This rule making process endorses ANSI 3.1.-1981.

Q. 107. And the same applies for the senior operator. Examiner Standard 109 says four years, and ANSI 3.1 says three. So, you will be changing that one also?

A. The Reg Guide takes exception to the ANSI Standard. Reg Guide 1.8 cites a four-year requirement for experience for the SRO.

*Q. 108. Reg Guide 1.8 endorses certain positions through ANSI 3.1-1981 for training and qualifications. The ANSI Standard has experience requirements which are different from those in the Examiner Standards. For instance, for a reactor operator, ANSI 3.1 of 1981 requires three years power plant experience, one of which is nuclear. And I believe it says two years as a nonlicensed operator, with six months as a nonlicensed operator at the facility. Is the Reg Guide endorsing those eligibility requirements also, or just training?

A. We have not taken exception to three years of experience for reactor operator. We have endorsed the ANSI Standard with respect to three years for RO, but have taken exception by requiring the four years for SRO. That's the same as the practice has been. We recognize the difference between the Examiner Standards and the Reg Guide in this area. The Examiner Standards will be changed to coincide with the implementation date of the Reg Guide, which is March 31, 1988.

Q. 109. Are the experience requirements for operator licenses applicable also to research and training reactors?

A. The requirements for test and research reactors have not changed. Whatever has been approved in the past, in terms of eligibility requirements, continues for test and research reactors. The eligibility requirements in Regulatory Guide 1.8 refer to power reactors.

Q. 110. I have an accredited SAT-based program. The simulator should be available next year and will meet ANSI/ANS 3.5 Standards. It's my understanding that we are okay because we meet those three elements, SAT, INPO accredited, and our simulator should meet your standards. Am I correct, that in meeting those standards, I don't have to worry about the ANSI Standards requiring two years as a nonlicensed operator with six months at the plant?

A. No, that's not entirely correct. While you don't have to submit that information to NRC, the industry, through NUMARC and INPO's training guidelines and accreditation, has standards comparable to those in the ANSI standard. Therefore, we feel that the qualification requirements are still being met. The only difference is that you don't have to submit all that information to us.

We had a case recently where an individual was a graduate of an accredited program but did not meet the experience eligibility requirements. His plant experience was that of a chemist, a position not comparable either to that of a control room operator or a shift engineer. We denied the application, and it was denied on appeal. We aren't going to see that kind of information in the future, and we expect the industry to police itself with respect to ensuring that the NUMARC commitments are, indeed, met. Because we are stepping out of that area, and not requiring it to be submitted, does not mean that you can relax your standards.

Q. 111. In the example that you just gave you were apparently talking about an SRO candidate, and I was referring, primarily, to RO candidates. In the past, particularly for those who weren't committed to the 1981 version of that ANSI Standard, there was no requirement for RO candidates to have been nonlicensed operators. Now we are faced with the new requirement, and I've got a group of people who are in training now, who don't necessarily have that background.

A. There is one aspect of the accreditation process that you may be missing. And it's a part of the process that pertains to meeting NRC eligibility requirements. The accreditation process does include a mechanism for you to exempt, or waive aspects, based upon having performed an evaluation of the candidate's experience and/or testing. That is the same kind of process that we use in making a judgement, on a case-by-case basis, about eligibility, where a person didn't cross all the "t's" and dot all the" i's".

We are looking for you to use that same process. You may choose, for a documented reason, as a part of your program, to waive a portion of the requirement, based upon experience and/or testing. That is a part of the accreditation process, and we understand that, and we expect that to continue. And the only difference is, you don't have to submit it to us to request a waiver.

Q. 112. Will NRC continue to accept one year as a Navy reactor operator, engineering watch supervisor, etc., as meeting the one-year reactor operator experience requirement, if one year remains as a requirement?

A. Yes.

Q. 113. The definition for related technical training in ANSI/ANS 3.1 says, "Formal training beyond the high school level in technical subjects, associated with the position in question, such as acquired in several programs, including utilities, and others. Such training program shall be of a scheduled and

planned length, and include text materials and lectures." All of our programs meet that definition of related technical training, and yet we can't count it for experience. Why not?

A. Experience is an eligibility requirement. If the person has the experience and the qualifications, then he goes into a training program. You have mechanisms, through your accreditation process, where you look at the entry level into your training program. You can count time and training prior to that program, but we have not been giving credit for experience for the training which is required and has been approved by NRC as a part of the specific program leading up to license eligibility.

Q. 114. Do radiation protection personnel now require three years experience per ANS 3.1-1981, even if Tech Specs require less experience?

A. The requirements for radiation protection personnel in Reg Guide 1.8 are the same as those included in ANSI Standard 18.1 of 1971.

Q. 115. About five years ago, we all wrote our response to the Denton letter and said that we would do specific punch list items to train our STAs. Now if we have an approved STA training program, per INPO, the old prescriptive hours that we committed to no longer apply. However, if that punch list item is in our FSAR, we need to remove it "per the INPO-accredited program." Is that correct?

A. That is correct, as it relates to licensed operator programs and other programs for which you have made training commitments which are covered by the Commission's Policy Statement on training and qualifications. And in both cases, it is simply a 50.59 type review to amend or update your FSAR to indicate the date on which you received accreditation, for instance, for the STA position. The only exception relates to the Commission Policy Statement on engineering expertise on shift or the use of the dual role SRO/STA compared with a separate STA, as indicated in Reg Guide 1.8, Regulatory Position C.1.j.

Q. 116. When an applied science degree is being considered, what constitutes an acceptable degree? How do we know what specific degree allows someone to be an instant SRO or whether he must first be an RO?

A. The staff reviews those and we use our best judgment, as do the people in the regions, in making a determination based on an application. If you feel that an application has been unfairly rejected, you can request reviews by regional and headquarter's management. If you want to bring it up through a review, we can certainly do that on a plant-specific basis.

Q. 117. Is it true that in the future it won't be a problem, because you won't check up on us? If we send an application in saying someone's an SRO, will you accept the application because you won't know what degree he has because it won't be listed?

A. It's our understanding that the determination will be made in accordance with guidelines that have been established under your INPO-accredited program.

The Commission has made a determination that we're going to trust the industry and let the industry programs be operative in the area of training and qualifications under the policy statement. We understand generically what those commitments mean, and we've reviewed them quite closely.

If we find that they're being abused, either through an inspection program or through any other vehicle, that's going to cause grave concern as to whether the industry is able to police itself and act responsibly, given what we have delegated to you through those programs.

We've been on team visits and at board meetings and we've seen utilities being put through their paces to describe what mechanisms they use to review and make determinations about the eligibility for candidates to enter into training and whether they are qualified to perform in that job position.

What we're saying is that we believe that process is the appropriate one to use. If you do that in a straightforward, rigorous manner, that's what we're looking for. We're not going to nit-pick and second-guess your judgments, provided you have an adequate basis for them and provided they are consistent with what has been approved generically through the accreditation process and the guidance that INPO has issued.

Q. 118. Are documents referred to, such as NUREG-0737, still required as references?

A. Revision 2 of Regulatory Guide 1.8 supersedes NUREG-0737 as it relates to operator licensing. However, there may be some aspects of NUREG-0737 which have been committed to in a facility training program, and the initial program may not yet have been accredited. Those commitments are still in effect. They are part of the approved program, and remain so until that program is superseded by an accredited program, and you provide the letter to the staff, as is described in Generic Letter 87-07 which forwarded the Rule.

Q. 119. It seems that Regulatory Guide 1.8 says a diploma or equivalent is required only for the shift supervisor and senior operator. ANS 3.1 requires only a high school diploma for licensed operators. Is that what you intend?

A. Yes. The intent of the exception taken in regulatory position C.1.d. was to eliminate the 30 and 60 semester hours of college-level education from the shift supervisor and SRO positions. The definition section in ANS 3.1 includes the General Education Development Test as the equivalent to a high school diploma, and it would be acceptable for all three positions.

Q. 120. 10 CFR 55 provides allowable training exceptions from this rule if a systematic approach to training is used. Reg. Guide 1.8 however, does not state that there are allowable training exceptions from following ANSI/ANS 3.1 for ROs and SROs. Please explain why exceptions were not allowed for RO and SRO training when a systematic approach is used.

A. Exemptions are allowed under Section D, Implementation, of Regulatory Guide 1.8, which states that the guidance in Section C does not apply to those training programs which have been accredited under an accreditation program which has been endorsed by the NRC.

WRITTEN EXAMINATIONS AND OPERATING TESTS

General Issues (Including Learning Objectives and Examination Question Bank)

Q. 121. Will the format of the written exams change? If so, how?

A. At the present time the format of the examinations is not expected to change, although there are numerous initiatives under way which may lead to format changes in one way or another as we refine the process.

Q. 122. The exam content states that Licensee Event Reports (LER) will be included in the exam. How is the scope of LERs determined and communicated to the individual taking the examination?

A. We expect your training program to include relevant LERs. We would sample from your learning objectives, but we would not necessarily be limited to those.

We would not take an LER from a significantly different plant and try to adapt it to your plant. But if there were LERs that reflect either training needs or operational safety, we are going to include those in the exam process. It may be in the written exam or on the operating test.

Q. 123. Will there be any effort by NRC to ensure a consistent level of detail in the facility's learning objectives?

A. Yes. We have a major effort under way to evaluate the quality of learning objectives that are submitted for an exam. This is a significant issue because we have seen a large spectrum of differences in learning objectives.

As a part of our examination development efforts, we have been reviewing the quality of the learning objectives submitted with materials for the 90-day letters. We're evaluating their quality and using that as a feedback mechanism into the evaluation process for how well accreditation is working.

Where we find that the learning objectives are not adequate, we'll use other materials. Where they are adequate, we will use them. We intend to evolve over time to the point where we can construct an NRC exam solely using the facility learning objectives.

We have also opened our examination development training program to INPO and others, providing information to them on how we construct examinations and on the training that we're providing to examiners. There are also activities underway within INPO to improve development of testing objectives.

Q. 124. How does the Commission intend to implement written examinations based upon the knowledge, skills, and abilities identified in the learning objectives derived from the systematic analysis of licensed operator duties?

A. It's our intent, as expressed in the Statement of Considerations, to reach the point where the training program's learning objectives become the major source for our examination. We want to sample according to a scheme that looks at the most important job performance, knowledge, and abilities, and we have that area documented with our K/A Catalogs. In fact, there's a supplement to the PWR Catalog being published that has the same sections as the BWR Catalog.

In addition, we asked a PWR and BWR panel of subject-matter experts to rate the testing emphasis they thought we should have. That rating forms the basis of NRC's sampling plan, so we will sample the most important job content. What we expect in terms of conditions and standards of performance will be driven by the learning objectives, and that will form the basis of our testing objectives. The only slight difference between testing and learning objectives has to do with the context in which you judge performance, because one is a time-limited testing situation, and the other might allow a longer training or job performance period.

We don't want our exam to be devoid of contact with your training program. The purpose is to get to the same spot. Of course we reserve the right to look at LERs and other events, and to further investigate other questions, with your assistance, manuals, license amendments, or other materials, because even if we judge our question in terms of your learning objectives, the material to develop the question and the answer has to come from something other than the learning objective.

Q. 125. What, if any, utility actions will NRC require to incorporate utility learning objectives into the NRC testing objectives?

A. The better your materials are, the more closely they are keyed to our K/A catalog, the easier it is for us to use them. But we're not going to require any actions. In the 90-day letters that go out prior to the administration of an exam, we're requesting that learning objectives be submitted, and we're evaluating them, and if they are appropriate for use in our exam, both the written and the operating test, we would employ them to the extent that they are consistent with our sampling plan in the Examiner's Handbook and the K/A Catalogs.

We've been training examiners to look at learning objectives and to use them for testing objectives. To the extent that you can provide material to the examiner where the learning objectives provide a standard of performance and you key the training materials in which the material to develop that question is available, and if you know a K/A in the catalog with an importance rating that's above 2.5, you will have provided the basis for developing a good question and a good examination.

Our experience is that the learning objectives may have conditions and standards of performance, but the supporting training materials are not there to develop the appropriate questions or they're cast in such a way that it's unclear whether they are related to a K/A associated with job content having a relatively high safety significance.

We also did not want to see the "enabling objectives," because these are for training purposes and are not grounded in job performance. We want objectives that are "terminal," and have to do with job performance; and the better the material is that you supply, the closer our exam will mirror those objectives.

We've spent a great deal of time looking at how one judges a question based on the learning objective so that the question will elicit the kind of performance or knowledge or response that lets us infer that the person has mastered that particular aspect of the job.

There's a related issue. We issued Generic Letter 87-01, which announced the availability of the NRC Examination Question Bank, and indicated the mechanisms by which utilities could request the information on what's contained in the bank on their facility or similar facilities. It also indicated a mechanism for you to update questions on the bank, either where we have inaccurate references or the design of the facility has changed.

We purged the bank of questions that were more than two years old because some of the older questions did not meet today's quality standards. In some cases, we have only four or five examinations on the bank for a particular utility. We want to improve that and are interested in your comments and/or questions for the bank. We'll also provide the bank to you for creating your own questions. To the extent you provide us information that's in a format which is compatible with loading into the bank, we can do that directly, either through hard copy or electronically. But for security reasons, we can't give you direct access to the bank. We have discussed with INPO the need for an industry initiative to validate a set of plant-specific questions that could be a source for NRC exams.

Q. 126. If the utility has established some internal guidelines of what they expect of the individual, will you accept those guidelines for the purposes of written examinations?

A. Yes. We would have an issue that we would discuss with the utility, that we would want to revise the guidelines if they did not conform to our testing blueprint based on the job-related knowledge and ability statements with high safety significance.

Q. 127. Can we submit that in advance of the written examination, and then come to an agreement somewhere up front?

A. It can be part of the materials that you submit in accordance with the 90-day letter, and we would consider that in developing the exam.

Q. 128. You mentioned a training program for the examiners on writing the learning objectives. How is that program being instructed; who's teaching that?

A. We started several years back working on writing multiple choice questions, and have been doing one-week training sessions in all the regions, twice at headquarters, and once each for contractors. During the one-week training session, examiners converted learning objectives into testing objectives and practiced writing testing objectives.

We've shared that information with INPO and have had INPO staff participate and take the materials back with them, so the information that we're using to develop examinations is available to you through INPO, or even through the staff if you want to request it.

Written Examinations and Operating Tests (Statement of Considerations)

Q. 129. In the Statement of Considerations, under Part D, Written Examinations and Operating Tests, it says: "Learning objectives derived from job-task

analyses should form the basis for licensing written examinations and operating tests at a facility. Ultimately, the NRC testing objectives will reflect facility licensee-developed learning objectives. In the interim, while programs are being developed and reviewed for accreditation, the NRC has activities underway to improve the content validity of NRC examinations and operating tests." Will NRC commit to solely using the learning objectives for plants that have accredited operator programs?

A. No. The rule states that the learning objectives will be used in part, but that other things, like LERs, etc., will also be used.

Q. 130. Why are written examinations only taken in part from learning objectives?

A. The hope is, eventually, to take the entire written examination from learning objectives. However, at this time, there are many places where the learning objectives are somewhat incomplete or inadequate. So, we utilize LERs and other training materials, such as lesson plans, system descriptions, and procedures, to supplement the learning objectives.

Q. 131. When will NRC activities underway to improve the content validity of NRC examinations and operating tests be complete?

A. We view this an an ongoing activity. We have a number of initiatives scheduled for completion in this fiscal year, including the revised Handbook (NUREG-1121), passing-point workshop, and the supplement to the PWR K/A Catalog (NUREG-1122) to conform to the BWR K/A Catalog (NUREG-1123).

By the end of this fiscal year, a number of milestones toward meeting that objective will have been met. But this is a continuing process, as we work toward a common understanding of what's necessary for assessing job performance. With the advent of the K/A Catalogs, we've made significant improvements in basing test content on the operator's performance-based job requirements: that is the essence of content validity. We have used a systematic process involving subject matter experts. We have supplemented the PWR Catalog, which now has a theory and component section similar to that in the BWR Catalog.

In addition to that, we have been looking at alternate ways to sample the content of the NRC written exam. At present ES-202 and 402 weight all four sections of the exam equally. We've looked at a way of sampling according to the sections in the Catalog. The differences would reflect differences between RO and SRO positions. We'll sample more heavily in plant systems for ROs and more heavily in emergencies that have fewer normal and more integrated plant responses for SROs. The final decision on that will be made based on the recommendation of a Panel made up of industry representatives and NRC contractor personnel that will meet May 18th through the 22nd.

We will consider the panel's recommendations to us before we make any recommendations to change the format of the NRC exam. That sampling plan from our Catalog and your input on your learning objectives should, in fact, be the essence of a content-valid exam.

Q. 132. I've heard different people say that all NRC exams are now based on the K/A Catalog. Are all NRC Examiner-Contractors held to that Catalog as a standard?

A. Examinations prepared by Contract Examiners are reviewed in the Region so the standard for the regional Examiner and the Contract Examiner is not different. Like regional examiners, the Contractor Examiners are required to write an examination which meets the requirements of the Examiners' standards, which now reference the Catalog and will, in a future revision, also reference the handbook.

We are sensitive to feedback from the exam process. We look at the facility comments generated during the exam review process. We intend to be very responsive to comments that point out any differences between a contract exam and one administered by NRC examiners.

*Q. 133. Is the new rule going to change the format of the exams (e.g., largely essay-type)?

A. The new rule does not alter the format of the exam. The current Examiner Standard, ES-202, permits a maximum of 25 percent objective-type questions (e.g. multiple-choice, true-false), a maximum of 25 percent longer essay-type questions, and a minimum of 50 percent short-answer questions in Sections 2-4 and 6-8 of the exam. Exam Sections 1 and 5 (reactor theory and thermodynamics) can consist of a greater portion of objective-type questions.

We're working on the issue of a generic exam--a prototype, objective exam for theory and component operation.

Q. 134. Have you pilot-tested Form 157 or have you had any practice with it?

A. No. The new Form 157 will be available after May 26. We'll be revising it as necessary, based on our feedback from field use.

Written Examination: Operators (Subpart E, Section 55.41)

Q. 135. The items in 55.41(b)(10) and (13) have previously been for senior operator knowledge. What level of knowledge is expected for the reactor operator?

A. Part of 55.41(b)(10), has been for operator knowledge in that it concerns normal, abnormal, and emergency operating procedures for the facility. For the administrative part, the reactor operator would be tested for the depth of knowledge required for his job position in the administrative area because operators get involved with administration at times. And Part (13), "Procedures and Equipment Available for Handling and Disposal of Radioactive Materials and Effluents," would also be geared to RO job requirements at your site.

Q. 136. Part 55.41, "Content," does not specifically address that licensed operator candidates need to know Technical Specifications, yet the examiner standard, Section ES-202, discusses the need to know Technical Specifications. What is the reason for this difference? Is ES-202 correct in its application for Technical Specification knowledge?

A. Section 55.41(5) addresses the Technical Specifications. We expect operators to use Technical Specifications as appropriate to their job. Reactor operators, as in 55.41(5), are expected to know limiting conditions, particularly those things they should recognize and communicate to the SRO in a timely manner.

The same thing goes for the SRO. We don't expect SROs to be engineers. So required job performance in your systematic evaluation, plus our K/A Catalog, should give you an idea of the level of specificity. We intend to revise the examiner standards to give our examiners better guidance. Right now, it's not as clear as it could be, but required job performance is the key, and if, for some reason, you feel you use Technical Specifications differently than we can interpret, you should call that to the Region's attention and discuss it long before the exam occurs.

There is clearly a difference between our expectations for ROs and SROs by virtue of SROs directing the activities of others. The SRO must know all aspects of license conditions. He approves work, work orders, and other things which require a knowledge of Technical Specifications beyond the material covered in the operator's written exam.

We don't expect the SRO to be able to develop a basis for a requirement on his own. We expect him to understand what the requirement is, and be able to carry it out. That's the difference that we tried to articulate in these two sections. An RO doesn't have to know about approving surveillances, yet surveillances are covered in the Technical Specifications. An RO does need to know about limits on operation of the plant, as they relate to the list of items under the written examination.

Q. 137. For facilities that have an approved INPO-accredited performance-based training program, what percentage of the written and/or oral exam questions administered by NRC will come from the facilities' objective-based exam bank, or at least from the facilities' training objectives? From Attachment A (to Generic Letter 87-07) it appears that all the exam questions for accredited facilities will come from the facilities' training objectives.

A. Eventually, we'd like to use the facilities' learning objectives. But, it's our experience that we have varying degrees of polished objectives. We've also found that even when there is a good objective, where the conditions of performance and the standards of performance are explicit, and the learning and the mastery is all tied to job performance, the supporting materials submitted with the 90-day letter do not allow examiners to develop the kind of question that will elicit the appropriate material to decide whether the candidate has mastered that objective. So while the objective may be good, the supporting material isn't sufficient to develop the right kind of question.

We're working on this. And we key the content of our exam right now to the K/A Catalog. We do not sample those items that have been found to have a low importance to safety. But we have to rely on your analysis to help determine what's important on a plant-specific basis.

And this is where there's some breakdown at the moment. The better the learning objectives in terms of their explicit statement of conditions and standards, the better the supporting material, and the better it's tied to our Catalog, the better the whole system works.

But don't read into that that we would be limited to those objectives. We would sample, we would tie it to those objectives; but if there isn't an objective in the safety-related system that we think is important, we may create our own test objective and cover it on the exam.

We're going to try very hard to ensure that it is safety related, it is operationally oriented, and it is performance based. Obviously we would want to have good justification for asking that kind of a question.

Many of you have used the INPO Job Analysis in your own plant-specific analysis. And part of the reason that we tied our analysis at the generic level to the INPO Analysis was so that the system names and numbers, and the resulting material, would be easily keyed at the plant-specific level to the K/A Catalog.

Q. 138. What will the Commission do to ensure that operator exams are both valid and reliable from a psychometric perspective?

A. Many things. One: We're working on a sampling plan developed by subject-matter experts that will better reflect the job of the operator as opposed to the four evenly weighted written exam sections currently in the Examiner's Standard.

Two: We'll be sampling only those items that received a high importance rating to ensure the exam's content validity.

Three: We have a meeting on May 18th in which we're bringing together another panel of experts first to evaluate our proposed sampling plan and document the basis for our passing point.

Four: We are conducting continuous, extensive training with our examiners on writing and reviewing questions, and we are evaluating feedback from the industry on the quality of our examinations.

Finally, we are continuing to make improvements to the exam question bank, which will include a validation process using statistical techniques to eliminate poor questions.

Q. 139. The statement of considerations makes the following statement: "Ultimately, the NRC test objectives will reflect facility licensee developed learning objectives..." With an INPO-accredited program already developed from a job-task analysis (JTA), does our training standard (site-specific learning objectives) supersede the NRC Knowledge and Abilities Catalog? How do we get regional concurrence that they will test to our training standard?

A. It's our intent to use site-specific learning objectives as the basis for our testing objectives. However, if we detect errors of commission or omission in the site-specific reference material (including learning objectives), we obviously will not shape our exam content to those errors.

Q. 140. Criminal violation only covers persons who willfully violate the Atomic Energy Act or NRC's regulations, and does not apply to situations such as discussions after an examination is administered or when a previously administered examination is used as a practice exam. What is the attitude of the NRC concerning distribution of the facility's examination bank to the examinees?

A. NRC has no specific policy concerning the distribution of the facility's own examination bank to their examinees. While some portion of training may be given using previously administered examinations as references, this should not be interpreted as NRC endorsement or acceptance of such a practice exclusively.

Written Examination: Senior Operators (Subpart E, Section 55.43)

Q. 141. The Commission Policy Statement on Technical Specifications and improvements may result in a substantial increase in scope and documentation. Will any effort be made to limit the knowledge required of senior operators to those elements of the Technical Specification basis that are essential for safe operation?

A. Yes. We have an ongoing program looking at the issue of what needs to be examined at the SRO level, as opposed to the RO level. And we are working with the people developing these new Tech Specs and intend to make sure that we are producing a performance-based exam.

That's not to say that there won't be some additional exam material that comes from the new Technical Specifications. But, again, it will be performance based, job relevant, and safety-significant material, and we will provide ample guidance to the examiners, in the examiner standard, as this program develops.

Q. 142. When we were developing standardized Techical Specifications, the requirement was that an operator know from memory, and be able to apply "one-hour-or-less," action statements from the Tech Specs. Since standard Tech Specs have come in, there are now well over a hundred one-hour or less action statements from Technical Specifications. Is the policy, or the guidance from the Commission still the same, to commit those to memory, recognizing that the utilities do not rely on nor require the operators to act from memory in that situation?

A. We are dealing with performance-based knowledge that an operator needs to know. Specifically, if the information is appropriate to the job, if it is in the K/A Catalogs with a high importance rating, he should know that information. If there is not a specific knowledge or ability associated with it or those that are have a low importance rating, then normally it would not need to be examined. However, there may be procedual steps or other indications that cause him to look into the Technical Specifications. The method you use procedurally in the plant for these indications, through performance-based testing under certain circumstances, such as procedural or event-related problems, would be the method that would be followed by NRC. We don't have any blanket rules that require memorization of everything in Technical Specifications that has to be done in less than an hour. That is not our policy. Ensuring that our examinations are operationally oriented and job related is our policy.

Q. 143. Senior operators are required to know the facility operating limitations in the Technical Specifications and their bases. If and when the Westinghouse Owner's Group completes development work and gains acceptance for the Technical Specification MERITS program, this will vastly increase the bases section of the Technical Specification. Will the NRC position change regarding the requirements to know the Technical Specification bases if this new program is implemented?

A. No. As we implement improvements to Tech Specs, we hope to reduce their size substantially as a result of this program and to do a better job of describing the why's associated with the limits and the underlying assumptions that relate to them.

We hope that in the long run we will better define the knowledge that a senior operator should have related to the Technical Specifications and their bases. We don't expect that the volume of the bases to increase to several three-inch notebooks. It should be significantly reduced compared with what's contained in the FSAR. It's going to require a topical report submission and an approval by the staff before it can be implemented on a plant-specific basis. We will be looking at generic bases, and there will be an opportunity for utilities to comment.

Our intent is not to add superfluous information; it needs to be related to the job.

Q. 144. Section 55.43(b)(3) refers to the facility licensee procedures required to obtain authority for design and operating changes in the facility. What is the intent of this? Should the SRO understand the process the licensee goes about in obtaining a design change?

A. There may be administrative procedures which would allow, for example, two SRO's on a back shift to change a procedure, as long as they don't change the intent of the procedure. Or, there may be other aspects of the 50.59 review process which an SRO is held accountable for knowing. He may be the shift supervisor, on shift at the time, responsible for those activities. And it's that type of administrative procedure we are addressing.

Q. 145. Therefore, are we talking about temporary alterations, not design changes, or permanent license changes?

A. He needs to understand what he's approving when he approves the work to be done in the plant. We're looking principally at those things which he can approve; deviatation from a procedure, an alternative approach, etc. The 50.59 type process, how those changes are controlled, and what it means when he signs off to approve a work package, is likewise important. This process may change the design of the facility, or change the way the facility is operated by a procedure. For clarification, there has been no change in this area from the previous Part 55.

Q. 146. What maintenance activities are included in 55.43(b)(4)?

A. Section (b)(4) talks about radiation hazards that may arise during normal and abnormal situations, including maintenance activities, and various contamination conditions. A common item may, for example, be a radiation work permit (RWP). He may be responsible for signing off, either in concurrence or approval, depending on the facility, on the RWP, so he would be expected to have site-specific knowledge in that area.

Q. 147. Part 55.43 does not specifically address emergency plan implementation. This is addressed in Part 55.45. Will the senior operators continue to be asked to classify events, given a specific scenario, into four categories (UE, Alert, SAE, GE) from memory on the written examinations?

A. Item 5 in Section 55.43(b), stipulates that SROs must be able to address the "assessment of facility conditions and selection of appropriate procedures during normal, abnormal, and emergency conditions." However, neither ROs nor SROs are required to classify events from memory.

Operating Tests: Content (Subpart E, Section 55.45(a))

Q. 148. Is there a definition of plant equipment that could affect the release of radioactive materials to the environment, per 10 CFR 55.45(a)(8)?

A. There are many systems and many controls that an individual can operate that could cause a release; operators are required to understand these systems and controls, which are the responsibility of licensed personnel.

Q. 149. Does 10 CFR 55.45(a)(10) imply that operators must perform exposure shielding calculations?

A. That depends on how these calculations are made at your facility. If you have an on-shift health physicist or, in an emergency, an STA, then we would not ask operators to do the shielding calculations. But if the SRO typically checks such calculations, then we may ask the SRO to check one.

Q. 150. Items 12 and 13 of Section 55.45(a), were reworded to include the phrase "as appropriate." What is the significance of this phrase for the Commission to classify this change as "major" in the final Regulation?

A. The comparison that we're making in the Statement of Considerations, Section IID(2), is between the proposed rule published in November 1984 and the final rule. Items 12 and 13 were significantly rewritten between the proposed and the final rule. To clarify, we have made sure that you're held accountable for performing as appropriate to the assigned position. So ROs are not expected to pass a test at the SRO level.

Q. 151. How will you evaluate Item 13, "Teamwork," in the operating test? I'm talking about the operating test itself, when you have to evaluate one single candidate on how he reacts and interreacts with the team?

A. You could put some licensed operators on the team with him, and we would just put an examiner with the individual taking the exam. You could have one of your instructors standing there, as we have done in the past.

Q. 152. How would you evaluate this if we didn't have a simulator?

A. It is the responsibility of the examiner to structure his operating test scenarios for the Integrated Plant Operations portion of the test that would create situations that would challenge the candidate in competencies G (communication/crew interface) and H (responsibilities/supervision). Obviously this would require a discussion format since the operating test without a simulation facility is a one-on-one test. For example, a scenario could have an SRO candidate evacuate the control room. He would then be expected to shut down the reactor from the local shutdown panel. He should be able to talk through how he would utilize his resources, including direction, communication, and report backs. Questions would be phrased as follows: What would you direct

the BOP to do? What reports do you expect to receive from the RO upon reactor trip? How would you verify a questionable report from the BOP/RO? How do you evaluate the licensed operator's use of nonlicensed operators during local operation of an auxiliary feed pump?

Q. 153. Part 55.45(a) contains a new evaluation criterion which requires an applicant to demonstrate the ability to function within the control room team as appropriate to the assigned position and in such a way that the facility licensee's procedures are adhered to and so that the limitations in its license and amendments are not violated. Is this criterion intended to be evaluated using the manipulation criteria addressed on the operating examination report contained in ES-302 which requires that an applicant: (1) follow procedures, (2) observe and check instrumentation, (3) exhibit dexterity and a feel for console operations? Or, will this evaluation be addressed in a future revision of ES-302?

A. This criterion is addressed in the operating test using the existing ES-302 with the new Form 157. Specifically, the form identifies, in competencies G and H (both with and without a simulator), the evaluation of communication/crew interaction and responsibility/supervision.

Waiver of Examination and Test Requirements (Subpart E, Section 55.47)

Q. 154. In 10 CFR 55.47, what is a comparable facility?

A. This question addresses the waiver of written examination and operating test requirements. We would look at each waiver on a case-by-case basis, and make a determination as to whether or not the facility was, for licensing purposes, "close enough."

SIMULATION FACILITIES

Written Examinations and Operating Tests: Implementation (Subpart E, Section 55.45(b))

Q. 155. Will NRC continue to examine operators on plant-referenced simulation facilities following the effective rule date, but prior to the submittal of the simulator certification?

A. Yes. If we're giving exams on your simulator now, we will continue to do so.

Q. 156. Will NRC examine operators on nonplant-referenced simulators for those utilities that have accredited training programs and use a nonplant-referenced simulators between the date that the new rule becomes effective and simulation facility approval by NRC is achieved?

A. We anticipate no change from what we're doing today.

Q. 157. Our facility will not have a plant-referenced simulator available for training until the first quarter of 1990. It is assumed that operating tests will consist entirely of plant walk-throughs until such time as a plant referenced simulator is certified. Is this a correct assumption?

A. Yes, but in the event the utility were to start using that simulator to evaluate candidates prior to the time at which they chose to certify it, we'd have no problem with the examiners using it to conduct operating tests.

Q. 158. Are the provisions of 55.45(b)(2)(i), and 55.45(b)(2)(iii) mutually exclusive? In other words, if the utility plans to meet the provisions of 55.45(b)(2)(iii) by purchasing a simulator during the 46-month period, does the utility need to submit a plan per (b)(2)(i) for the simulator to be used until the plant-referenced simulator is certified?

A. No. If you intend to certify a simulation facility on Form 474, you have 46 months from the effective date of the Rule to do that, and you do not need to submit to us a plan, or an application, prior to that time. If, however, we do not see any evidence that there are plans in the works for a certified simulation facility, and if we have not seen a plan from you for a noncertified simulation facility, we'll probably get in touch with you to find out what your intentions are.

Q. 159. We currently have a site-specific simulator, and it has been used to administer the simulator portion of the operating tests. Do we have 46 months from the effective date of the rule to submit Form NRC-474, "Simulation Facility Certification"? Will the simulator tests continue to be administered on our noncertified simulator before we submit the Form 474? Under what conditions would NRC refuse to administer operating tests on the simulator?

A. Yes, you have 46 months to submit Form 474, and, yes, the simulator will continue to be used for the conduct of exams until you submit that Form 474 or until you reach the four-year deadline. NRC would refuse to administer operating tests if the simulation facility has not been certified by the deadline or if, after it has been certified, an inspection proves that it is unable to meet

the requirements of conducting an operating exam. And, if certification is pulled, then it needs to be recertified.

Q. 160. For simulators that are not plant specific, when the regulation goes into effect in May, are you going to start giving nonplant-specific simulator exams?

A. No. We do not intend to administer such exams. Those few plants without plant-referenced simulators will be handled on a case-by-case basis.

For clarification, once a utility begins to use a simulator to evaluate its operators, we would retain the option to use it to conduct our operating tests, even though it may not yet be approved or certified.

It's our intent to continue with business as usual from the effective date of the regulation until such time as you either have an approved simulation facility, or you have certified a simulation facility. Or, of course, the four-year deadline arrives.

In other words, if we presently conduct operating exams in a walk-through because you do not have a plant-referenced simulator or you do not have an acceptable simulation facility, we would continue to conduct exams on a walk-through basis. But if you do obtain a simulation facility between now and the date that you chose to certify it, if you find the simulation facility is acceptable for your use in evaluating operators then we will find that same simulation facility acceptable for our use in evaluating operators, even prior to the time it is certified or approved.

One other clarification. It does not matter who owns a simulation facility, or where it is located--the key is the plant to which it is referenced. And the facility licensee is the one who must certify that simulation facility for use regardless of whether that facility licensee is the owner of that simulation facility or not.

Q. 161. Several simulators are still in the manufacturing pipeline, to be delivered in the next two years, while a few are still just beginning their procurement activities. Is this plan required within one year regardless of whether the utility is in the process of procuring a simulator?

A. The plan referred to is required only for those utilities which are not planning to submit a certification on Form 474. If you are procuring a certified simulation facility, there is no plan required and there is no application for approval required, regardless of where in the pipeline your procurement is.

If you are not procuring a simulation facility that is to be certified on Form 474, then there is a plan required and there is an application for approval. Then the answer is yes, we would expect that plan to be submitted to us within one year of the effective date of the regulation, regardless of where you may be in the procurement cycle.

Q. 162. Consider the utility undergoing the simulator procurement process right now. There is certainly the realistic possibility that that simulator will

not be delivered and declared ready for training until sometime in 1990. At that time it will be approximately two and a half years since design data freeze.

In that period it's reasonable to expect that the utility would not be able to meet the requirement of ANSI/ANS 3.5, 1985 that the plant reference simulator be current within 12 or 18 months of the reference plant, to which you are attesting when you sign the material-false-statement on Form 474. Does this mean that this utility would have to submit a plan for an alternative within 12 months of May 1987?

A. We would still expect a certification from those utilities on Form 474, rather than the application for approval. If necessary, you would take exception to meeting some of the requirements of ANS 3.5. These would have to be identified and described, along with a description of when and how they would be resolved. There is a provision on Form 474 for this information to be supplied.

Q. 163. In other words, they would not be held to the statement that says they are or are not in compliance with ANSI 3.5?

A. That is correct. The facility licensee would address them as exceptions to ANS 3.5.

Q. 164. I didn't see on the proposed Form 474 an area that addresses exceptions.

A. There is such a block on the form. It might not have been on an early version of the form; but on the final version you will see an area near the top which indicates exceptions taken to the standard.

That's not an unusual circumstance just for those who are buying new simulation facilities. Because design modifications are made in the plant, you may at the time of certification have modifications made in the plant that you have not yet put into the simulation facility.

The process provides for reference plant data and design data for the simulation facility, and there can be as much as two years' difference between the time these two conform with one another. If you're not in conformance at the time you certify, if there's some exception, identify that in the exceptions sections and indicate on what schedule you're going to correct it.

If we disagree with the exceptions, we'll visit you. But if you've done a reasonable job of identifying them and we still conclude that we can conduct an operating test, we'll accept that certification.

Q. 165. In Section 55.45, implementation schedule and simulation facility certifications, what is the relationship of the two timetables provided in (b)(2)(iii), which is 46 months, and (b)(3)(iii), which is 60 days?

A. There is no relationship between them. The 46-month requirement in (b)(2)(iii) refers to facility licensees, which includes anyone who has a docketed application. The 60-day requirement in (b)(3)(iii) refers only to what we call facility applicants, which includes only those without docketed applications. So you can ignore that 60-day requirement.

Q. 166. Do we have a requirement to certify a simulation facility to NRC prior to its being used for an operating exam?

A. No. You have a requirement to certify a simulation facility to NRC no later than four years after the effective date of the regulation. Prior to that four-year deadline, it can still be used for conducting operating exams whether it is certified or not.

Q. 167. Due to the extensive use of the simulator for training, there may be times that meeting the 25 percent performance testing requirements within 12 months of the last set of tests is not possible. What is the allowable time table tolerance regarding this situation? For example, is it permissible to perform 50 percent testing in one year and no testing in the next year, as long as 100 percent testing occurs every four years?

A. The regulation provides, in 55.45(b)(4)(vii) and (b)(5)(vi), that performance testing be done at the rate of approximately 25 percent per year on a continuing four-year cycle. The goal is to ensure the ongoing testing and upgrading of the simulation facility, and to assure that it is maintained on a consistent basis with the status of the plant. You must present to us, on Form 474, your performance testing schedule. To the extent that it must deviate from 25 percent per year, if it must deviate, you need to let us know just what those deviations are and we will have to evaluate it case-by-case. It's safe to say that performing 50 percent of the tests in one year, and no tests in the next year would not meet the intent of the regulation.

For clarification, we really don't want to see the minutiae of your performance testing schedule, which tests are to be run on which days of which months. We're looking at an annualized 25 percent per year basis, and that's the block of time in which we would like to see your performance testing scheduled. Any changes that may need to be made to that schedule, you need to tell us about, based on that annual block.

Q. 168. What is the required retention period for simulation facility test procedures, modification documentation, and discrepancy reports?

A. Four years is the record retention period. But at any given time, you may have accumulated and held on to more than four years' worth of data, because you are performing your performance tests at the rate of 25 percent per year. So if you certify, hypothetically, at time zero and then you submit your first four-year report on the four-year anniversary of that initial certification, at that time in year four you can discard the results of the performance testing that you had for the initial certification. Then when you submit your next four-year report at year eight, you can discard all the performance testing documentation that you used to submit the first four-year report.

So it's a four-year period, but as you accumulate the tests at 25 percent per year, you're going to be retaining these test results until the time comes at your next report to discard it.

Q. 169. Regarding decertification of a plant-referenced simulator: What process will be used to decertify a simulator? Will an NRC examiner be able to decertify a simulator based on his observations of simulator performance during an NRC exam?

A. No. An examiner will not be able to decertify a simulation facility based upon his observations. He will report those observations to NRC, and the staff may use that information to perform an audit or an inspection. "Decertification" can occur only as a result of an inspection which finds that the simulation facility is incapable of being used for the conduct of an operating test.

Q. 170. Section 55.45 requires that within one year after its effective date, each facility licensee proposing to use a simulation facility must submit a plan detailing how and when their simulation facility will be developed and submitted for approval. Must a utility that operates dual units at the same plant and that currently obtains a multi-unit operator license from the NRC submit this plan for the unit not being replicated?

A. The key issue is the similarity of the two units. The availability of current multi-unit licenses would lead us to believe that you do not need to submit an application for approval for the simulation facility for those units. We in all likelihood will accept certifications on Form 474 with the exceptions noted for each unit.

Q. 171. If a utility with multiple units believes that the units are too dissimilar to support Form 474 certification, what format requirements, if any, does the Commission wish to see in the application for approval?

A. Here is an example of what we'd expect. Let's assume that you have a dual unit control room and that the control rooms are identical with the exception that they're mirror images of each other. Your physical fidelity comparison in accordance with the standard would identify as an exception the mirror-image layout.

One Form 474 would indicate that the mirror-image issue was a difference, but you conclude that's acceptable for an operating test. And you'd reference the certification form for the other unit; that is, you'd identify all the other exceptions that you may have. So one is tied to the other. That way we get a form that says it's certified for each plant to which it's referenced.

Where you have a simulator now which is on site and which replicates two units, we would expect you to use the certification process.

Q. 172. Several utilities are not planning to obtain plant-referenced simulators. They prefer to use other simulation devices. Assume that a facility licensee has constructed and is operating a plant-referenced simulator that meets the provision of Regulatory Guide 1.149 and ANSI 3.5 and has been certified to the NRC for use for operators and senior operators who operate the reference plant or are candidates for a license at that plant. A second utility wishes to use the simulator as their simulation device rather than construct and operate a plant referenced simulator. What procedure must the second utility follow to obtain approval to use that simulator?

A. The answer assumes that the utility who wants to use it is treating it as a noncertified, nonplant-referenced simulator. It does not matter who built the simulator, who owns it, where it's located. The facility licensee who

wants to use a particular simulation facility for conducting operating tests is the organization that is required to file a certification or to apply for approval to use it. So in this case, the procedure that the second utility must follow would be to submit a plan within a year, followed by the application for NRC approval to use that simulation facility, whether they are the owner of it or not.

Q. 173. Has the staff developed guidance and/or criteria regarding the use of a certified plant-referenced simulator by individuals other than those from the referenced plant?

A. It is possible for any particular simulation facility to be certified as referenced to more than one plant, to the extent that those plants are similar. But only the facility licensee who wishes to use a simulation facility for its reference plant should submit the certification for its use. So if one simulation facility is intended to be used by several different licensees for different plants, then we would expect to see several different certification forms coming in, one for each of those facility licensees.

Q. 174. Does this guidance apply to facility licensees that wish to use another facility licensee's plant referenced simulator?

A. Yes, but there are some very practical issues that utilities are going to have to address in the area of configuration control, plant design changes, and getting those plant design changes referenced back into the simulator.

Some of those can be taken care of with software, by having a different data pack, tapes, etc. Others are going to be very difficult to take care of where they relate to control board location or systems that you have on the device that are different. Clearly, where two utilities want to use the same simulation facility, they are going to have to work out agreements with each other as to how they are going to maintain configuration control such that the same device can be used for the operating test at each utility.

We have not precluded that a facility may certify a simulation facility owned by someone else to its reference plant; but the requirements for having an appropriate configuration control system still exist, and you must still follow the ANSI standard. So that if you get into that mode, you may find it difficult over the long term.

Q. 175. Assume that an entity has constructed and is operating a plant-referenced simulator that meets the provisions of Regulatory Guide 1.149 and ANSI/ANS 3.5-1985, and has been certified by NRC for use by operators and senior operators at the reference plant, or who are candidates for license. A utility wishes to use the above simulator as their simulation device rather than construct and operate a plant-referenced simulator. What procedure must the utility follow to obtain approval to use the above simulator?

A. Only facility licensees are to certify simulation facilities to NRC or request approval for simulation facilities. If an entity means a facility licensee under 10 CFR Part 50, then that's fine. If it means some other organizational body, then that would not be acceptable for certifying, or

applying for approval of a simulation facility. It does not matter whether that utility owns that simulation facility. It does not matter where that simulation facility is located, but it is the utility who must certify, or apply for approval to use it.

If that simulation facility referred to is referenced to a facility licensee's plant, then the process to be followed is certification on Form 474. If it is not referenced to the facility licensee's plant, then the proper approach would be submittal of a plan within a year, followed by application for NRC approval.

Q. 176. Title 10 CFR 55.45(b)(4)(i) states, "In accordance with the plan submitted pursuant to Paragraph (b)(2)(i) or (b)(3)(i) of this section, as applicable, submit an application for approval of the simulation facility to the Commission, in accordance with the schedule in Paragraph (b)(2)(ii) or (b)(3)(ii) of this section, as appropriate." What performance tests are required and what standard is used to evaluate whether the tests are satisfactory or not?

A. To the extent applicable even to those simulation facilities that will not be certified, ANS 3.5, as endorsed by Reg Guide 1.149, is the standard to be used. The performance tests include the malfunctions identified in Section 3.1.2 of the standard to be done at a rate of approximately 25 percent per year over an ongoing four-year cycle; the performance tests that are specified in Appendix A of the standard, also at the rate of 25 percent per year; and the operability tests identified in Appendix B to the standard that are to be done annually.

The criterion for the performance of these tests is that the simulation facility must be capable of being used for the conduct of the operating tests which are identified in Section 55.45(a) of the regulation, and the staff will inspect simulation facilities against that requirement.

Our definition of "plant-referenced simulator" differs from the ANSI standard definition in that we require that a simulation facility be capable of being used with the plant's control room procedures, and we would inspect against the ability to use those procedures as well.

Q. 177. Sections 55.45(b)(2)(i) and (ii) state that within one year a plan shall be submitted for a simulation facility (other than a plant-referenced simulator), and within 42 months an application for use of the simulation facility must be submitted. When will the facility licensee know if the plan for the simulation facility is acceptable to the NRC? What criteria will NRC use to determine acceptability? Can the plan be modified after the first submittal?

A. The minimum acceptance criteria for nonplant-referenced simulators as simulation facilities include the capability for conducting the operating tests identified in Section 55.45(a) and their ability to operate under the use of the control room procedures.

The nonplant-referenced simulator alone or in combination with other devices must demonstrate acceptability for conducting these operating tests using control room procedures.

The staff will review the plans for such simulation facilities against the criteria specified in the regulation for the conduct of the operating tests; and to the extent applicable, we will also apply the requirements of ANS 3.5 as endorsed by Regulatory Guide 1.149 even for nonplant-referenced simulators.

The staff intends promptly to inform any facility licensee if the staff's review of the plan or the application submitted is not satisfactory for being able to conduct these exams.

We plan to meet with the small group of facility licensees who have indicated an intention to request staff approval of simulation facilities during the year following the effective date of the regulation and prior to the deadline for their submittal of a plan for application for approval.

Finally, although we expect that our initial meetings with these few facility licensees will result in sufficiently specific guidance that modifications to plans won't be needed after submittal, we don't want to preclude such modifications if the facility licensee judges them to be necessary or desirable.

Q. 178. The preparation of a simulation facility plan will cost money and resources. If an submitted simulation facility plan is not acceptable, the NRC should let the utility know it is wasting its time as soon as possible. If a utility submits a plan for an "approved simulation facility" before May 26, 1988 will the utility receive an indication of whether or not the NRC will approve the simulation facility? Or, will the NRC approve the simulation facility only after application within the 42-month period stated in the rule?

A. The NRC will review the plan submitted by each facility licensee which proposes to use a simulation facility pursuant to Section 55.45(b)(1)(i). The facility licensee will be provided the results of such review. However, approval of a simulation facility (in accordance with Section (b)(4)(ii)) proposed pursuant to paragraph (b)(1)(i) will only be considered after receipt of an application submitted in accordance with Section 55.45(b)(4).

Q. 179. When a simulation facility evaluation is conducted by the NRC, plant operators may be used to perform the operations using plant procedures. In this case, are the operators performing on a "no risk" basis to their licenses? If not, will the operators receive credit for an operating test? Could certified instructors be used to demonstrate the simulation facility evaluation test instead of plant licensed operators?

A. During a simulator evaluation, no evaluation will be made of plant operators. If clearly unacceptable performance is identified, the operators and specifics of their performance will be identified to the facility licensee for appropriate action. Qualified simulator instructors would be acceptable for demonstrating simulator performance.

Q. 180. When a malfunction is used during training can we take credit for it as a performance test?

A. If all of the requirements of the Perfomance Test including planning, scheduling and documentation as required on Form 474 are met, credit may be taken for completion of the Performance Test.

Q. 181. Paragraph 55.45(b)(4)(i)(B) states "A description of the components of the simulation facility which are intended to be used for each part of the operating test" must be included as part of a facility's application for approval of simulation facilities. Please elaborate. Does "intended" mean "can?"

A. The word "intended" means that the listed component is that which the facility licensee plans to use for the evaluation of a specific one of the 13 items specified in 55.45(a).

Q. 182. Assuming that a utility were to submit a plan to certify a non-reference plant simulator as a simulation facility, what minimum criteria would this facility be required to meet (since operator testing using reference plant procedures would be limited or not possible) and what aspects of the non-reference simulator would disqualify the device from certification as a simulation facility?

A. The minimum criteria for approval of simulation facility are contained in 55.45(b)(4)(ii), which requires that it be suitable for the conduct of operating tests for the facility licensee's reference plant. The operating test requires that the 13 items listed in 55.45(a) be able to be adequately evaluated, and that plant procedures be used. Further details of simulation facility characteristics necessary for NRC certification are contained in Regulatory Guide 1.149 and ANSI/ANS-3.5-1985. For clarification, a non-plant-referenced simulator would be developed following a plan and then an application for NRC approval. It would not be certified using NRC Form 474.

Q. 183. For utilities which have not yet received simulation devices from their respective vendors, when will they be required to undergo simulator examinations as part of their operating examination? When ready for training? When certified by the utility? When utilized by the facility as an evaluation tool?

Does the above answer change for any facility which currently possesses a simulation device, but asks that it not be used for NRC examinations until such time that it is certified?

A. No simulation facilities will be required to be used in the conduct of operating examinations until May 26, 1991, unless they have been certified to the NRC or approved (after application) by the NRC earlier. However, if a simulation facility is used by the facility licensee as an evaluation tool, the NRC will use it for exams as well. This would hold true despite any request by the utility that it not be used until certified.

Regulatory Guide 1.149

Q. 184. In order for a utility to comply with ANSI/ANS 3.5-1985, it would have to use a full-scope nuclear power plant control room simulator. The standard states the following under Section 1, Scope: "Also excluded are part-task or limited scope simulators intended for specialized training or familarization."

This means that non-full-scope simulators would clearly be excluded from the Standard, and, hence, a simulation facility that does not consist solely of a full-scope simulator has no guidance or standard which a utility may use to obtain NRC approval. The previous statement leads us to the following conclusions: If Reg. Guide 1.149 and ANSI/ANS 3.5-1985 become the only standard for determining the acceptability of a simulation facility, the simulation facility must be a full-scope simulator, is that correct?

A. No. Regulatory Guide 1.149, in regulatory position (c)(2), takes exception to those segments of the Standard that were just cited. The Reg Guide says that simulation facilities, as defined in Section 55.4 of the Regulation (and that includes the plant, and potentially other simulation devices) should meet applicable requirements of the Standard. Also remember that Regulatory Guide 1.149 is only one acceptable means of meeting the requirements of the Regulation, and that facility licensees may propose other approaches to meeting the Regulation.

We intend to evaluate those simulation facilities which are other than certified plant-referenced simulators on a case-by-case basis, once we get to the point of dealing only with the applicable portions of the Standard.

Q. 185. If Regulatory Guide 1.149 and ANSI/ANS 3.5-1985 do not represent the only standard for determining the acceptability of a simulation facility, will NRC identify the minimum standards and criteria that are acceptable to them for non-full-scope simulators?

A. Those two documents do describe the only standards. But Regulatory Guide 1.149 is a Guide, it is not a regulation. A facility licensee may propose alternative ways to comply with the regulations in Part 55, other than the submittal of the information in Regulatory Guide 1.149.

Q. 186. Does NRC continue to endorse the requirement in ANSI/ANS 3.5-1985 to perform annual operability tests? If so, should this be part of the 25 percent testing, or should it be done annually?

A. Yes. We endorse Appendix B on operability testing, and as the standard requires, this must be done annually. This is not a part of the 25 percent performance testing.

Q. 187. Section C4 of Reg. Guide 1.149 specifies that reference plant modifications be reviewed annually against the simulator and that the simulator update design data be revised as appropriate, and that the first such annual review and update should take place within one year following the facility licensee's certification. Does this mean we have until a year after certification to match the simulator update design database to the reference plant or 18 months after simulator operational date, as specified in ANS 3.5, Section 5.2?

A. No. According to Section 5.2 of ANS 3.5, you start with a database which may, for nonoperating plants, be based on predicted data. Eighteen months after the simulator is ready for training, your simulator update design data must include available plant data, unless the simulator is on line before the plant, in which case you have 18 months from the date that the plant becomes operational. In accordance with the standard, it's whichever is operational later, the plant or the simulator.

Section C4 of Regulatory Guide 1.149 refers not to the development of this update design database, but rather to the annual review of reference plant modifications that are called for in the same Section of the standard, the results of which must be added to the update design database.

The standard says, "Reference plant modifications shall be reviewed at least once per year, and the simulator update design data shall be reviewed as appropriate." Section 5.3 of the standard goes on to say that the simulator shall be modified as required within 12 months. It is this cycle of the annual review of plant modifications, followed within 12 months by simulator modification as required, that we expect will begin with your certification on Form 474.

The rest of Section 5.2 addresses when your database must include actual plant data. And the two time schedules are somewhat independent.

You must still base the simulator update design data against the reference plant within 18 months after the simulator is operational. But you must begin your cycle of annual plant review of reference plant modifications when you submit the certification.

Q. 188. Section D, "Implementation," of Regulatory Guide 1.149, outlines a procedure to be followed for a facility licensee that wishes to utilize a simulation facility at more than one nuclear power plant. Does this guidance apply to facility licensees that wish to use another facility licensee's plant-referenced simulator?

A. Yes. But the facility must certify that the simulator meets the requirements of ANSI/ANS 3.5-1985, as endorsed by Reg Guide 1.149, for his plant. In reviewing such certifications, we would be particularly concerned about how you handled configuration control. Because you would have the potential for multiple design changes at a facility, we would have to understand how you are going to ensure that the simulation facility tracks the different plants.

Q. 189. What procedure must be followed to determine whether a two-unit site will require only one plant-referenced simulator?

A. There is considerable guidance on this in the "Implementation" section of Regulatory Guide 1.149. It says that if a facility licensee wishes to use a simulation facility at more than one nuclear power plant, it must demonstrate to NRC in its certification, or in it's application, that the differences between the plants are not so significant that they have an impact on the ability of the simulation facility to meet the regulations in 10 CFR Part 55.45(a), and the guidance of ANSI/ANS 3.5-1985.

There is a list of indicators that can be used to demonstrate that there are not such significant differences. One of the key areas that we will look at is whether we issue multiple licenses for your operators of those facilities.

ANSI/ANS 3.5, 1985

Q. 190. ANSI/ANS 3.5-1985 requires that performance tests be conducted in the event a design change results in a significant simulator configuration or performance variation. What is the NRC's definition of significant?

A. Our operational definition is any change to the simulation facility, its models or software that might cause the results of performance tests to fall outside the acceptable performance criteria set within the standard. The standard does not define "significant," and for an official definition, or an official clarification, you need to seek guidance from ANS itself. It's possible that this definition will be clarified in the next revision to the standard, but unless and until it is, we will use our operational definition.

Q. 191. This question concerns the list of required malfunctions in performance testing and ANS 3.5-1985. Are those not more "events" versus "malfunctions"? Do you understand that this causes confusion on the part of the simulator vendors in that if I was to go to a vendor and tell him that I want a reactor trip malfunction, he's going to wonder what I'm talking about? Do I want power to the CRD breakers? Do I want to lose all reactor coolant system flow? How do I want to do this to create the abnormal event that ANSI 3.5 is asking me to perform? Isn't that really referring to a list of abnormal transients?

A. Yes.

Q. 192. ANSI/ANS 3.5 Section 3.1.1(7) requires that the simulator be capable of performing startup and power operations with less than full rated reactor coolant flow. If the facility licensee is not allowed by Technical Specifications to conduct such operations, is this capability still required?

A. No. If a plant is constrained in any particular area by its Technical Specifications, then the simulation facility need not possess that capability as it applies to routine operations.

Q. 193. The Technical Specifications clearly bind the conditions under which the plant is allowed to operate. Am I correct that the simulator only needs to be bound by the same parameters?

A. No. For normal startup and shutdown practical-factor evolutions, in accordance with your procedures, you need not model those to be outside the bounds of the Technical Specifications. The question came up in the context of "N-minus-1 loop operation"; for instance, continued operation with a recirculation pump out of service or continued operation with one reactor coolant pump out of service. You need not model the simulation facility for operation in that mode if you are not permitted normally to start up in that mode. It was with respect to the context for startup.

Clearly, emergency procedures, for example, which go into function restoration guidelines and go beyond design basis accidents are not covered by Tech Specs, but we expect the simulation facility to be able to reasonably model those events. The same holds true when you insert malfunctions. If you turn off power to a panel, you're clearly outside the bounds of the Technical Specifications. You would not be operating with that panel de-energized. So in general, if you are conducting malfunctions, you may be in that mode.

Q. 194. ANSI/ANS 3.5 Section 3.1.1(9) states that measurement of reactivity coefficients and control rod worth using permanently installed instruments be performed. What is meant by "permanently installed instrumentation?"

A. The question of the meaning of the term "permanently installed instrumentation" is in ANS 3.5, and official definition or clarification really has to come from ANS and not from the Commission.

Our operational definition essentially says that portable or temporary instrumentation that is brought into the control room for specific modes of operation, such as startup, would not be required as part of the simulation facility.

We intend that you use the normally installed instrumentation available in the control room and not instrumentation associated with special tests.

So if it's part of your normal plant operating procedures and it's instrumentation you rely on (and we expect that you have instrumentation that falls into that category for calculating rod worth for doing startups) that's what we intend you to use. You need not simulate other instrumentation that is outside the scope of your normal procedures.

Q. 195. ANSI 3.5 Section 3.1.1(10) states that the simulator be capable of performing operator-conducted surveillance testing. Are you only considering the remote shutdown panel?

A. Any surveillance that cannot be performed from the control room need not be modeled. For example, if you're doing a diesel startup from the local panel for the diesel and that's the way you conduct the surveillance, you need not model anything that's done on a routine basis from outside the control room.

Q. 196. Would it be wise to evaluate, for example, the plant's surveillance procedures and identify which of those we think would be applicable to being done on the simulation facility? In other words, generally the operator from the control room would be doing that evolution. Naturally, all of those valves exist on the control board and so on, and you can legitimately perform that. Would that be acceptable in meeting the intent of Item 10 in the standard?

A. That would be one way of doing it. But if you look at the performance testing, particularly when you're getting out of component testing and into system testing, and you're evaluating your capability to actually model the system, a way of doing that would be to see if you can model the surveillance procedures on that.

What you describe is acceptable. You may choose some subset of the surveillances that you can perform on those particular systems to show that those systems are operating within the bounds expected by the plant.

After all, that's where you have a source of data on the actual performance of the system: the records from the surveillance tests that you've conducted on those systems, particularly where they have specifications for flow or pressure or some other characteristic which is modeled in the control room.

Q. 197. Plant data, simulator update design data, and simulator design data: I interpret their relationship this way. Plant data represents the current plant configuration including installed and functional modifications. Simulator update design data, call it Data A, is an accumulation of plant data for a fixed time period, such as one year. At the end of the data accumulation, the

simulator update design data is evaluated and appropriate data is incorporated into the simulator design data by the simulator modification process. We have one year to match the simulator design data to the simulator update design data, Data A. In the meantime, a new accumulation of data into the next simulator update design data, Data B, is begun. Is this a correct interpretation?

A. That interpretation is reasonable. The key thing is that you have up to two years according to the standard to incorporate a plant modification into the simulator. You have one year in which to identify the need for a simulator update, based upon the required annual review of plant modifications; and then you have one more year during which you have to get it incorporated into the simulator modification. So we have possibly two years from the time you recognize the need from a plant change to update the simulator until it must be in the simulator.

Simulation Facility Certification (Including Performance Testing, NRC Form 474, NUREG-1258)

Q. 198. When will the official simulation facility inspections start? Will they start before certification takes place?

A. No. There are two minimum criteria. They will not start before the SFEP guidance has been out for six months, and they will not start until we have received your certification on Form 474, or your application for approval.

Q. 199. What level of simulator capability must be reported and tested if a simulator has considerable simulation capability, much greater than ANSI/ANS 3.5-1985 requirements?

A. We are requiring that the capability of the simulation facility be such that it meets the requirements of 10 CFR 55, and ANS 3.5, as endorsed by Reg Guide 1.149. To the extent that any simulation facility has capabilities that exceed those minimum requirements, you need not tell us what they are. You need not certify them to us, and we will not inspect against them.

Q. 200. In the event we had capabilities beyond ANSI/ANS 3.5-1985 and Part 55 that we did not test and certify, would those capabilities be utilized in examining the operators?

A. Possibly. For example, let's say that ANSI/ANS 3.5-1985 for a transient requires a parameter to move in a certain direction so that you don't get spurious alarms, etc. The standard is rather loose with respect to modeling for transients. And if you have something which is closer to an engineering tool, such that you cannot only predict the direction of the parameters, but also have a rather good tolerance on its value as compared to what you would expect from simply meeting the standard, that does not mean that we're not going to examine that particular transient or say that it's outside the scope of our examinations. On the other hand, if you are able to go into the area of, say, severe accidents, which we don't currently cover in the requirements, we may not be examining in that area. The issue is whether that's appropriate for the control room crew, or the technical support center, the accident assessment function, and that's the difference.

Q. 201. That's the real question. When our vintage simulator was purchased, the limitation on the vendor was to build it to plant design. Sometimes some of the NRC scenarios go beyond design basis, and I can't say whether the simulator's performance is correct or incorrect, I have no basis to certify it.

A. We will still be examining on the design basis, because you must do that in order to get into symptom-based procedures and function-restoration guidelines. And we want to be able to see an operator's ability to use those emergency operating procedures, in particular.

That already puts you beyond the Chapter 15 design-basis transients and evaluations. There is one requirement in ANSI/ANS 3.5-1985, which is endorsed in our Regulatory Guide, and is also contained in our Simulation Facility Evalution Procedure, for some means or mechanism within the simulation facility to notify the simulator operator when the simulation facility has exceeded the capability of its modeling. And that's one of the things that we would be looking at in our inspections.

Q. 202. In order to get into the emergency operating procedures on most plants, you have to have a variety of different types of failures that are compounded, which go beyond the design scope of the plant as single-failure-proof and would be very difficult to run on a simulator. We have found that in using the emergency operating procedures (EOP), we can quickly get outside the bounds of simulation. How do you propose that we address that issue on EOPs?

A. There are two ways: First, the standard indicates that when you go beyond the bounds of modeling, it should indicate that in some way during the simulation. Second, we conduct examinations that go outside the bounds of your Chapter 15 accidents and transients. That's necessary in order to get you into the function-restoration guidelines.

We intend to see and the regulations require that we understand that an operator can effectively implement those procedures. The tolerances, however, for those procedures are quite large. When you get into casualties, ANS 3.5 essentially requires that the parameter go in the same direction it would go during the actual transient in a plant; that you don't get spurious alarms and that the alarms that are supposed to come in are the ones that you get. It's not time dependent. It's really the ability to look at the parameter and decide, based upon that parameter, what procedure you're supposed to be using, and then implement that procedure. We are not looking for a high-fidelity severe-accident simulator in order to be able to exercise the emergency procedures.

Q. 203. This question relates to the definition of "site-specific plant-referenced simulator." What is meant by "it's been designed and uses plant procedures?" With this explanation, could you give me a feeling for whether I have to delete some steps as inapplicable because of non-modeled systems? Does that need to be highlighted in my performance testing exceptions?

A. What we mean by "use of procedures" is simply that the procedures that your operators use in the control room should be capable of being run on the simulation facility without change. You must be able to use controlled copies of the control room procedures, not copies modified in some fashion or by pen-and-ink

changes. They actually need to be controlled copies. You can indicate which steps cannot be performed, then you must certify to that. NRC must be able to use the facility emergency operating procedures during the conduct of operating tests. A suitable alternative must be provided in the event of non-modeled systems that are involved with the execution of such procedures in the control room. Depending on the extent and degree of such discrepancies, it is possible to certify with exceptions as opposed to applying for NRC approval.

Q. 204. In other words, I can't take exception to any step in the procedure because of non-modeled systems?

A. Let's assume that it is a step in the procedure that's used in the control room, but it directs an activity outside the control room. Say the reactor operator tells the auxiliary operator to do something, and you have not modeled that capability in the simulation facility. That would be not applicable.

If it is a step normally conducted from the control room, it is part of the operating procedures for the control room, and it falls into one of the categories appropriate for the operating test, then you need to model and describe it as a part of your certification of the simulation facility.

If that step need not be used as a part of the operating test, if it's for an ancillary system outside of what we would test on -- you may have something associated with fire suppression or some other system, for example, that's not explicitly covered in the items for the operating test -- then that need not be included.

So you have to look at the scope of the operating test in view of the required capabilities of the simulation facility as described in the ANSI standard.

Q. 205. Let's assume that in the absence of a modeled system or a modeled cabinet within the control room area, I believe it would be permissible to use the plant to train on that particular component. In essence, I have an exception on my performance test plan, which would normally require the use of that cabinet. But through on-the-job training in the actual control room, I can give the equivalent of that training that I would have performed on the simulator. Have I gone beyond the plant-referenced simulator category and moved into the other category here? If so, how do I address that?

A. Not necessarily. You need to look at whether that system is, for instance, a safety system. If it's not a safety system and it's not otherwise called out in the categories under the operating test, then you need not model that system as a part of the control room. The safe-shutdown panels in some facilities aren't modeled. They are outside the control room. We do not require that you model that in the simulator.

There are radiation monitor panels in the control room and things like that that you may not have modeled in your simulation. We understand that. That should not preclude you from using certification with exception.

You need not necessarily go through the application process. It's when there is some portion of the operating test which requires controls in the control room that are not replicated on the simulation facility that would require you to submit an application for NRC approval.

Q. 206. Will the operator/examiner feedback form that was discussed be used to determine the status of current simulators?

A. The guidance to the Examiners is that the form will be applicable only to simulation facilities that have been certified, or have applied for approval. However, even today, with the present vintage of simulators, you still are experiencing feedback reports, although informal, in the exam review process. And that will continue. If the Examiners have a problem in conducting the operating test at your simulator, you can expect some feedback in that regard, even though it won't be the formal process that will occur for certification or approval.

Q. 207. So, is it true that if I wait for 46 months to certify, that is an advantage to me?

A. No. It's not an advantage because you will to have provide substantial additional information for every application that you submit and we are going review that information and make determinations on individual applications and candidates.

Q. 208. But, yet, you won't inspect us?

A. We won't inspect your simulator, but we're certainly going to be keep close tabs on your applicants. And every time you receive an NRC operating test using your simulator, you can expect feedback through the exam report on the performance of your simulator.

Q. 209. This refers to the accelerated update of the simulation facility that may be required as a result of performance testing. What systems, events, or procedures are we trying to exercise during the simulator exam?

A. The intent was to identify any potential system, operation or scenario that we could not conduct on the simulator exam because of the simulation facility and which we could not readily implement another way during the examination, so that the exam could potentially be compromised or considered invalid. We would need to see that that system, or procedure or event had been corrected before we could develop an appropriate exam using it. For example, one simulator was unable to adequately represent flow coast down on a loss of coolant. The response was very unusual as compared to what was expected, and on how the procedures were to be used, because there was no coast down. It would not have been appropriate to conduct an examination which involved a loss of flow event in that case. We would not want that situation to exist for the next two years, because we may want to conduct a loss of flow scenario as a part of an exam within that time. So, we would require that that be corrected on a schedule that is faster than the normal two-year correction schedule provided in the standard.

Q. 210. I think clearly, that's the intent. But I see opening some areas of disagreement in the future. None of us know what the next round of the "topic of the day" is going to be. And we may find that our present machines were not designed to handle whatever that issue is. And, so, when you say any event, that can be troublesome.

A. We suggest that you look at NUREG-1258 that describes the Simulation Facility Evaluation Procedure (SFEP) and the pilot tests. That should allay some of the apprehension.

Also remember that this system, operation or event is something that you have already certified that your machine is capable of doing. We're referring to something we discovered during the course of our inspection that contradicts something you've told us on your certification.

Q. 211. This question addresses performance tests to be performed on the simulator in compliance with 10 CFR 55. What are those set of performance tests, the specific scenarios and malfunctions? Could you clarify that?

A. We're talking about Appendices A and B of ANSI/ANS 3.5-1985, and the list of 25 malfunctions that are contained in Section 3.1.2 of the Standard. There is a defined list of malfunctions that the simulation facility needs to perform.

Q. 212. Is it just that list that's in 3.5, only?

A. Yes.

Q. 213. Or is it that list, plus the diesel generator that's covered in Regulatory Guide 1.149?

A. There was a specific list of malfunctions in an earlier draft of Regulatory Guide 1.149, but it is gone from the final version. The equivalent paragraph that's in the final version endorses the paragraph in the Standard that lists the 25 malfunctions. Recognize, however, that some of those malfunctions are quite broad. We talked about the loss of power. That could mean loss of power to a panel, to a system, to a component, or loss of all power. Small break LOCAs can be initiated from a reactor coolant pump seal, from a steam generator, a tube rupture, a lot of different ways. What we are interested in is a representative sample of those things. You need not do all possible permutations and combinations.

But you are going to have to look at what you are certifying to, that's the reason that you are submitting test abstracts, and you describe what your testing program is.

Q. 214. So we will determine which specific scenarios we will run, as long as we cover those areas?

A. That is correct. And you describe that in your abstract, with your certification, and you describe the performance tests that you will conduct in the future to maintain the simulation facility.

Q. 215. Would the Commission find a formal simulator facility review board/committee (consisting of training management, operations management and senior reactor operators) a suitable forum for making judgments regarding the simulator scope requirements versus training value? For example, ANSI/ANS 3.5-1985 states that all accidents analyzed in the facility's FSAR must be included in plant malfunctions in the simulator's scope. It then later states that this is required only when the simulator is determined appropriate for training.

However, in a few cases the accidents provide little, if any, training value to an operator. Can a board, such as that proposed, be considered a legitimate forum for making these decisions?

A. We are concerned with the applicability of your simulation facility for the conduct of operating tests, and not as it applies to your training programs. Generally speaking, when you look at the ANS 3.5 document, you can safely substitute the term "operating tests" wherever the term "training" appears.

Although we recognize that your simulation facility's scope, when applied as part of your training program, may exceed that which is necessary for its applicability to use in operating tests, it doesn't matter to us what process you use internally to identify those differences.

We have tried to indicate clearly the minimum requirements for use of your simulation facility to conduct operating tests, and it must meet those minimums. These include the evolutions and malfunctions identified in Section 3.1.2, in the performance test appendix, and in the operability test appendix of the standard, using the required operating test requirements in Section 55.45(a) as the criterion.

However you meet those requirements is your decision to make; and as to whether you need to certify or provide additional performance testing data for anything additional, that's also your decision to make.

You will be submitting performance test abstracts with the Form 474 that describe the testing that you're going to perform.

When you look at the list of malfunctions and you see a malfunction that says "loss of power," that's very broad. Which ones do you choose in developing the test abstract for various losses of power?

You should look at the testing that you propose and, if possible, combine some of those malfunctions so that you have a smaller number of performance tests than would otherwise be the case and describe how those tests in your abstracts meet the intent of the standard.

In doing that, we would use those tests in making a judgment as to what the capabilities are. That does not mean that we would limit our examinations, however, to those particular tests or scenarios.

Obviously, if you demonstrate that the simulation facility works well for an event at high power and for some tests at low power, we may be able to mix those just as we do now. You have a substantial amount of control in deciding what testing you want to propose for the performance tests and that list of malfunctions is quite general.

In the case of using the panel, that could be an appropriate vehicle for deciding what tests are going to be proposed as performance tests. They could be a subset of all the malfunctions the simulator is capable of performing. You may literally have hundreds of malfunctions which you can implement.

We don't want to see a performance test for each malfunction. We do want to be sure that all of the malfunctions that are listed in the standard can be performed.

Q. 216. Section 55.45(b)(5)(vi) says a certification report need only include a description of performance testing completed, performance testing planned, and the schedule for conducting 25 percent of performance tests per year for the next four years. Is this sufficient, or must the document conform to ANS 3.5-1985 Appendix A?"

A. This question addresses two different issues. The first is the testing that is required, and the second is the reporting. The reporting itself need not be in the format of Appendix A, ANS 3.5, although that's not necessarily a bad idea. But it must cover those items that are called out in the Regulation in Section 55.45(a), specifically a description of the performance tests conducted, and the schedule for future performance tests, if that schedule differs from one that was previously submitted with the certification.

The actual testing must include not only the Appendix A performance testing, as called out in the standard, but the specific list of malfunctions that are identified in Section 3.1.2 of the standard, both at the rate of 25 percent per year. Also, the operability testing that's shown in Appendix B of the standard is to be performed annually. So, testing and reporting are separate issues.

Q. 217. When does the Commission project that their guidance for conducting simulation facility audits will be made public?

A. That guidance is available now in draft NUREG-1258, and we will accept your comments on that NUREG until the 26th of May.

Q. 218. Will simulator certification audits be performed by NRC headquarters staff, regional NRC staff, or some combination?

A. In all probability, the simulation facility inspection program will combine headquarters and regional staff, starting largely as a headquarters function and over time becoming more region-based as we move into the inspection procedures.

Q. 219. NRC released a final draft of "Handbook for Software Quality Assurance Techniques Applicable to the Nuclear Industry," dated February 1986. This handbook addresses the applicability of 10 CFR 50 Appendix B requirements associated with computer uses in the nuclear industry.

It specifies that training simulators require stringent software quality assurance. This requirement seems to imply that the simulator's software should be treated as though it were safety related, with the appropriate programmatic and procedural controls applied. What are the Commission's plans in this area and what relationship, if any, will the draft handbook have to simulator certification?

A. The draft handbook to which you refer imposes no requirements on the industry. It is under consideration by the staff, but there is no intent for us to review your software development or quality control procedures as they apply to Part 55 and to simulation facility certification.

You, of course, have to manage your own simulator software program in order to meet the regulations in Part 55 as required to certify that the simulation facility is suitable for conducting operating tests. And we will review the simulation facility's adequacy using the performance testing program, after you submit your Form 474.

We will take a look at the handbook to determine its status, but we think it is safe to consider it not applicable to these regulations.

The best way of determining whether the software is any good or not is to see whether it performs in accordance with the plant's design characteristics. We don't need a very prescriptive software control program protocol that is subject to NRC review and evaluation.

We've described how we intend to inspect the simulation facilities and we have put that into the Simulation Facility Evaluation Procedure. The evaluations will be based upon running things like Licensee Event Report scenarios and seeing how the simulation facility compares with the plant.

But if you start modifying the software in one area, you may affect other areas. So you need to understand what impacts such changes will have to the overall performance tests. If a modification causes a performance test to fall outside of its acceptance values -- that is, the 2 percent and the 10 percent -- you need to rerun that test to ensure that the simulation facility is still performing in accordance with the design specification. We're looking for a machine that will replicate what we expect to happen in the plant. We're not looking for developing a software control system which is appropriate to a reactor protection system where you cannot test by operation how effectively the performance of the reactor protection system works. Title 10 CFR 50 Appendix B requirements would appear to be appropriate in such safety-related applications. That's the difference.

Q. 220. This question concerns a simulation facility consisting of other than a plant-referenced simulator, and the performance testing related to such a facility. What performance tests are required and what standard is used to evaluate whether the tests are satisfactory or not?

A. We intend to follow the guidelines in the ANSI standard as applicable to the simulation facility which you have proposed.

Let's say that you want to use another plant's simulation facility for reactor startup and that you can effectively model the controls and indications that would be used for reactor startup. We would expect you to follow the ANSI standard as it related to startup modeling. You may not be able to model it for controls and indications because you don't have that capability on the simulation facility. You would not have to follow ANS 3.5 guidelines in that instance because they are not applicable.

Q. 221. If the standard for performance tests is ANSI/ANS 3.5, as modified by Regulatory Guide 1.149, will it be possible to deviate from the standard in certain areas or must it be adhered to in its entirety?

A. We recognize that there will be a number of outstanding discrepancy reports on the simulation facility against its reference plant. We expect that, for certified simulation facilities, as well as for those that achieve approval after application, exceptions will have to be taken from the requirements of ANS 3.5. There is a block on Form 474 for certified simulation facilities to address the exceptions that you take at any given time. The same would apply to noncertified simulation facilities where you would address those exceptions in your application.

Q. 222. Does a simulation facility certification form, NRC 474, have to be submitted prior to each operating examination?

A. No. Assuming that you maintain the acceptability of the simulation facility, it is a one-time certification.

Q. 223. Will the guidance document be limited to auditing the provisions of ANSI/ANS 3.5-1985?

A. No. It will be limited to auditing certification against the requirements of Section 55.45(a) of the regulation, which delineates the 13 components of the operating test, and ANS 3.5-1985, as endorsed by Regulatory Guide 1.149.

Q. 224. Will the performance testing documentation maintained for NRC review be limited to those items addressed in ANSI 3.5?

A. No. The performance testing and its documentation will use Section 55.45(a) of the regulation as its criterion, and must employ the malfunction testing of Section 3.1.2 of ANS 3.5, as well as the standard's two appendices, and the endorsement by Regulatory Guide 1.149.

To amplify, the operability test identified as Appendix B in the standard is done annually. We have not taken exception to that. Performance testing, which appears in Appendix A, plus the repeat of the malfunction testing, which is described in Section 3 of the standard (that set of testing at approximately a rate of 25 percent per year over four years), will constitute the additional annual testing to be done.

So you have an annual operability test, and then 25 percent of the performance tests that are described in the first appendix, plus 25 percent of the malfunctions that are listed. To the extent the operability test itself duplicates a portion of the performance test, that's sufficient. You don't need to do it twice, but that's the scope of the testing we are expecting to be done on an annual basis, and the term annual is used in its common meaning. We are interested in you doing the performance tests regularly over a period of four years, and not putting them off for the last year.

Of course, before you submit your certification or your application for approval, you should have completed 100 percent of the operating tests and the performance tests. After that, the 25 percent per year cycle will begin.

Q. 225. It was indicated that when we submit the Form 474, we should have 100 percent of the performance tests completed. Can we count performance tests, specifically malfunction tests, that were performed as part of an acceptable

test procedure, say, three years ago, towards having performed that part of the performance test one time, or do we have to redo it before we submit the form?

A. There is not necessarily any need to redo those performance tests. The concern, if any, is the difference in time from when they were done, and any changes to the plant configuration that would be required by the ANSI standard to bring the simulation facility up to date. If there have been no changes that would require you to repeat some performance tests to make them in compliance with the standard, then those tests should be acceptable.

Q. 226. So if we conducted an acceptable test program, and since then have had a program in place to test all the modifications to the software, including malfunctions, if appropriate, then we've got a basis for starting, anyway?

A. Yes. We intentionally did not specify a time prior to certification by which you had to have them all completed.

But the situation you have is that once you do certify, then you start performing those same performance tests over again on a 25-percent-per-year basis over the 4 years to ensure that configuration changes are, indeed, incorporated in the simulation facility. But the rule itself is silent on how long before certification these tests may have been performed.

There were some changes in the standard between the 1981 version and the 1985 version. You have to show that you have met the 1985 version, and that any design changes or software changes that you have made since then have not affected the validity of those earlier tests. It may be easier to repeat them than to repeat the entire process, but that's up to you.

Q. 227. Is there any intent to include remote shutdown panels in any of the simulation facility requirements?

A. No. However, if these panels are provided as part of the simulation facility, they may be used in the NRC operating test.

Q. 228. What does the Commission consider an adequate schedule to correct performance test failures identified in the four-year anniversary certification?

A. Although the rule requires a report on every four-year anniversary of certification, or four-year anniversary of application, we intend to have a much closer working relationship with you so that we will know on an ongoing basis about any such performance test failures, and there are several mechanisms to do that. One is the 90-day letter prior to examinations, in which uncorrected performance test failures would be identified. Another would be simulation facility fidelity reports from our examiners, and the third would be the results of our periodic audit and inspections of simulation facilities.

The schedule to correct performance test failures is really based upon the seriousness and the magnitude of the failures that are discovered. It may range from purely an NRC recommendation that the failures be corrected, to a recommendation that a failure be corrected within the normal update cycle required by ANS 3.5. The next level would require a correction on an accelerated schedule. The most serious failures require that the simulation facility essentially shut down until the failures are corrected.

Q. 229. What detail of description is the Commission anticipating in the report? Should the report be revised if a schedule for conducting a performance test changes year-to-year during the four-year period?

A. If your schedule for performance testing changes between the time you submit a certification and any subsequent four-year report, you should advise us of that change on the Form 474.

There are three documents for certified simulation facilities that address the level of detail. The rule, specifically the operating test in 55.45(a), lists 13 items that make up the content of the exam; ANS 3.5, which sets out the requirements for the simulation facility's capabilities, as well as the performance testing requirements; and Form 474, which indicates that we want performance test abstracts and performance test schedules.

We don't want reams of material on the details of all your performance tests and all the results. If we need additional information in the course of conducting an off-site or an on-site simulation facility evaluation we will request it from you; we are really looking for summaries and abstracts submitted with that certification form.

Q. 230. Will an NRC certification team be sent to the facility to conduct a simulator performance audit using the new simulator certification criteria?

A. Essentially yes. The NRC staff will conduct the review and the inspection. It will be a two-phase process, an offsite review, followed by an onsite inspection, if necessary. Only as a result of onsite inspection might certification be removed, as a last resort. For further clarification, a certification is not removed as a result of an inspection. It's removed as a result of failing performance tests which are required by the regulation. During the inspection we conduct performance tests where we audit the ability of the simulation facility to perform as described in the performance tests that you submitted. So if the machine does not work during an inspection, the criterion is still the failure of a substantial number of performance tests, such that you cannot perform a meaningful operating test as described in the regulation.

The conclusion is based upon the requirements for the operating test, not just on failing some fraction of the performance tests. You have to fail performance tests, but it's got to be a substantial enough number of performance tests that it impacts on the simulation facility's ability to conduct an NRC operating examination. So one performance test failure does not necessarily mean that the simulation facility would be decertified. It has to be a gross enough set of failures that we can't conduct a test.

Q. 231. We presently have two years before a plant modification must be incorporated into our simulator. Can we certify the simulator to the NRC without having incorporated all plant modifications?

A. We always anticipate that even when you certify a simulation facility, there will be exceptions if you haven't been able to bring it up to date with plant modifications. The ANSI standard allows a two-year period from the date you identified the need for making modifications until those are fully incorporated into the simulation facility. So the answer is yes, you can certify prior to the date you've incorporated the modifications.

Q. 232. Where specifically would that be on Form 474?

A. There is a block near the top of the form that says "I hereby certify that the simulation facility meets 10 CFR 55 and ANSI 3.5."

It then says: "If there are any exceptions to the certification of item two above [that is, the ANSI standard], check here and describe on additional pages if necessary."

Q. 233. In earlier discussions mention was made about using controlled copies of procedures for simulators. What do you mean by the word control?

A. Controlled copies means those procedures identical to the ones that you use in the control room of the plant. The copies should be up to date, including references and revisions.

*Q. 234. When an examiner conducts an exam on the simulator, are we going to be able to take a look at some of the fidelity questions that they have on a simulator prior to them leaving or prior to their exit interview?

A. Yes. The examiner will provide any comments that he or she has about the simulator's fidelity on a "Simulation Facility Fidelity Report," which has been added to Examiner Standard ES-104. Those thoughts will be shared with the facility licensee along with the rest of the examiner's comments, before he or she leaves the site.

Q. 235. Are licensees required to submit exemption requests per the ANSI Standard or the Regulatory Guide, and they are to be issued per the requirements of 55.45?

A. If any one of the requirements of the operating tests in Section 55.45(a) cannot be met with the simulation facility, you would require an exemption from the Regulation. A failure to meet all of the requirements of the ANSI standard does not require an exemption. It simply requires an identification of what it is that you cannot meet. And it must include a conclusion on your part that that difference would not preclude the conduct of an operating test as it's described in the Regulation.

That's why the certification on Form 474 is a certification to the Regulation with an identification that you follow the ANSI standard with some exceptions. We recognize that there will be exceptions. There are exceptions on new licenses on the day they're issued and we issue a number of license conditions.

We don't expect that the number of discrepancy reports on a simulation facility is ever going to get to zero. It's anticipated that there will always be some feedback, some necessary correction. The standard itself provides a schedule for incorporating those corrections and revisions.

Q. 236. I'm unclear as to how much we have to put into our simulator with regard to back panels.

The simulator we have is what's called a main horseshoe. We have 50 to 60 back panels in the simulator which are used during surveillance testing, and

recently there have been a lot of bypass switches that we use during our emergency plan training. Must we have all those back panels in our simulator or can we substitute the plant for that part of the training? It's a very big main control room, and we put all our back panels in there instead of outside the main control room.

A. Our intent is not to have you model the entire plant, but if the evolutions you are citing are your operating and emergency procedures for the facility, and it's an evolution which is conducted from within the control room by the regulation, we would expect that to be modeled or you would have to show us how that could be done without modelling and identify that as an exception.

But for facilities that have a large number of back panels or other equipment available in the control room, it's not the intent that you mock up all those panels. Generally, they are merged in the main control boards. For example, those that control the reactor, safety systems, electrical line-up, and balance of plant are the typical ones that we're looking for.

Q. 237. Would it be safe to assume that you have in mind the area that the operating shift typically does not leave during normal operation of the facility?

A. It's those portions of the facility where the individual is defined as being "at the controls," which is described in Regulatory Guide 1.114. Some facilities mark it off with a red line on the floor or with a fence or whatever. It's that area where the individual is at the controls as defined in the Regulatory Guide that we're interested in simulating.

LICENSES

Special Senior Operator Licenses (Including Instructor Certification)

Q. 238. What is the impact of the new rule on instructor qualifications? Are the requirements of NUREG-0737 superseded?

A. The new rule supersedes the requirements for instructor qualifications in NUREG-0737. The responsiblity for ensuring that instructors are qualified now rests with the accreditation process. INPO has established the qualifications for technical instructors, which would be reviewed within accreditation. NRC's role is to monitor the accreditation program to ensure that it maintains the standards that have been endorsed by the Commission.

Q. 239. Instructors who have been certified or who have held a license previously may instruct students in courses needed to prepare applicants for NRC licensing examinations. Are these instructors required to participate in a requalification program?

A. If you have an accredited program or systems approach to training (SAT) program, then that program will define the continuing qualification and retraining requirements for instructors. If you do not have an accredited program, then the instructors will have to meet the commitments of the approved program as defined under Part 55 and commitments contained in the FSAR. NRC will no longer issue instructor certifications. If a licensee is using vendor-certified instructors in a requalification program that has not been completely converted to an SAT program (performance-based), it is conceivable that a 50.59 change could be made to support such an approach in the interim until such time as the requalification program is converted to an SAT-based program.

Q. 240. As I understand it, only people that hold a license for a facility may instruct license-type material to a hot license class. Would consultants who were previously licensed and certified by General Electric be able to teach such material?

A. If your program is accredited, then you determine subject matter expertise and instructor skills in accordance with the accredited program. If your program is not yet accredited and you were previously under the commitment in the Denton letter to assure subject matter expertise for instructors -- which was that those instructing integrated plant operations have a level of knowledge comparable to that of a senior reactor operator -- then the process we've allowed in the interim permits you to certify your instructors based upon their successful completion of your senior operator training program.

We have also allowed that those examined and certified by NRC in the past can continue, but they should receive additional training on plant or procedure changes, that portion of the requalification program which is applicable to what they're teaching.

Now, the practical aspect is that those people who are instructing have to learn that material to a depth greater than that which they instruct, and your program also has mechanisms for evaluating instructor performance.

We are trying to move out of the area of specifying training program content or qualifications for instructors. So depending upon your commitment in the presently approved program, you may need to review that in accordance with 50.59. NRC will not need to certify it; you may do that under your own program.

Q. 241. How would that apply to vendors such as Westinghouse? We cannot get accredited by INPO. Therefore, if we hold a staff of instructors, are they then going to have to go to the utility and the utility is going to have to either license or certify them?

A. For contractors that are providing instruction for facilities, it is the responsibility of the facility to ensure that the contractors have the appropriate subject matter expertise and instructor skills to meet the requirements of their accredited program. The staff will not be certifying or approving instructors who are contractors, nor will we be certifying or approving instructors who are facility employees.

Q. 242. Did I understand correctly that you said that if you're not accredited, that you would have to license instructors?

A. Some facilities in their existing training programs have committed in the FSAR to have either licensed senior reactor operators or individuals who were certified instructors. The old instructor certification, which was comparable to a license (the eligibilty requirements were relaxed), required that the instructor go through the same examination, although he was not authorized to manipulate the controls. We no longer issue such certificates, which would imply that you would be obligated to have licensed operators conduct your program.

We also indicated that you could perform a 50.59 type of review that would meet the same intent. Having your instructors complete and be examined by the standards of a program comparable to your own senior reactor operator program, such as a vendor certification program, would be sufficient in the interim. When we get to the point where everyone has been accredited, that issue is superseded. The accreditation process covers instructor qualification and training.

Q. 243. I do not have my programs accredited yet. I hope we will have them done by the end of the year. But I have people who are in a program right now, the same one we've been using all along, and they are being examined by us next week. And the Region is not going to come in and give them an NRC exam. My intention is to certify them as I have done in the past and put them right into a classroom. They will also be in a requalification program. Do I understand that to be a correct procedure?

A. Yes. If you are getting ready for accreditation, you probably have completed the self-evaluation report, and are getting ready for a team visit. As preparation for that, you look at how you train and certify instructors. We want that to be a part of the accreditation process, and not a part of the NRC review.

Q. 244. Can trainees participating in a systems training program for instructor certification manipulate controls on the facility under the appropriate supervision of licensed personnel?

A. If that training program can lead to a license if carried to completion trainers may manipulate controls under appropriate supervision if it occurs in the proper sequence within the training program. The trainee may also manipulate controls (under proper supervision) without being involved in a course that leads to a license if the systems that are being manipulated do not affect power or reactivity (e.g., feedwater). However if the systems that the trainee will teach, and therefore the controls he would manuipulate, do affect power or ractivity, then he must be enrolled in a course that leads to a license.

Q. 245. As I understand it, in the accredited utilities, instructors will be considered to be certified to teach licensed operators after they complete the accredited training program. In the case of a utility that doesn't have their operations programs accredited yet, could you outline what the requirements will be?

A. The requirements are basically those which were in existence before the effective date of the Rule, and that is to either have an individual who has completed a training program comparable to that of an SRO, and been examined on it (we used to call that instructor certification), or be a licensed senior operator, who is currently enrolled in a requalification training program.

Because of the fact that we no longer are going to be giving instructor certifications, you then have only the option of using a licensed operator to teach those courses. We are not going to give any further instructor's certifications, that's not permitted under the Rule.

For NTOLs and facilities that are in the accreditation process, the Commission's Policy Statement in Training and Qualification of Power Plant Personnel of March 20, 1985 allowed facilities to make the transition from FSAR commitments to accredited programs. Therefore NRC instructor certifications which, as a policy, were discontinued in Mid 1985, relied on facility certification of instructors. We believe this policy will continue and eventually be reflected in Revisions to Section 13.2 of NUREG-0800, the Standard Review Plan.

Q. 246. So, training instructors must be licensed operators?

A. Yes, until such time as you get accredited, or have some other way of getting subject matter expertise through your accredited program, including instructor training. We are not going to specify that for an accredited program. But you may have a program on record today, in which you have committed to the requirements to the Denton letter, which said you were going to do certain things to ensure subject matter expertise in instructors. And that was to either use a licensed senior reactor operator or an individual who has been examined by the NRC to the same level as a senior operator.

We are not going to examine without issuing a license.

Q. 247. Will people who are currently certified by virtue of the fact that they have previously passed a senior reactor operator examination somewhere, and thus demonstrated their competency, be considered as certified to teach?

A. Yes. But when they come to us after the effective date of the Rule requesting to have their certification renewed, that's not going to happen, because there is no longer such certification.

Q. 248. So, then, is someone who has passed an SRO exam given by the NRC at some point in the past, considered certified or not?

A. For the purpose of meeting your training program commitment of having an individual who has a knowledge level comparable to that of a senior reactor operator, the answer is yes, provided the individual is maintaining currency in the requalification program, with respect to any changes which would affect his knowledge base. That is consistent with what INPO is looking at in the instructor training and as identified in Technical Instructor Training and Qualification Guideline, INPO 82-026 at 7.1.

Q. 249. Can you tell us how you expect to treat people under the new rule who are currently SRO instructor certified? What kind of credit are they going to get because they are SRO instructor certified, if any?

A. The answer is none. Obviously they have completed the same training program and taken the same exam as an SRO, but because of eligibility requirements or time on shift or some other requirement they did not meet the SRO requirements.

In the past, there have been individuals who successfully converted an instructor's certification to an RO license.

Additionally, there is the provision for waiver of certain portions of the NRC examination, based on operators having: (1) extensive actual operating experience at a comparable facility within two years, (2) discharged his or her responsibilities competently and safely and is capable of continuing to do so, and (3) learned the operating procedures and is qualified to competently operate the facility designated in the application.

If you want these individuals to become licensed, you will need to submit a complete application, and if applicable, request a waiver under the Regulation. This application would then be reviewed by the Region as to what portion, if any, of the examination would be waivered.

"Actively Performing the Functions of an Operator or Senior Operator"

Q. 250. What guidance will the Commission provide to the facility licensees and the staff that Section IIF(2) is Commission policy?

A. Section IIF(2) is part of the Statement of Considerations that summarizes public comments and describes the staff's final actions in response to them. This Section discusses the definition of "actively performing the functions of an operator or senior operator," which is part of the regulation, contained in Sections 55.53(e) and 55.53(f).

*Q. 251. The regulation for active participation states that "an individual has a position on the shift crew that requires the individual to be licensed as defined in the facility's Technical Specifications, and that the individual carries out and is responsible for the duties covered in that position." How does this rule accommodate plants with RO and SRO licenses on shift that exceed the Technical Specification minimum staffing requirements?

A. The rule does not preclude having additional people on shift beyond the minimum staffing requirements. That is a utility decision. However, in order to take credit for the proficiency of such personnel standing watch above the Technical Specification minimums, as a condition for maintaining a license under 10 CFR 55.53(e), the facility licensee must maintain administrative control over these designated watchstanders, and must be satisfied that these individuals are maintaining their proficiency by manipulating the controls of the facility in the case of an operator, or by manipulating the controls and directing the licensed activities of licensed operators, in the case of a senior operator.

So that if you operate a single unit with three reactor operators on shift, two of those individuals are in positions required by the Technical Specifications. One is usually the reactor operator and the other is the balance of plant operator. The third person would need to rotate into one of those two positions over the course of a quarter to obtain the requisite number of shifts to maintain his license active, so he would need to sign the logs, on occasion, as the reactor operator or the balance of plant operator. So it's clear that you must be in the position on shift required by the Technical Specifications, and additional personnel on shift to perform other duties do not meet the requirement for directing the activities of licensed operators or for manipulating the controls. There are alternatives built into the regulation to provide ample flexibility in obtaining proficiency for licensed duties, e.g., 40 hours of parallel watch standing.

Q. 252. Our Technical Specifications do not address the individual's responsibilities for each position in order to satisfy the active participation requirement--it says you have to have an RO and two SROs, one SRO as a shift supervisor and one that's another RO. Can you rotate that SRO position from a shift foreman position to another senior reactor operator position? It doesn't say who is required to fill those positions, so the complication is that if we have a senior control operator who has an SRO license and he's clearly directing the operator's activities, can we give him the responsibility for the day and say the shift foreman no longer has the responsibility, because both of them hold an SRO license?

A. For the case that you've described, the individual who is on shift directing the activities is the one who's in the position required by the Technical Specifications. Whether he is the shift foreman for that shift because that's the title that you use to describe other responsibilities he may have, it is the senior operator in the control room who directs how the other two operators manipulate the controls and who is there fulfilling the requirements of the Technical Specifications to be supervising the activities of the licensed operators. That's the position that qualifies for the eight hours on that shift, independent of title. Your administrative procedures should be clear as to who has authority to direct licensed operators so that if the shift foreman is relieved there is another senior operator in the control room carrying out those duties. The Technical Specifications don't refer to shift foreman; they say senior operator directing the activities of other licensed operators.

There is a related question that concerns the extra person on shift who may not be in the licensed role. It is possible for that individual to complete 40 hours of parallel watch standing; that is, he's not in the position required by

the Technical Specifications, as long as he is being supervised and his activities are being closely monitored by the person responsible. He could accrue 40 hours of parallel watch standing for that quarter and not be actually in a position required by the Technical Specifications to meet the seven shifts at eight hours each, or the five shifts of twelve hours each.

It would require in that case, that the authorizing representative of the facility certify that he has completed that duty. From a practical standpoint, it's easier to rotate the people through the watch to maintain their proficiency. The active license status is intended as a way of maintaining the proficiency of the people who are performing the functions. If you're dual licensed, the active status requirement can be met by standing watch on only one plant, or on some combination of the plants.

Conditions of Licenses (Subpart F, Section 55.53)

Q. 253. With regards to fuel handlers, in the case where you may refuel once a year, it's probable that the requirement won't be maintained. Subparagraph 55.53(f)(2) suggests that one shift of supervised duty is required before the fuel handling foreman with the license can assume his full duties. Is the intent that that supervision be performed by another fully qualified SRO who may not be a fuel handling specialist?

A. That is correct. An active SRO license includes the capability and responsibilities associated with monitoring fuel-handling activities.

Q. 254. The Operations Manager and Operations Supervisor are required by Technical Specifications to be licensed as Senior Reactor Operators. These individuals do not have a position on the shift crew. They are involved in the day-to-day direction of Licensed Operator activities. Are these positions considered as actively performing Licensed Duties?

A. No, unless they stand the seven 8-hour shifts per quarter, or five 12-hour shifts per quarter. That does not mean that the Ops Manager and the Ops Supervisor cannot keep a license. The requirements to maintain a license are that they continue in requalification.

If the Operations Manager must hold a license, then he must participate in requal, but he need not stand watch on shift in a position where he is directing the activities of the Reactor Operators. A license, whether it's active or not, may meet some Technical Specification requirement.

Q. 255. What if you have an SRO stand a shift assignment as an RO? Does the SRO get credit for standing watch in that position for renewal purposes?

A. The SRO is not performing Senior Reactor Operator license duties. Unless he is also standing SRO's duties during that quarter, then his SRO license would not be active. Where an SRO is standing an RO watch, his license would continue to be active insofar as it deals with his operating or manipulating the controls as an RO.

In order for him to direct others, he would have to stand a 40-hour parallel shift in order to be proficient and go back into an SRO's duties. He could,

however, continue to maintain an SRO license if he's current in requal. If he wants to assume an SRO's capacity, he must go back to a 40-hour shift under instruction as an SRO.

Q. 256. When the operations manager is licensed, should technical advisors or licensed instructors have to become members of a shift crew to maintain an active license?

A. Yes, to maintain an active license, they do. To maintain an inactive license, they don't.

Q. 257. Do personnel seeking to maintain an active license have to replace a member of a shift crew to meet the watch requirements of 10 CFR 55.53?

A. Yes, they do, with the understanding that there may be additional people on shift beyond the minimum technical specification requirements.

Q. 258. Although there is only one Technical Specification SRO position on shift (Shift Supervisor), our Technical Specification reflects the 10 CFR 50.54 requirement of a second SRO on shift. Would standing a watch as a designated second SRO meet the definition of actively performing the function of a Senior Operator?

A. If he is filling an SRO position under the Tech Specs then he would be maintaining his active SRO license. A number of people have asked, can we have two or three people come in to get their on-shift time? Our position is that those meeting the minimum staffing Technical Specification requirements for whatever operational mode get credit, although there can be other people on shift who are also eligible for credit.

For clarification, this question seems to imply that at this facility the Tech Specs do not conform to the Regulation for a single-unit site for having two Senior Operators on shift during operational modes. That's understandable because the Rule itself supersedes the Technical Specification requirement, and is a higher order requirement. That is, you must conform to the Rule even if your Tech Specs permit something less. We would suggest that the next time you have an administrative change to that section of the Technical Specifications, amend it to conform to the Rule.

Q. 259. If the Operations Manager does not hold an active license, what duties may he perform or not perform in that status? For instance, we all have Technical Specifications that require licensed Senior Reactor Operators to approve changes to procedures. Would an inactive license allow him to do those administrative functions?

A. Yes. He can do everything but direct a Reactor Operator in manipulation of controls, or himself manipulate the controls.

Q. 260. All stations have engineering expertise on shift in the form of a shift engineer, who is the STA. STAs hold a current SRO license. They direct activities and integrate schedules. Are they not actively performing the functions of an SRO license by those duties, or are they going to have to come back and perform as a shift supervisor, on shift?

A. If they are one of the two individuals required by Technical Specifications to staff the shift, then what you just described is acceptable. If one is there as an engineer on shift who happens also to hold an SRO license, and is only fulfilling the role of an STA, then he is not responsible for directing the activities of licensed operators. There are many cases of extra people on day shift, who do support functions, such as reviewing tags, procedures, lineups, records, etc., and do not require an active license to perform them. It is only when he is performing the functions and duties of an operator or a senior operator that an active license is required.

*Q. 261. Our Technical Specifications require two senior reactor operators and two reactor operators for mode one and two operation. Typically, though, we'll have others assigned to the shift. Is it NRC's intention that only the two people assigned as the balance of plant operator and the reactor operator are receiving credit for being on shift? Or are the others manipulating the controls getting credit for being on shift?

A. If utility management has determined that they are necessary for safe operation, the decision about the number of additional watchstanders is that of the facility licensee. However, in order to take credit for the proficiency of such personnel standing watch above the Technical Specification minimums, as a condition for maintaining a license under 10 CFR 55.53(e), the facility licensee must be satisfied that they maintain their proficiency by manipulating the controls, in the case of an operator, or by manipulating the controls and directing the licensed activities of licensed operators, in the case of a senior operator.

Q. 262. Do candidates with an RO license in training to be upgraded to senior operator lose their active license status per 55.53(e) while standing watch as an extra operator for three months?

A. Yes. If the operator does not maintain the requirements of an RO, he loses his active status.

Q. 263. This question is related to actively maintaining a license. Could someone stand 40 hours in January and then again in June to meet the active license requirement by calendar quarter.

A. No. The 40-hour requirement does not pertain to maintaining a license, but is part of the requirement for resuming active status. Maintaining an active license means standing the necessary shift watches.

*Q. 264. This question concerns active license status at a dual-unit plant. The shift supervisor is the SRO who normally directs the activities of the operators. We also have an SRO on shift who is over both of the shift supervisors. He does not normally direct the activities of the operators, but he may. Would his supervisory time on shift count as active time?

A. Yes. If you look in the Regulations on staffing for a dual-unit site, you have three SROs for the two units. If he is in one of those positions, that qualifies him. If he is not in one of those positions, you may still take credit for his proficiency if you are satisfied that he is maintaining that proficiency by manipulating the controls and directing the licensed activities of licensed operators.

Q. 265. If an operator gets sick in the middle of February, and has been actively on watch in January and February and has this requirement met but is sick for three months before he goes back on the watch, does he have to stand a 40-hour watch? You don't have to demonstrate in the prior three months he has served 40 hours; isn't it by calendar quarter?

A. Correct. But during the remainder of that quarter he's going to have to complete the required number of shifts to be considered actively performing the functions.

Q. 266. What records will the Commission require to ensure that a licensee has maintained active status per 10 CFR 55.53(e)? What will be the record retention period?

A. It's up to the facility to determine how it wants to be able to document the active status. Shift turnover logs would be appropriate documentation. The key is that the documentation be retained and available for review.

There are two answers to the question of record retention. If the record is the control room log, it has its own record retention requirement, which is essentially for the life of the plant. If you are using the control room log to determine whether the guy was signed in, that's adequate.

The certification for his returning to duties is based upon his standing 40 hours of parallel watch. On parallel watch, however, he need not sign the control room log. Under those conditions, the responsible official onsite could create a form which would go into your records onsite and be available for audit. That form would have a record retention requirement equal to that person's license; that is, six years.

Q. 267. The proposed rulemaking said nothing about the five 12-hour shifts or seven 8-hour shifts. What is the basis for this, and why weren't we given an opportunity to comment?

A. The previous practice has been for a minimum of one shift, essentially per month, three per quarter. That was deemed by the Commission to not be sufficient, as a part of their review and determination of the final Rule, and they increased it to the current requirements in the Rule.

Q. 268. Would it be possible for an operations superintendent to direct activities from off his shift, and if so, then would that individual be required to maintain an active license by actual shift time for a calendar quarter?

A. Let me give you what I think is the most practical example: in an emergency, typically, the operations superintendent is the individual who goes back and forth between the Tech Support Center or provides assistance in an emergency. He gives directions to whoever it is, the Shift Superintendent or the other SROs; so he is not directing the manipulation of the controls; he's providing guidance on how he wants the event to be handled.

Someone else in the decision process is actually deciding whether he agrees or doesn't and directs the activities of the licensed operators in manipulating controls.

So in that case he is not on shift in the position; he is off shift, responding in accordance with the emergency plan, which is covered by a different portion of the regulations.

So the operations superintendent need not hold an active license unless you intend him to go on shift as a shift superintendent.

Q. 269. That same logic would apply to day-to-day operations, then, if I understand you correctly?

A. There is no day-to-day operations issue. He's there fulfilling the position that's required by the Tech Specs as the operations superintendent; that is, independent of proficiency in manipulating controls. We would not expect the operations superintendent to go in, for instance, and line up systems or manipulate controls on the board.

He needs to be proficient in order to be consistent with the requirements of the regulations, so he would either have to stand 40 hours of parallel duty or maintain proficiency or keep his hands off the controls.

In the process of examining him for requalification, we would examine him both at the RO and the SRO level. Your continuing training program should ensure that he doesn't lose those manipulative skills because he is not required to maintain an active license.

Q. 270. If our Technical Specification defined the STA position as an SRO on shift, would filling that capacity satisfy the requirements?

A. Yes.

*Q. 271. Consider a plant in cold shutdown with lowered minimum shift manning requirements. Are the licensed operators assigned to that crew who are in excess of the minimum cold shutdown staffing requirements actively performing licensed duties?

A. Yes, if you have determined that they are necessary for safe operations, you maintain administrative control over these positions, and if you are satisfied that they are maintaining their proficiency in accordance with the regulation.

Q. 272. How, and to whom, is certification made under 55.53(f)?

A. This section has to do with returning the individual to an active status. A certification must be made and available on file for inspection purposes; it need not be made to the NRC.

Q. 273. It would appear that once a quarter, an individual could spend 40 hours on shift under the direction of the licensed operators. And the facility could certify that he had done so, and that his status in the requal program was current. And by doing so, he could maintain an active license by spending essentially 40 hours a quarter on shift, instead of the 56 to 60 hours specified in other parts of the Regulations? Is that true?