A. That is true, although that is not what we intend. The issue is to make it easy for people to maintain a license. And that's a decision that the facility makes with respect to the commitment of time to the requalification program. If the facility wants to commit an additional 40 hours for parallel watch standing in a control room in addition to the requalification program, so that he can be active, that's their choice. Our intent was to make the minimum seven watches at eight hours, or five watches at twelve hours, to maintain the proficiency of those who are actually directing the activities, or manipulating the controls. It's a proficiency issue, it's not a license renewal issue.

Q. 274. Are any allowances made in 55.53(f) for off-shift licensed personnel who are involved in daily operation's supervision?

A. No. They are either in active status or they are not. If they are not, their just being a daily operations manager, or an operations superintendent, does not convert them to an active status.

Q. 275. Suppose someone completes 40 hours on shift under supervision; then his clock starts again for his seven 8-hour periods. If an individual goes through this in the last month of a quarter, does he have to complete those seven 8-hour shifts before that month is up, or does he start during the next calendar quarter?

A. If he's done 40 hours of parallel watch in a quarter, he's active in that quarter. For the next calendar quarter, he would need to stand either seven 8-hour watches, or five 12-hour watches. Regaining proficiency allows him to go back into an active status to stand watch. He does not have to do both in the same quarter. That is, he does not have to serve 40 hours under instruction, plus stand seven 8-hour watches, or five 12-hour shifts in that quarter; it goes to the next one.

Q. 276. Could you clarify what you mean by "parallel watch standing?"

A. It's very similar to "being directly under the supervision of," as we use that phrase for a trainee; that is, the individual that has the watch still has the responsibility.

The person that's in the parallel situation, even though he's licensed, is not considered proficient. The regulation requires that he not manipulate the controls or direct activities except under the direct supervision of someone who has an active license.

Q. 277. Do those 40 hours have to be consecutive; i.e., eight hours a day?

A. No. It has to be 40 hours. You can have four tens or ten fours or any other combination that adds up to 40 hours; however, they must be in the same calendar quarter.

The only explicit guidance in the regulation concerns the seven 8-hour or five 12-hour shifts where a full shift means from watch relief to watch relief.

Q. 278. Can licensed Senior Operators who are not in active status perform refueling SRO duties?

A. No. Only active SROs can supervise refueling activities. If they are not active, they must stand one 8-hour shift under instruction from licensed active SROs to perform active SRO duties limited to fuel handling.

Q. 279. What leeway do you give to the facility to know that an operator has received a felony conviction?

A. Convicted felons typically go to jail, so they're not going to be at work. Also, all those granted clearance for unrestricted access have background investigations that relate to such things as convictions for felonies. You will have access to the information from that source, too.

Q. 280. But the facility will not necessarily know within 30 days?

A. It is the operator who is required to let us know in 30 days, as a condition of the license.

Q. 281. So, we don't assume any liability for not notifying you within 30 days?

A. If you don't know, and you didn't have a reasonable basis to know, we're not going to hold you liable for that. However, if you get a criminal history check that shows that the person has been convicted of a felony, we expect you to tell us.

Q. 282. If we submit an applicant for a license who has had a felony 15 years ago, is that still reportable? If he had taken a licensing exam and was ready to receive a license, would he have to notify you within 30 days, assuming we did not know that?

A. If the individual knew that he had been convicted of a felony in the past, and he did not report that on the initial application, his application would be considered incomplete. Such an omission could be the basis for revoking his license, since he would have withheld information.

Q. 283. Why is the applicant no longer required to sign the Form 396 certifying that he or she has no felony convictions?

A. Because it is a condition of a license, per Part 55.53(g) that individuals notify us within 30 days of a conviction for a felony. So, should someone get a license who had a prior felony, he would be required to notify us of the prior felony.

Q. 284. If we were to let an individual's license go inactive, would it also be reasonable for us to let his medical requiremerts lapse?

A. No, you cannot let his medical requirements lapse. He must be medically examined each two years. That is a condition of his license, whether he maintains proficiency or not.

Q. 285. Is there is a purpose for that, if he is going to continue inactive? He is not permitted go on shift, so there seems to be little point to maintain the medical status up to date?

A. The issue is whether he is medically fit to carry out the duties of a licensed operator if you put him in a situation of watch standing to regain his proficiency. At that point, he would be permitted to manipulate the controls of the facility, and/or direct activities. The reason we extended the licensing period to six years was to make it coincide with the medical requirement, which comes up in two-year cycles.

Q. 286. Are licensees who maintain an inactive license required to participate in a requalification program to the same extent as licensees maintaining an active license?

A. Yes. A condition of their license under the new Part 55.53 (h), requires participation in the requalification program.

Q. 287. The problem is that standing the shift foreman's license does not prepare this person to go out and handle fuel, and I don't understand how doing one watch under instruction does that, how that can guarantee that he's going to be a safe person in charge of fuel handling?

A. We're talking about an SRO limited to fuel handling, not an SRO with an unlimited license here. So if a guy has an SRO license and he's an active SRO, he can be used as an SRO with no other duties but to handle fuel, or be the supervisor in charge of fuel handling, with no other duties. If he's a senior with a limited license, he's in a different category, because he can't be used as an SRO. So any active SRO could be a fuel handler senior, but if he is an active fuel handler and then he doesn't handle any fuel for awhile, or for some reason he doesn't use his license, then he has to only stand one watch, or one eight-hour shift with an SRO who is an active SRO, or an SRO with a limited fuel handler, and then he has met that certification again.

The only adjustments we've made in the rule for fuel handlers are that, in order to become active, they only have to stand one parallel shift, which would make it much quicker and easier than the 40 parallel shift, and that the requal program is limited only to those aspects of the plant operation to which their license is limited.

Q. 288. With respect to the requirements for maintaining operating proficiency, can a licensed STA (SRO License) who is standing the "STA Watch" get credit for SRO proficiency?

A. No.

Q. 289. We had a concern on restoration of an inactive license as a full-scope SRO license, and we wanted to use that individual for fuel handling during refueling. Would that individual as a full-scope license have to go through the 40 hours of concurrent duties, or just eight hours of concurrent duties?

A. It would only take eight hours under parallel watch with a person whose license is active, whether that's another licensee limited to fuel handling only, or it's a senior reactor operator.

Q. 290. When will the quarter for shift standing start when the new rule is implemented?

A. For accountability purposes the first complete calendar quarter after the rule is implemented must meet the seven shift/quarter requirement.

Q. 291. Does completion of 7 days on shift in one position such as shift engineer, allow the individual to perform duties in another position on shift for which he is also qualified?

A. If shift engineer is a Tech Spec position required to hold a SRO license, then performing in the seven-8 hour shifts, per 55.53(e) would permit the licensee to perform duties as either an SRO or RO.

Q. 292. Do technical advisors or licensed instructors require an active license, if they must maintain a license for technical specifications or FSAR?

A. They may need a license per the Technical Specifications, FSAR etc., but it does not have to be "active" per the Regulation unless the individual is required to assume a position onshift that the Technical Specifications identify as a licensed shift manning requirement.

Q. 293. If an operator gets his license during a calendar quarter, how is he to meet the seven shifts per quarter requirement?

A. For the initial calendar quarter for which a license is issued, he is considered to have met the proficiency requirements by virtue of having passed the exam. Thus, the "actively performing" requirement will commence in the first calendar quarter <u>after</u> he receives the license.

Requalification and Renewal (Statement of Considerations)

Q. 294. The regulation says that sometime during that six-year period, a candidate will get a test. That may be the first year through the sixth year, but the next time he is renewed, it may be as much as 11 years apart. Is that correct?

A. No. In the Statement of Considerations, II(H)(4), the last sentence says, "The NRC will administer these requalification written examinations and operating tests on a random basis, so that no operator or senior operator will go longer than six years without being examined by the NRC once a six-year license is issued." That's a direction from the Commission to the staff. That's the same way we handle the clarification of the INPO status, in the Statement of Considerations that goes with the Rule, describing intent. Some operators will receive more than one NRC-administered exam during the term of their license in order to comply with the Commission's direction to the staff.

Renewal of Licenses (Subpart H, Section 55.57)

Q. 295. At what point will the six-year cycle start for present license holders?

A. It will start with the first license issuance after May 26th. We do not intend to amend the present licenses. So on May 25th, someone will get a two-year license. On May 26th, that individual would receive a six-year license.

Q. 296. I have 107 licenses expiring over the next two years for which NRC requal exams are not taken. Where do they stand?

A. The renewal of the two-year license is governed by the rules under which they were given their original license, so no NRC exam is required.

Q. 297. We've gone from a situation where at the end of the examination conducted by NRC, the results were discussed with the utility, to a situation presently where the results are not discussed until the license certificate is signed off and the results have been reviewed at the Region. In combining requalification exams administered by NRC with initial license exams administered by NRC, will the examiners, upon an indication that a candidate for renewal was a potential failure as a result of the operating portion of the exam, discuss that information with the utility, or will you allow that person to go back on shift pending the complete review? And how do you expect this to affect the turn-around time when we're significantly increasing the number of exams to be evaluated?

A. We can't predict how it will affect the turn-around time. Hopefully we will have the resources to do it within the existing time frame. From the point of view of a licensing decision, no decision has been made until the paper is signed. In other words, it is only a recommendation until the point that either the license or the failure has been approved by the branch chief, by the licensing authority.

We're prohibited from discussing predecisional information. That's why we do not give preliminary results either on site or from the regional office.

REQUALIFICATION AND RENEWAL

Obviously, if the examiner believes that it's a safety issue if an individual returns to shift, it's incumbent upon him to notify the licensee. We would not leave the site with a safety issue pending. However, when we leave the site, we don't always know whether an individual has passed or failed all portions of the examination (written, oral, and simulator).

Q. 298. What is written evidence of the applicant's experience and how is this supplied?

A. Written evidence will be the same as it is now; as it is reported on relevant portions of Form 398.

Q. 299. What is the evidence that the applicant has discharged the license responsibilities competently and safely, and how is this information provided?

A. The utility certifies that the individual has performed in accordance with the terms and conditions of his license, and that he has performed satisfactorily. It is for you to determine how that performance has been, through whatever mechanisms you want to use; whether it be performance evaluations, or other information that you have in your company files related to that individual.

Q. 300. In reviewing past performance under Section 55.57, you said earlier that an NRC letter or a letter of reprimand might be part of what you'd evaluate. Does this mean a letter of reprimand specifically from NRC, or one from the site itself?

A. An NRC review would be based upon two things: the certification from the company, and any official enforcement actions taken against the individual that are in his official docket file. It does not include information that has not been formally transmitted to the individual under his license, as it must be a completed action. The fact that an individual is under investigation by the NRC may not result in something going into his file. It only goes into his file when we complete an enforcement action and he receives a letter. It's a formal notification, and there is guidance as to what is permitted in the docket file and what is not. Essentially, anything in the NRC docket file has already been presented to that candidate, whether it be an examination grading report result, or an enforcement action.

Q. 301. If someone never operates the controls, and he gets a license, that license is renewable. Why do we then report the number of hours one operates the facility on a renewal?

A. Although we will renew a license of an individual who has not stood watch, that information may be helpful in making judgments on renewal applications in which the individuals did not fully meet all 55.57(b) requirements to the letter. For example, an individual may have been unable to attend every requal class because he was participating in a management course. The number of operational hours for this person may influence our decision regarding his renewal.

Q. 302. When it's time to renew the license of our shift engineers, can their license be renewed in an inactive status, without another examination, if they have maintained all of their requal requirements?

A. For anyone who holds a license, he must be kept current in the requalification program; he must be medically fit, and he must have been examined at some time by NRC during the course of that six-year license. The requalification examination requirements are applicable independent of active/inactive status.

Q. 303. If a licensee is not maintaining an active license in accordance with 55.53(f) at the time of license expiration, what are the requirements for renewal?

A. If he is not maintaining an active license, he still must meet all of the requirements for renewal in 55.57(b). However, he does not have to be active to get his license renewed. He must be, most importantly, current in the requalification program, but he does not have to be active to have his license renewed.

Q. 304. In order to obtain license renewal you must be examined by the NRC at least once during the six-year life of the license. What is the extent of this examination: written, operating, both, either?

A. With respect to format, the requalification exam will parallel the initial exam, i.e., it will include both a written and operating test. The content of requalification exams will be based on the facility's learning objectives provided that these objectives are satisfactory.

Q. 305. Section 55.57 states that license renewal is going to be based on having passed the comprehensive requal exam and operating test administered by the Commission during the term of a six-year license. I believe that you have interpreted that to mean that an exam will be given at least once every six years?

A. Yes, that's what the Commission has stated. The Commission has directed the staff to examine operators <u>at least</u> once each six years, and that's why we know that some people may have an exam more than once in six years.

Q. 306. What percentage of people will you examine at a time?

A. At least 16 percent per year, because we've got to examine 100 percent in six years. In fact, it will be greater than 16 percent because of the randomness involved in ensuring that candidates don't have prior knowledge of when we are coming in to examine them.

Q. 307. How far in advance will an individual licensee be notified by the Commission of his scheduled examination date?

A. Ten days, minimum; 6 weeks, maximum.

Q. 308. Do you need to take examination to renew a two-year license?

A. No. The rule is very specific: You need an examination by the NRC only for the renewal of a six-year license.

Q. 309. I have some renewal submittals that will have to be submitted before the May 26th date, but the renewal is not until after. Do I submit them under the existing rules for them to come back as a six-year license?

A. The Form 398 that you use until May 26, 1987 is the same one that's in effect today. Even though you submit that version of the form, if we issue a license after the 26th, it will be a six-year license. Any applications submitted after May 26th should be on the new Form 398 with the new Form 396.

Q. 310. Will the people presently holding two-year licenses have to reapply at the expiration of the two years or will they be automatically extended to the six-year cycle?

A. They need to reapply prior to the expiration date of their current license.

Q. 311. Considering that every utility has or will have an accredited retraining program, what is the justification for the random selection, which would include the possibility of having more than one exam in a six-year period, versus the possibility of doing an orderly schedule to include only one exam in that same six-year period?

A. It is NRC's mandate to ensure that all licensed operators maintain a satisfactory level of proficiency at all times. As such, the required exam is intended to serve as a "spot-check" to verify that that level of proficiency is in fact being maintained. Further, we want to ensure that operators can demonstrate this level of competence without special preparation outside of the normal required training program. The Commissioners believe that this is best accomplished by randomly selecting the operators to sit for the required exam.

To the extent possible, we will coordinate the exam schedule with your regular cycles. But if we have reason to believe that there is something wrong with the program, or we have other indications of problems, we will conduct examinations at times other than during your requalification cycle.

Q. 312. How can the Commission administer a comprehensive written exam once during the six-year cycle if the utility is administering their written exam spread out over a segmented period?

A. As stated above, the Commission's mandate is to ensure a satisfactory level of operator proficiency at all times. It is the facility licenses's responsibility to ensure that their required program, although segmented, maintains this level of proficiency throughout the training cycle.

Q. 313. Who will schedule and track each licensed operator to ensure he has had an NRC exam prior to renewal?

A. That's NRC's responsibility. It will be tracked in the Regions by the docket files on each individual which will contain the last NRC-administered requal exam.

Q. 314. How soon can someone be re-examined after failing an NRC exam?

A. We have resources for two visits to a facility per year. If the individual fails and is getting close to the point for renewal, we would evaluate on a case-by-case basis whether our resources permit us to go back and give another examination before the next regularly scheduled exam.

If he's within, say, six months of renewal, and that's when he's targeted to come up for an exam, that's a pretty good indicator that he's going to be taking an exam at that next cycle before his license renewal.

Q. 315. In the past, if an operator failed the requal exam, he would go into an accelerated requal program normally administered by the utility. Is that going to remain the same, and, once he completes the accelerated requal and the examination by the utility, would that be acceptable as far as meeting the requirement of passing the NRC-administered exam?

A. No. There are two different questions there. The first deals with the acceptability of the facility's accelerated retraining program to return that individual to licensed duties, and this depends upon the status of your requalification program. If your requalification program is deemed satisfactory, then you have the capabilities under your program of dealing with the failure of a requalification examination.

The second concerns satisfying the requirement for a six-year reexamination. The Commission has directed the staff to administer a requalification examination to each licensee during the six-year term of the license. If he fails and you have a program that has been deemed satisfactory, you can retrain him and return him to shift duties; however, he must successfully pass an NRC-administered requalification examination before renewal of his license.

Q. 316. Is the appeal process for the requal examination the same as the initial exam? If so, there are two problems. One is the individual's own self-respect if he fails that exam and he feels he should not have. The other problem is that our program is being judged against the results of that requal exam. If there's something that we feel was amiss during the exam, we should have a method of recourse in having that evaluated.

A. The answer is that the appeal process does apply as it relates to the administrative process. You are provided the opportunity to comment on the written examination through the normal process for any written examination.

However, the individual does not have the right to request a hearing because his license has not been taken away. He still has a license. He can request an administrative review by the Division Director in the Region and a review at NRC Headquarters if there is a potential for the exam results to preclude his license renewal.

If we were to deny the renewal of his license and he was contesting the failure of that exam administratively, he would have the right to a hearing because we had not granted the license renewal. So in that context, he would be eligible to request a hearing on the denial of his application for a license renewal.

Q. 317. Why weren't the utilities allowed to make public comments on 10 CFR 55.57(b)(2)(iv), license renewal requirements?

A. The Commission decided to add Section 55.57(b)(2)(iv) between the time of the proposed and final rules to allow it to examine licensees during a 6-year license period. This decision was an outgrowth of comments on the proposed rule and is consistent with the Commission's Policy Statement on Training and

Qualifications, and with Section 306 of the Nuclear Waste Policy Act. Part of the reason for that decision is that we indicated in the policy statement on training and qualifications that we would use the requalification examination as a mechanism for judging the validity of the industry-accredited training program process. The Commission is continuing to do that.

We have moved out of the training review and are instead judging the ability of the individual to perform after training. We make that judgment through an examining process. That's the reason for it. The Commission has indicated their policy both through the policy statement, which was publicly noticed and available, and through a continuation of staff practice.

The Commission tied it to renewal to ensure that there was a clear understanding on the part of all operators that this was required, and to eliminate the question of "Why me," because in the past, when the staff selected operators for examination, there was always a question of, "How did I get chosen, why not someone else?" In this case, it's clear that it applies to all licensed operators who hold a six-year license.

Q. 318. Will future NRC requalification exams given in conjunction with replacement tests be modified replacement tests as in the past?

A. NRC requalification examinations are developed to evaluate the adequacy of the facility licensee's requalification program. Where replacement training program and requalification training program objectives overlap, duplication of questions is acceptable.

Q. 319. Since it is six years before any renewals will require the completion of an NRC exam, when will the process of "10-day notice exams" get started?

A. As of the effective date of the rule. We can notify selectees up to six weeks in advance of the examination date, but in no case will less than 10 days notice be given.

Q. 320. Does the six-year license apply to nonpower reactors? Do their licensed operators require an NRC exam prior to renewing a license?

A. Operators of nonpower reactors will receive six-year licenses upon satisfactory license renewal after their current licenses expire. License renewal will be in accordance with 55.57.

Q. 321. When will the requirement for an applicant to be examined by the NRC prior to renewal be implemented?

A. That requirement will become effective for all six-year licenses granted after May 26, 1987.

Q. 322. What will the basis be for "continued need" under 55.57(b)(3)?

A. It is the facility licensee's decision as to whether there is a continued need for an operator. We will not question the judgment of facility management.

Q. 323. Can the requirements of 55.57(a)(4),(5), and (6) be certified on the Form 398?

A. Part 55.57(a)(4), assurance that the applicant has satisfactorily completed the requalification program, and 55.57(a)(5), assurance that the applicant has discharged license responsibilities competently and safely, can both be certified in Form 398. For 55.57(a)(6), certification of medical condition, a Form 396 is needed.

Requalification (Subpart H, Section 55.59)

Q.324. What is required for Commission approval of a requalification program?

A. You simply certify to us that you have an accredited program that is based on a systems approach to training, and that's sufficient.

Q. 325. In Generic Letter 87-07, page 24, it states that "The specific cycle will be approved by the NRC as part of each facility's training program." What does this refer to?

A. It covers programs which are not approved through the accreditation process.

Q. 326. On the training program approval, if you have an accredited program and you certify that you're doing an SAT process, that's one method. You also listed implementation of INPO Guideline 86-025 as another approach. Can you explain this?

A. The accreditation process has a hierarchy of requirements, the top level of which are called objectives. You must meet the intent of the objective in order to be accredited, and those are contained in INPO 85-002. The Commission has reviewed and endorsed the INPO accreditation objectives and criteria as meeting the SAT or systems approach to training. I believe there are 12 objectives.

Each objective has a number of criteria; meet the criteria and you meet the objective, but the opposite is not always the case. That is, you may not meet one criterion, but you still may meet the intent of the objective through some other mechanism. You go through the criteria and objectives for your self-evaluation.

Subordinate to those are the guidelines for licensed operator training, for maintenance training, and for other areas. One guideline is for continuing training for licensed operators (INPO 86-025); it gives information about the content appropriate for a continuing training program. It also describes how you evaluate and feed information from plant operations and performance evaluations back into the process.

You clearly do not have to cross all the t's and dot all the i's of everything that's in that guideline. That guideline, however, constitutes an acceptable method of implementing a performance-based, SAT-based continuing training program that the staff would find acceptable.

The next level below guidelines are good practices. Those are things which INPO has seen facilities do that worked particularly well for a facility, and they have provided guidance on those.

We have concluded that if you are accredited you understand what the objectives are, and how criteria are used, and what the process is for developing a systems approach to training. We think that understanding, along with recent INPO training guidelines provide an adequate basis for you to review your own programs and certify to us that your program is based upon a systems approach to training.

We believe that there are two final parts to that. You need to look at the tasks that are relevant to the job, decide which ones are appropriate for training on a continuing basis, based upon such criteria as importance of the task to the safety function and frequency of performance. Clearly, emergency procedures would fall into that category. Shift relief and turnover would be outside of that category, such that your continuing training program would not address shift relief and turnover.

If you've operated continuously between outages, you would not necessarily have performed plant startups and shutdowns. In that case, you may want to fold the startup and shutdown into the continuing training program, and do that on a simulator.

It's that type of flexibility, and reviewing and determining the content of the program which we feel is the most important attribute of the change to the regulation. It gives you the flexibility to tailor your program to the needs of the job incumbents, and to bring them up to a comparable level with the initial training programs through the INPO accreditation. That's the process we think should be followed. It doesn't mean that everything has to be done in INPO 85-026 with respect to simulator training, or INPO 85-025 with respect to continuing training. Those are guidelines, and you really need to address the issues as to how much of that should be followed or done with INPO, not with the staff. We are not in the position of reviewing and determining what constitutes INPO requirements. We want to move out of that. We will provide our comments to INPO should we see problem areas for INPO to address generically with the industry. We do not want to get into the mode of providing guidance to individual utilities on how much of an INPO document needs to be followed before the staff would accept a certification. That's for you and INPO to work out.

Q. 327. While someone is in an SRO upgrade for (say) ten months, he is not officially in the requalification program. How is that going to affect that inactive status?

A. If your upgrade program meets the objectives of your requal program, you can take credit for that. However, if there is a differential there might be some areas that are not covered at all, but are covered in a requalification program. If that individual is no longer current in requalification, to resume active status, he would have to receive the remedial training necessary to make him current with the requalification program. Simply being in the upgrade program does not, necessarily, compensate for the requalification program.

We hope that that's not an issue that we face very often, because we expect that most candidates who go into an upgrade program would receive a license as a senior operator and remain cognizant of changes, LERs, and significant events. And upon the date they receive a license, they can manipulate the controls and

direct the activities of others. So, it's only when there's a period between the end of his training and the time he gets a license when you may want to use him as a reactor operator. He may have to stand some parallel watch with the reactor operator before resuming duties. And that's the point when you would have to certify that he had completed the necessary requirements of the reactor requalification program, if there are any aspects that were not covered in the SRO operating training.

Q. 328. Since Section 55.59(b) indicates that the Commission would accept additional training in lieu of a licensee's participation in the requalification program, is it acceptable for a utility to remove certain license holders from the requalification program, yet have them retain their licenses if this additional training was provided to them?

A. No. Section 55.53(h) requires completion of a requalification program as a condition of a license. In general, a licensee who is permanently removed from the requalification program no longer satisfies this condition of their license, and thus has been determined to no longer need a license by the facility licensee under Section 55.55, Expiration. Only under extenuating circumstances (e.g., special temporary assignment, extended illness, removal from shift to enter a degree program, etc.) would the provisions of Section 55.59(b) be invoked. This will be handled on a case-by-case basis.

Q. 329. There is no requirement to modify the Requalification Program documentation. We just have to follow the new rule, correct?

A. That is correct. You must follow the new Rule, or your existing program, whichever is more restrictive. But you may perform a 50.59 review to bring your existing program in conformance, and simply submit that. Or, if you need an amendment to the license, you request the amendment, and you would have an administrative change approved to put your program in conformance with the Rule.

Q. 330. Most facilities have an NRC-approved requalification program in the FSAR. For utilities that cannot certify their requalification programs, either because their requalification program has not been approved by INPO, or it has been approved and does not meet the INPO 86-25 requirements for SAT, how will we implement 10 CFR 55?

A. You will continue to follow your approved program of record, as is documented in the FSAR, until you either modify it, bring it up to the INPO guidelines in 86-25, or take some other action to modify it. That's one way of doing it. You may be able to discuss with INPO other alternatives. But you follow the program of record, as modified by the Rule.

Q. 331. What is the difference between a requalification program 24 months long followed by successive requalification programs and a continuing training program administered throughout the term of the individual's license? Does the Commission mean to imply something by use of the word "requalification" versus "continuing training?" If so, what is the distinction?

A. There is little difference between the two. We expect you on some basis to step back and take a look at the performance of your licensed operators and

modify your program appropriately to reflect those areas that need continuing training. From that aspect, we chose 24 months, consistent with the previous program, to be a point at which you would take that formal look at your program.

There is no distinction except that the law used the term "requalification," and that's why we continued with that term.

Q. 332. The requalification program must be conducted for a continuous period not to exceed 24 months. What is the purpose of the 24-month limit?

A. Because it's consistent with defining a fixed-length program. Since the previous period was 24 months, we retained it.

Q. 333. Is there an intent to look at a 24-month period as an isolated section and try to meet certain requirements within a 24-month period?

A. The intent is that at the end of that period we want you to do a comprehensive evaluation of the program and decide how you need to modify it for the next cycle. If you want to do it in 12-month or 18-month cycles, that's also acceptable. If you want to tie it to refueling schedules that's also acceptable. The cycle cannot be longer than 24 months, however.

Q. 334. What is considered a "continuous period" with respect to the conduct of the requalification program?

A. It's 24 months, then you start over again for another 24 months, and then another 24 months, so that you'd have three 2-year requal cycles in the six-year license period.

Q. 335. Will the program that breaks for, say, a two-month refueling outage be considered a continuous program?

A. By "continuous" we mean that it's the same program for operators on shift as well as off shift, and it's the program as you've described it. There may be cases where you want to stop it for a period of time, where you are using segmented training and you want to teach one segment, and in the next segment you, in fact, may have some particular training in the outage that you want to cover prior to the outage.

That's the flexibility you have under the systems approach in defining your needs are and sequencing accordingly.

We want one program for all licensed operators. We don't want one schedule or program for people on shift and a different schedule or program for people who are not normal watch standers on shift.

Q. 336. Does NRC want to see a comprehensive evaluation of the program on a biennial basis?

A. Yes, at least on a biennial basis. That's the intent of the biennial qualification examination being comprehensive. Part 55 requires that the evaluation be used in determination of subsequent continuing training requirements.

Q. 337. On Page 24 of the supplementary information provided to Generic Letter 87-07 is the following statement: "The frequency of the comprehensive requalification written examination has been changed to a maximum of every two years." Where is this statement to be found in the text of 10 CFR 55?

A. The statement "maximum of two years" with regard to examination frequency can be derived from 10 CFR 55.59(a)(1) under "Requalification Requirements" where it says "Each licensee shall successfully complete the requalification program developed by the facility licensee that has been approved by the Commission and that the program shall be conducted for a continuous period not to exceed 24 months in duration." The next paragraph says "pass a comprehensive requalification examination and an annual operating test." So, by inference, the written examination only has to be administered on a two-year basis, where the operating test is required on an annual basis.

Q. 338. Does this statement mean that written requalification exams can occur less often than every two years?

A. No. It must be conducted concurrent with the two-year program.

Q. 339. If a utility currently has an NRC requal examination scheduled for the first week of June 1987, what will be the impact of this rule on the examination? Will the examination content be covered by the old rule, or will the content be upgraded to the requirements of the new rule? If the examination will be covering the content by the old rule, when can we expect examinations utilizing the content covered in the new rule?

A. There will be no change for the June exams because preparation of those exams has already begun. Only exams given after July 1st of this year will be able to conform to the new rule.

For clarification, there are clearly some changes in the rule that will change the examination. We don't expect that there will be changes in the content of the exam, based upon a requal program that's already been done under the current Examiner Standard, ES-601, where we are auditing individuals who have two-year licenses and auditing the company's program.

Clearly, however, the operating test portion will be documented on the new Form 157, and we will be addressing areas that are required by the regulation in constructing the examination. We aren't going to be testing on areas outside of the requal program, or the current licensing program at the facilities, but there will be some change in forms and in the documentation process. The reason for that is that those examinations are already in preparation now, and you can't do 90 days worth of work in the transition period, so we will be continuing to use the materials that were submitted prior to the effective date of the rule to construct the first few exams after the effective date of the rule, but there will be some changes in forms and processing and how it's handled.

Q. 340. Can the written requalification examination be given in several sections over a period of time or is the intent to administer one complete examination at one time?

A. If you currently have a requalification program in which you've committed to an annual comprehensive written exam, you have to continue giving that annual

comprehensive written exam until you have sent in the appropriate documentation that you have an SAT-based program and that you're moving to a continuous program that is going to be conducted over a period of 24 months. That's one way of doing it, sending us a letter telling us when you are accredited and that you have a requalification program that's SAT-based.

The other alternative is what we have done in the past, which is the 50.54 change, where you would notify us that you're changing your program. So if you're committed to an annual written exam during this transition period, you have to continue to meet your commitments until you've notified us that you're changing.

Along those lines, with regard to the segmented exams, if you currently have in your program an annual comprehensive examination, then we will expect you to continue that.

If you have an accredited program and the segmented approach to evaluation is an acceptable methodology under that program, we will allow you to implement your program.

But realizing that the NRC examination will be a comprehensive examination, we expect that the program evaluations that you implement will be comprehensive in nature, also. For clarification, weekly quizzes that may be given following a week of instruction tallied together to form one exam probably would not meet the comprehensive intent of this evaluation process.

Q. 341. Written examinations for requalification will be based on initial license material. Should the exam not be limited to the scope of the approved Requalification Program?

A. The requalification exams are intended to be performance-based and operationally oriented. To the extent that they're made available to us in the submittal following the 90-day letter, we intend to use the facility licensee's learning objectives that pertain specifically to the continuing training program.

We anticipate that when you have an SAT-based requal training program, it would be modified from time to time, depending on the needs of the job incumbents. As your needs change, you would modify your program.

We anticipate that those learning objectives might be different from time to time. We would, of course, tailor our exams to those learning objectives.

Q. 342. Would it be NRC's goal to document those differences between the initial exams and the requalification exams?

A. We want you to certify that you've got a requalification program that's based upon a systems approach to training; and you should document those differences.

That's why we say that when you do the initial task analysis, you should identify that subset of tasks which are appropriate for continuing training.

We believe that to the extent you follow the INPO guidelines in 86-025, you will have done that. We believe that that's a fair representation of the type of material that should be contained in continuing training and should be used for the basis of a requalification examination.

Q. 343. Where do we find the standards and criteria for administering the comprehensive exams for the requals?

A. The standards and criteria are identified in Section 55.59, and as far as our implementation, they will be clarified in ES-601.

Q. 344. You said previously, where there is an annual operating exam and then a comprehensive written exam every two years, that the NRC exam would count for the operating portion of the examination. Why would that not also be acceptable for the written portion, if individuals were scheduled to have their written exam during that year?

A. We intend for it to be both. If NRC administers a written exam, that will substitute for the facility written; if NRC administers an operating test, that will substitute for the facility operating test for that year or for that program, whichever is appropriate.

Q. 345. Will section 55.59(a)(2) change the policy of using a licensed SRO to write/review the written requal examination? If the written examination is given every two years, would he still fulfill the requirements of this section since technically he is not taking the exam? Similarly, will the SRO who writes the performance exam, and is thus exempt from taking the exam for that year, comply with this requirement?

A. Section 55.59(a)(2) will not change the policy of using a licensed SRO to write or renew these examinations. However, it is the Commission's intent that all licensed operators be enrolled in the requalification program and take the requalification exams; further, an individual must take an exam that he did not write or review.

Q. 346. What will be the duration of the grace period for the implementation of the new 10 CFR 55?

A. The rule goes into effect on May 26, 1987. There are grace periods identified within the rule for certain aspects of the rule, and those are stated in the rule.

These include operating tests on an annual basis. If an individual is licensed on May 26, 1987, and holds a license, he must have had an operating test by May 26, 1988, within one year. For an application which you submit in the middle of that period -- after, say, six months has expired -- he may or may not have had an operating test, because you would not have been required to complete an operating test for everyone until after one year. So if it says you've got to examine annually, then one year after the effective date of the rule, everyone should have had an operating test. Another example is the comprehensive written examination to be done at least each 24 months. After the rule has been in effect for 24 months, everyone who was licensed on the

first day that the rule went into effect shall have had a comprehensive examination, unless, of course, you are accredited, and then you may use a segmented exam.

Q. 347. It appears that comprehensive requalification written exams are required only every two years and operating tests are required once per year. Is this true?

A. It is true that the written examination will go to every two years unless your program commitments are more stringent. If your current program requires an annual exam and it is not an accredited program, then you will have to notify us if you intend to reduce that commitment. If it's an accredited program, then you can make the changes as appropriate.

Q. 348. Our past requal programs, for those facilities which don't have plant-referenced simulators, have not included an operating test. They have included some operating evaluations, but not a pure test in the context of the new regulation. Some of the currently licensed operators will be up for renewal immediately, as soon as the new 10 CFR 55 goes into effect. Will there be a transition period during which it would be possible to get a waiver for those operators because they will not have had an operating test? We do not have a simulator certified by NRC to conduct an operating test. And, in fact, I'm not even sure if, under the new regulation, we could use our current off-site simulator to conduct an operating test. So, how do we address renewal of licenses for the period between now and when we get our plant-referenced simulator; or will there be some time after which we will have to do an operating test?

A. During the period between the effective date of the Rule and one year following, an individual may not have yet had an annual operating test, and you may put him up for license renewal. After one year, everyone should have had an operating test. The issue of whether an operating test is on a simulation facility, or conducted as a plant walk through is a different issue.

At least the plant walk-through portion will be required. The issue of doing it on a simulation facility, that would be required by May 26th, 1991. Prior to that time, if you have certified or approved simulation facility, you would also do it on the simulator. If you are currently using a simulator, and we are conducting examinations on it, we expect you to continue to do so, and within one year of the effective date of the rule, start examining candidates using your current simulator as a part of the operating test for the requalification program. Also, you have to make sure that the documentation that you provide for that annual operating test addresses all 13 items in the new Regulation. The Form 157 is the way that we are going to check that. You can use alternate ways, but you must make sure you document all 13 items.

Q. 349. During this one-year period of transition, do we document, by exception, and ask for a waiver on our requests for renewal? Would that be the appropriate way to handle that?

A. No, that would not be necessary.

Q. 350. Must a facility administer annual operating tests to licensed operators before a certified plant referenced simulator is available?

A. Yes. Even though it may not be part of your requal program now, you have to start administering an operating exam, and if you don't have a simulator, then you would give an oral exam, a walk-through type like we do on the plant.

This is one aspect of the transition into the new rule where we are not going to look for everyone to have completed an operating test on May 26, 1987; but by May 26, 1988, everybody who's been licensed for that last year shall have completed an operating test on the facility.

We're using a more common sense approach, so if you submit an application for renewal for a candidate who has a two-year license now, and you submit it in four months, that individual may not have had an operating test, as is described in the rule, because he has not been under that rule for a year. We would still renew the license and issue him a six-year license.

After everyone has been under the rule for one year, we would not find that he had met the terms and conditions of his license if he had not had an operating test, because the operating test is to be conducted each year.

Q. 351. If an SRO directs the proper action, does that satisfy the ability to perform the actions necessary?

A. Yes.

Q. 352. We've talked about an annual operating exam to be administered by the utility. What constitutes an "operating exam?"

A. If you currently have a simulator on which you or we are conducting examinations, then you must include an oral and a simulator examination. It is not performance of practical factors in a training environment. We've had, for instance, the requirement of the Denton letter to perform certain practical factors on an annual basis. People take simulator training and perform the practical part until successful, whether it takes one, two, or three tries.

We are interested in a structured examination. We are not interested in training on the simulator. The structured examination must meet the requirements of the regulation as it relates to sampling those areas that are specified under the regulation. It is a combination on the simulator, if you have one, and in the plant. If you don't have a simulator, it must be done in the plant.

Q. 353. What constitutes by definition, an annual operating exam? In our NRC-approved requal programs we administer what is called an accident assessment exam. It's an operational type exam, documented by written examination, which tests operator knowledge and on how they can operate the plant, implement procedures, diagnose a situation, a transient, an accident, or whatever. Does this meet the annual operating exam criteria?

A. Look at what is specified in the Regulation by way of observed behavior for the operating test, and assure yourself that the way you are implementing the exams covers those 12 items for an operating test for requal. The start up

shut down is the only portion that's dropped out. But control board familiarity, those kinds of things are still being assessed. You need to look at your program, and judge whether you have met those 12 items for the operating test for requal.

Q. 354. Must the annual operating exam for requalification be given in one time frame or can that also be broken up into various pieces throughout the year? It's very difficult to get everybody done in one year by the training staff.

A. For a candidate, it needs to be done at one time, but if what you are asking is that you have 30 people that need to have an operating test, and you want to spread out the 30 tests over the period of a year, the answer is yes.

But you can't take an individual and give him a walk-through today and some simulator evaluation tomorrow and then some six months from now add those three pieces up. That would not meet the intent of an annual operating test.

Q. 355. Not even if you broke up the in-plant and the simulator between the different weeks in requal, and catch them one cycle a week, get a crew in on the simulator and maybe the next time they come up, five weeks from then, get that same crew up on the plant?

A. Although we have explicitly approved such an approach for the written examination where you are using segmented tests, provided you show that the sum of the parts equals the whole in the comprehensive exam, we have not concluded that such an approach is acceptable for an operating test. Our position is that an operating test, to be effective, must be administered at one time, and must cover the 12 items in the rule as a minimum.

Q. 356. Section 55.59(a)(2) implies that the requalification program includes observations and evaluations of performance and competency by supervisors or staff members during actual abnormal and emergency procedures at the plant. Is this required?

A. This goes to part 5, evaluation, of the definition of systematic approach to training. The intent is that when the casualties are practiced on the simulator, performance would be evaluated by staff members as part of that systematic approach to training. It's not intended to have those evaluations done on the actual plant.

Q. 357. The criteria for the NRC comprehensive requalification examinations are similar to the standard criteria for an initial examination listed in 55.41 and 55.43. What is the perceived difference between the two exams?

A. The requalification exam requires a sampling of criteria. If your requalification program is based upon a systems approach to training, you will have reviewed the tasks from the initial program which are appropriate for continuing training. You will have chosen those on some criteria, such as frequency of performance, safety significance or other criteria. That's one way of determining the content of your continuing training program.

Another way is the feedback from performance in the plant: licensee event reports, and the like. Another area would include facility design changes and/or

changes in procedures. Those are the subject areas that we would tend to focus on for a requalification examination.

When you move to learning objectives for your requalification program that have conditions and standards, we would use that as the basis for sampling the content of the examination.

In the meantime, because that's not fully in place yet, we are using such things as the K/A catalogs, which identify the importance of job tasks and are based upon the industry generic job task analysis. We are also using a sampling plan -- it was referred to as the "examiner handbook" -- where we sample from that catalog to ensure that we get a representative sample of the knowledge, skills and abilities -- the skills being done on the simulator--that are appropriate for an NRC examination.

We intend the initial examination to be different from the requalification examination. We will look at the two, even though we developed them in parallel; and questions which are not appropriate for a job incumbent -- questions, for instance, on watch relief and turnover or other things which he does on a repetitive basis -- would be excluded from the requalification examination.

We believe that through the informal review process of appeals, and the facility review of the written examinations, there are sufficient safeguards in place during the transition period to ensure that there was a content-valid examination that was indeed related to job performance.

From our review of examination reports from all the regions, the weaknesses concern knowledge of events that have occurred at their own plant, significant events at other similar plants, changes to design, changes to procedures, and selection of those tasks from the initial program which are relevant to training on a continuing basis. We do not help the operators if we simply repeat the initial program for continuing training. That's not the intent.

Q. 358. How are the current guidelines, which allow requalification examination site visits to be extended to every three years based on good SALP ratings or accreditation, going to interface with 100-percent requalification every six years?

A. Basically these are two different programs. One is a programmatic evaluation looking at the adequacy of the requalification program. The other deals with the Commission-directed re-examination of each licensed operator on a six-year basis. In the next couple of years, though, we don't expect it to change very much. It's going to take some time to build up a pool of six-year licenses so that we would be conducting the examinations in accordance with this regulation. So in the near term, those facilities which have better performance and have achieved INPO accreditation would have a longer period between NRC visits.

Q. 359. On the question of randomness, if in year two a candidate passes the exam, and in year four he fails, the rule says he has to pass it once during the six years. Will that stop the renewal of his license?

A. No. If he had passed one exam and failed a second one, but was re-examined by the facility after appropriate remedial training and returned to watch, he

would have passed an exam and that would be the basis for the license renewal. The rule does not say the last examination administered by the NRC. It says an examination during the six-year term of the license. And we recognize that some people may have more than one.

Q. 360. What process will be used to schedule the NRC-administered written examination and operating tests during the term of a six-year license?

A. It is our intent that this will be a random test, performed on a random basis. We would try not to have double jeopardy, where an individual takes more than one NRC exam during his six-year term. But he may. We will have to coordinate with the facility. We would, in our 90-day letter, ask for lists of people who would be eligible to take the NRC exam. This would include all licensed individuals at the site. If there were individuals who had a vacation scheduled during that time, or if there were some personal hardship, we would want to know about it. We want to work with your people's needs as much as we can.

Q. 361. This question addresses the random requalification examination and the pending notification. A lot of emphasis is placed on team work and communications, even though the license is granted to an individual. Admittedly, periodically we may rotate a person within a shift due to illness or vacation, etc., but most of the people, normally three out of the four, usually remain the same. The potential exists for administering a simulator examination, potentially to four people that don't work together normally. Have we considered the potential jeopardy there, that we have created an environment contrary to the way we have been trying to teach the operators, in particular going to the plant-referenced simulators?

A. The examiner standards indicate that when selecting people from shift, you select one crew. That is the mechanism we use. And one crew is approximately 20 percent of those people on shift, unless you have a six-shift rotation instead of five. And then we look at approximately 20 percent of the operators who are not on shift, the day-shift workers.

To the extent we can, we would put them into the crews where they normally work. But when you consider all the other constraints, such as those who have six-year licenses, those who have two years, the time frame for renewal, etc., that will not always be possible. To the extent we can, we want to accommodate your personnel. We would try to coordinate the examination visits with the requalification cycles that you are already using. In fact, in the past we have allowed the facility to identify how they wanted to combine the crews. We just say these are the guys we are going to see on this schedule, and you tell us how you want to group them.

But at the same time, there is not going to be a lot of advance notice to the individual as to when he is going to be examined. It will be on the order of ten days to six weeks. Although there may be some comfort in being examined in the team environment in which training takes place, transfer between teams is a practical reality with which each operator must be equipped to deal, both in the plant and in the NRC exam.

Q. 362. Will a representative sample group of license holders be tested or will the whole license complement be tested?

A. In keeping with the Commission directive, it should be a random sample of license holders. All would be subject to exams. We would coordinate that with you if there were severe hardships but that would have to be handled on a case-by-case basis.

Q. 363. This concerns the random examinations of licensed operators. How far in advance will I know who will be examined? When will I be supplied with the list of names, saying that on this day, these people will be examined?

A. You will be notified of the examination 90 days in advance in accordance with ES-601. Typically, ten days to six weeks, prior to the examination, we will notify you of the individuals who have been randomly selected for the requalification program evaluation.

Q. 364. Will NRC notify the facility in time to facilitate preparation of the license holders before taking the requalification exam?

A. We will provide ten days to six weeks notice. It was explicit direction from the Commission to ensure that examining is done on a random basis for reasons that are associated with evaluating the continuing training program, and evaluating and ensuring that the candidate maintains proficiency and an appropriate knowledge level over the duration of his license.

We will coordinate the scheduling of examination visits with your regular requal program schedules and/or your replacement examination schedules to the extent we can. But our resources are limited. We are budgeted for two visits per year to a facility. And if you have a need for more than two to accommodate some activity, it's likely not to occur without adequate advanced planning.

And we will choose candidates from among those who have not been examined by the NRC before we select someone who already has been so examined. However, some people will be examined twice, so that those who got examined early in their cycle shouldn't make the assumption that they're not going to see the NRC again for the duration of that period.

Q. 365. In the past NRC tested requal every two years and the operators were drum-head tight until somebody was randomly selected. Then they relaxed for two or three years, depending upon whether everybody had gotten accredited. And then the cycle was repeated.

I'm under the impression that neither NUMARC, nor the operators, nor anybody else, had an opportunity to critique these particular two paragraphs prior to having seem them here. It appears to me that as a minimum, NRC is going to have to give a requal test once a year, if I have requested a hot license test once a year.

A. Your perception is quite accurate. The Statement of Considerations is the vehicle that the Commission used to provide directions to the staff on how to implement the Regulation, which has always permitted the staff to administer requalification examinations. The fact that the requalification examination has been made a condition of license renewal is new.

There was some concern in the past, of "why me?" "Why not this other guy?" By putting it in the Regulation, and indicating what the intent is, it becomes clear that everyone will, at some time during that six-year license, be examined by NRC in order to have his license renewed.

We are accepting a certification by the facility for two written tests and five operating tests per six years, but the staff will continue to examine in some cases. That is, we will simply choose not to accept the facility's certification at that time, and we will examine the individual. There may be some cases where an individual will be examined more frequently than once each six years.

Q. 366. If an operator gets his license renewed, and is tested in the first year, my arithmetic says that he can't go but one year beyond his renewal. Then, clearly, the frequency is going to be greater, by definition, than once every six years.

A. Correct. That's why we use the term at least once during a six year license.

Q. 367. These questions are related to the NRC-administered requal. Would it be possible for an individual to be selected twice during the six year period before all other individual licensees were selected once?

A. We intend to select people who have not been selected before selecting someone a second time. But that does not preclude this from happening, if we got everybody else. If we've been through all of the people with six-year licenses, and we are still sampling, it is possible for an individual to be examined twice.

Q. 368. So, it's random, but the pool from which the random selections are made gets smaller as people are selected?

A. It could get larger, based upon more six-year licenses being issued. At some point it will reach equilibrium, where everybody has a six-year license.

Q. 369. Is this a testing of the requalification program, or is it testing human beings every six years? I feel that it may have been a step backwards in raising the anxiety level of the population of operators who are going to be up tight every year. That's why I don't understand the Statement of Considerations, because I'm just concerned about those people.

A. It says that we're going to test so that nobody goes more than six years without being tested, and means that some are going to get examined more than once in six years. It's our view that if a licensed operator is going through an effective, continuing training program, then there shouldn't be any concern with that person getting an NRC exam because our exams are designed to confirm that the individual has maintained a minimum acceptable capability. If he is going through a continuing training program, our expectation is that he is way above the minimum that's acceptable.

Q. 370. I feel perfectly comfortable that our operators, and our supervisors on shift can safely operate our units. The vehicle you are using to measure the requalification program is improperly aimed at obtaining those results. If we

focus the requalification program on problem areas, design changes, and events in the industry, it's fairly narrowly focused. But the exam looks at a target area beyond that, that has not been covered, for memory/recall type things, and it's unrealistic to see the operator be able to pass that, or the senior operator, or anyone else.

But if the exam were focused on what the requal program had focused on, then the focus is on target. You ought to be able to pluck an operator off shift, have him evaluated, and expect that he'll do fine. But when it's not aimed at the same material, very little probability exists of him doing well on the exam.

A. We understand your comment, and we recognize that both groups are trying to move to the point where we are using content-valid examinations to measure performance. We have a ways to go, and we are working on that. And we think you all have ways to go in describing adequately the content of the continuing training program. Eventually, we will get to the point where we have closure on the scope and content validity of a requalification examination.

Until then, there is going to be anxiety. We believe that with the administrative review process for examinations, there are adequate safeguards to ensure that improper questions can be challenged, and that the questions are appropriate to the job. We have provided some tools to do that, and they need to be used. And until we get conservative feedback both ways, and recognize that the objective is to measure that individual's performance, the imperfect tools that we are using now aren't going to get much better.

And that is a challenge to the industry, to really take a hard look at the INPO guidelines in continuing training programs, and to consider how your program is modified to meet those objectives.

We've had problems with exams in the past, and we probably will in the future. We have found problems with requal programs in the past, and we'll probably find problems with those programs in the future. But we have not taken action against individuals by way of revoking licenses, or other activities. We do expect that until remediation is provided, those who fail are removed from shift-standing duties until they are brought back up to speed.

And if they feel that the examination is unfair, they can request a review of the examination by the Regional Division Director, and they can subsequently request a review by the Director of DLPQE. We are serious about improving the quality of exams and getting them content validated.

Q. 371. What would happen if, by chance, an individual wasn't selected during the six year period?

A. The NRC intends to administer a comprehensive written exam and operating test to every licensed operator at least once during the six-year term of the license. In the unlikely event that an individual did not receive such an exam, we would take immediate steps to initiate one. However, we would have to consider that he had made a timely application for renewal, and as a result, his existing license would remain in effect. But we would not issue a new license until we had examined the individual.

Q. 372. What occurs when an individual fails the NRC-administered requalification exam?

A. First, the individual is removed from licensed duties and placed in an accelerated training program. Once he has successfully completed all remedial training, he must pass a facility-administered examination to ensure that all weaknesses have been corrected. If that facility's training program received an NRC rating of marginal or unsatisfactory, this examination may be overseen by the NRC, in keeping with the alternate approach to requalification evaluations which was recently adopted by NRC.

In addition, it should be noted that in accordance with Section 55.57, all operators must pass an NRC-administered requalification exam during the term of the six-year license. Therefore, if this individual failed the NRC-administered requalification examination and has not passed another NRC-administered exam during the term of his current six-year license, his license will not be renewed until he has passed such an examination.

Q. 373. Is there any minimum period before a person gets into the requalification pool, after getting an initial license?

A. The clock starts the day he gets his six-year license. But if we give a requalification program audit, and there are individuals on site with two year licenses in effect, they are also in the pool to be randomly selected for an evaluation of the requalification program, in accordance with Examiner's Standard 601. So, don't assume that only six-year people may be chosen.

Q. 374. Part 55.59 states that in lieu of accepting certification by the facility licensee that the licensee has passed written examinations and operating tests administered by the facility licensee, the Commission may administer comprehensive requalification written examinations and an annual operating test. Will this testing take the same form and frequency as the previously established 20 percent testing at 50 percent of the utilities in the Region?

A. Yes. It will have essentially the same form except it will now be about 16 percent of the operators at all facilities in the region every year. For clarification, you can anticipate that the operating test will resemble the one that would be given for an initial candidate, but the written exam would be geared directly to job performance. The written exam is going to have to be operationally oriented.

Q. 375. Will requalification exams be administered to non-approved requalification programs?

A. As we see it, there are no such programs. You are operating under present NRC approval under old Appendix A, new 55.59(c), the requal program, or you have an INPO-accredited SAT-based requal program. There can't be anything outside of those.

Q. 376. Prior to the issuance of this rule, people developed their requal program with two taskmasters: one, the INPO accreditation process, and the other, the relatively non-task based aspects of Appendix A. Now that the utilities

have got the flexibility to withdraw or to remove the non-task based part of the old programs, which may take some time, what is the approved program in the interim? Is it the old program?

A. Yes, you must follow the NRC-approved program, which was based previously in Appendix A to Part 55, until such time as you send to us a letter which certifies that you are accredited and that your program has been based upon an SAT approach. We don't believe, however, that that is such a big task. Some of the material we required in the past falls into the kinds of things that can be used in an SAT-based program.

Whether that set constitutes 80 percent coverage or 70 percent coverage, we're not sure; but the real issue is the flexibility to design your program based upon program evaluation and feedback from on-the-job performance to factor in changes in procedure, changes in design, licensee events, industry events, and if you look at the programs that have been approved by the NRC, those have been required.

In some cases, because of the need to cover so many hours in the classroom, you've had a competition for time available to conduct training, so important items have been covered in the discretionary time left.

So we think that's a major advantage, and it's one that we would encourage you to look at carefully and to implement as quickly as you can.

You have to follow your approved program, but by May 26, 1987, that approved program has to be brought up to at least meet the requirements under the new rule. If you have an Appendix A approved program in place currently, then on May 26th, you can submit a certification that you have SAT program which now meets the requirements of the new rule, but if you do that on May 26th, to upgrade to the SAT program, the program you have in place has to comply. No matter what it is, it has to comply with the new rule on May 26, 1987.

If you do not intend to upgrade to an SAT program, you can continue to follow the format of your old program, but that old program has to meet the requirements of the new rule on May 26, 1987.

Q. 377. What is the intent of the Commission to approve specific cycles as a part of each facility's training program?

A. Once the programs are certified as SAT programs, it's not our intention to recertify these programs on any particular basis. Item No. 5 brings in the continuing process of change that should reflect the feedback from the performance evaluation of your program. The Commission will not be requesting periodic certification. You certify once and update to indicate when subsequent accreditation was achieved.

In the first round of accreditation, you have a specific date that you were accredited. Through that process you have a requirement to submit a report at two years and to be re-accredited at four years. You would simply send in another letter that says, "My programs have been again accredited," and that would be all that's required based upon the Commission's endorsement in the policy statement as it exists today.

Q. 378. By what means is a utility to certify to the Commission that their requalification program is both accredited and based upon a systems approach to training? The interpretation for implementing a systems approach to training is somewhat different by the NRC and INPO. By what specific standards is our certification for using a systems approach to training based; i. e., the NRC's criteria utilized in conducting pre/post accreditation site evaluation, or using the INPO 85-002 criteria?

A. The two are equivalent; that is, NUREG-1220 is essentially a series of questions related to each of the five elements of a systems approach to training as it's described in the policy statement. In that same policy statement, the Commission has endorsed the INPO accreditation objectives and criteria as being a systems approach to training.

The difference comes about in that INPO has 12 objectives and about 60 subordinate criteria. The Commission in the policy statement identified five elements, and the Staff has a number of questions that we use for information-gathering in our reviews. However, we would prefer that you use the INPO accreditation objectives and criteria and supporting documents; in particular, for your requalification program.

There is clearly a hierarchy of documents within the INPO program. Objectives need to be met. Criteria may or may not be met if you can still meet the objectives. Guidelines are just that--they are guidelines, an acceptable way of doing business as INPO would review it.

That is very similar to the staff's approach in doing our postaccreditation audits. We have questions that relate to each of the five elements that the Commission has endorsed. Those questions do not imply criteria. They are simply areas where we gather information. So the simple answer to the question is follow INPO.

We have seen several cases where the requalification program was not based upon a systems approach to training; rather, it was based upon a training program docketed with the NRC, that the NRC had approved. It was very prescriptive. It was, "Conduct X number of hours of classroom training, perform certain practical factors on the simulator in accordance with the Denton letter," etc. Because of a reluctance on the part of the utility to change commitments that are required by license condition or regulation, many of those programs were not changed to a systems approach.

Effective May 26th, you can remedy that prior restriction by simply sending a letter to NRC which indicates that you are accredited and that you have developed your requalification program on a systems-approach-to-training basis.

That's the most important aspect of this rule. It gives you the flexibility to control the content of continuing training based upon the needs of the individuals who have been trained, and the feedback mechanisms which are described.

Most important is Element 5 of the systems approach to training: program revision based upon evaluation of performance on the job. That's where we see the major payoff, and we think that we are giving you the flexibility that you need to fully implement the industry commitments through training and accreditation.

Q. 379. What criteria is the Commission going to use to approve programs developed using a system approach to training?

A. If you are asking the NRC to approve a requalification program that's based on a systems approach to training, we don't look forward to trying to do those kind of reviews. We'd rather see a submittal indicating that you have an INPO-accredited program, which has both initial and requalification training based on an SAT.

If you were to ask NRC to review a training program that was not INPO-accredited, that you claimed was based on a systems approach to training, we would try to use the document that we now have to evaluate that, NUREG-1220.

For clarification, if your program is accredited, and you're not a cold plant licensee, then prior to receiving an operating license we fully expect that you will use the INPO accreditation process and the guidelines that have recently been issued by INPO in their continuing training guidelines for licensed operators to develop your requalification continuing training program.

We will accept a simple statement to the effect that this has been done. We accept as fact that you have been accredited, and therefore that you understand the process of developing performance-based training. We do not expect to review such programs. I don't think INPO would like us to review programs against their criteria and to put them into that context. We are trying to, in this rulemaking, clearly differentiate between training programs, which are being handled by the industry initiatives through NUMARC and INPO, and licensing requirements and the NRC examination. We don't want to mix those two, and would probably have discussions with facilities that propose to do otherwise.

Q. 380. As far as the INPO document, 86-025, is concerned, you just say "as long as you are following the guidelines." Do you expect verbatim compliance with the guidelines, or just general compliance?

A. There is a hierarchy of criteria within the INPO program, starting with objectives. Then you have criteria guidelines. You must meet the intent of the objective. That's a "shall." When you get down to the criteria, you may not meet all of them verbatim. For some you may have alternate methods. Guidelines indicates what INPO believes would be acceptable to meet the intent of the criteria and the objectives.

Your program has mechanisms for reviewing and deciding how you put that process in place. The fact that you are accredited is evidence to us that you understand how to use that process and those guidelines. We don't need to see the details, based upon the fact that you have been through accreditation.

The principal goal for revising the requal programs is to allow feedback from operating problems, particularly licensee events, plant design changes, procedure changes, and other aspects of training for which there is a demonstrated need, and not to be constrained to X number of hours in a class, because that's what's been required in the past.

Q. 381. What if I put in 80 hours of simulator time, although INPO says 120, but we're doing okay with 80?

A. That's between you and INPO and your needs under a program which utilizes the SAT process. We have confidence in the process based on our evaluation of a number of facilities. We may get back into training programs if we see performance deficiencies on the job, through an event or through our inspection program.

We have developed guidance, the series of questions in NUREG-1220, as to how we're going to go about evaluating programs. So that you know what you consider to be fair game for us to look at. But we are not in the mode of telling INPO what to do. That's for the Accrediting Board, INPO, and the facilities to determine.

Q. 382. Will your evaluation of the training program be in accordance with the guidelines in NUREG-1220?

A. Yes. We have had a number of discussions with INPO on it, and we have been using that for our post-accreditation review.

Q. 383. Will a change to FSAR Chapter 13 (to satisfy new 10 CFR 55 requirements) be considered a decrease in the scope of an approved operator requalification program requiring prior NRC approval, in accordance with 10 CFR 50.54(i)?

A. No. That issue is addressed in the Statement of Considerations, where it indicates that this Rule supersedes all other previous requirements. Even though the Rule may have caused a decrease in the scope of your requal program it has already been sanctioned by the Commission in its approval of this Rule, provided your program is INPO accredited. If it's not, then you must follow 50.54(i); so you must determine if it has decreased in scope.

Q. 384. Applicable portions of Title 10, Chapter 1, Code of Federal Regulations are one of the lecture topics for a requalification program. Can you be more specific as to which portions of Title 10 are applicable, or is that up to the plants to determine?

A. You just cited the NRC Rules and Regulations, which includes such things as Tech Specs and amendments to licenses, and things like that. So, there are many Title 10 issues, including the radiation protection standards in Part 20. The subject matter of those lectures should be determined by the plants to satisfy the training needs of their operators.

Q. 385. Paragraph (c)(3)(i) of Part 55.59 requires certain manipulations to be performed annually. This list of manipulations differs from the list in the Harold Denton letter of March 28, 1980. Our requalification program is based on the Denton letter. How long do we have to modify our requalification program to be in compliance with the new 55.59 requirements?"

A. The rule supersedes and should include the requirements of the Harold Denton letter of March 28, 1980. If there are commitments in your program that go beyond those identified within the March 28, 1980, letter, then you will have to entertain an amendment to your Tech Specs to bring your program to that minimum level specified within the rule. Otherwise, we expect you to have a program that is modified and in compliance with rule by May 26, 1987.

Q. 386. Section 55.59(c)(3)(v) states: "A simulator may be used in meeting the requirements of paragraphs (c)(3)(i) and (3)(ii) of this section, if it reproduces the general operating characteristics of the facility involved and the arrangement of the instrumentation and the controls of the simulator is similar to that of the facility involved." Fort Calhoun will continue to use the Combustion Engineering (CE) simulator in Windsor until the plant-referenced simulator is available for training. Is the CE simulator approved for meeting the applicable requirements until such time as a referenced simulator is available? The same question applies to the discussion in Section 55.59(c)(4)(iv).

A. Yes, until May 26, 1991. This is now a part of your requalification program and will continue to be a part of your requalification program until you either have a certified or an approved simulation facility.

Q. 387. Does NRC agree with the utility interpretation that they may use the nonplant-referenced simulator as the preferred device when it comes to the requalification training program's on-the-job training control manipulations?

A. The word "preferred," we would think of as "equal." There is a nuance for the control manipulations -- the on-the-job training in items (a) through (f). In the Rule, under on-the job training, it says, "A simulator may be used in meeting the requirements of paragraps (c)(3)(i), and (c)(3)(ii) of this section, if it reproduces the general operating characteristics of the facility involved, and the arrangement of the instrumentation and controls of the simulator is similar to that of the facility involved."

This difference permits the use of the nonplant-referenced simulator for start up, shut down, and other things which are not related to casualty control, even after you have certified or received approval of your simulation facility. It specifies that you must use the certified or approved simulation facility for the operating test, and for Subparagraphs (g) through (aa) of the Section, which are the casualties.

So, you may use a simulator other than an acceptable simulation facility for control manipulations for requals. But you must use the acceptable simulation facility for casualties after May 26, 1991, or after you have been certified or received approval. It provides you some flexibility during periods when your simulation facility may not be available for routine control manipulations.

Q. 388. May a utility use a certified simulation facility for requalification training programs, such as on-the-job training in control manipulations, or must some control manipulations be performed using the plant controls?

A. If you look at the list, it just says you can't do casualties on plant controls. Items A through F in 55.59 are eligible to be performed either on the plant or with an approved or certified simulator.

These relate to start-ups and shutdowns and changes of power of more than 10 percent, manipulations which you can perform on the facility without putting it in danger. It is your option. You may either do those on the plant or on the simulator.

For the remaining items that are required annually or for the operating test, those must be done on a simulation facility. They may not be done on the plant.

Q. 389. With respect to licensed operator/senior operator requalification training, is it appropriate that utilities assume they can take credit for the required annual and biennial plant control manipulations completed on a simulation facility (nonplant referenced) if their programs have been approved by the National Nuclear Accrediting Board?

A. Yes.

Q. 390. Can a utility whose training programs have not been accredited by the National Nuclear Accrediting Board and which does not have a plant referenced simulator take credit for plant control manipulations that are performed on a nonplant referenced simulator?

A. If that's what your approved program is now, then there will be no change to that approved program until you get your own simulator, or until May 26, 1991 at which time the regulation requires that the training portion be done on a certified or approved simulation facility. There's an exception, in Section 3, "On-the-Job Training," that you may substitute your accredited program for those requirements. So if you are able to talk INPO into accepting a simulation facility other than a plant-referenced simulator, that's between you and INPO, but for the purposes of the staff's review, we would expect you to use the simulator after it has been certified if you do that before the May 26, 1991, with one minor exception, which has to do with the first six on-the-job items listed under 55.59(c)(3). In that case, you need not have a certified simulation facility or an approved facility. The words permit you to use another simulation device. Section 55.59(c)(3)(v) permits the use of a simulator which reproduces the general operating characteristics of the facility involved, if the arrangement of instrumentation and controls of the simulator are similar to those of the facility involved. It only requires the fidelity of a plant referenced simulator for the casualties.

Q. 391. Must all six manipulations listed in Paragraph (55.59)(c)(3)(i) be performed biennially, or just one of the six?

A. Items A through L must be performed annually. All the rest are performed biennially. All of the first six items must be performed, either on the plant or the simulator. The rest are casualties, that must be performed on a simulator.

Q. 392. Is it correct that Section 55.59 has now added fuel manipulations to the required items to be done annually? They are more than what's in the Harold Denton letter. We have renewals coming up during the summer of 1987, and the training program has been ongoing for the last year. There may be some manipulations that, in fact, have not been accomplished on the simulator on an annual basis by July of 1987 that 55.59 now says should have been done on an annual basis.

A. There are two parts to this answer. First, the requirements in Section 55.59(c)(3), with the exeption of the sequence, are identical to those in the Denton letter; no fuel manipulations are required. Second, although the new requirement exists, the annual manipulations don't have to be completed for everybody until the regulation has been in effect for one year.

Q. 393. In 55.59, "ON-THE-JOB-TRAINING," loss of electrical power is one of the manipulations that needs to be performed. Is that loss of off-site power or degraded power sources, such as the loss of half of your emergency bus or is it a total blackout?

A. It may be both. That is, it could be a total loss of electrical power, or it could be loss of power, particularly involving buses or consoles.

Q. 394. If we want to run those scenarios, either one would meet that?

A. That is correct. But remember that, according to that Section, you may not do casualties on the plant. The break-out in the Regulation specifies that everything below a loss of coolant event is an accident. The malfunctions and faults are done on a simulator. But the permissive part is for the other manipulations, the control manipulations, that may be done on the plant or on a simulator.

Q. 395. Must plant control manipulations during the requalification period be documented on Form 398?

A. The documentation hasn't changed for that particular item of the 398 Form. You still have to certify that the control manipulations were done. Only where there would be exceptions to the guidance in Regulatory Guide 1.8 would there need to be some amplifying comments made. For example, if you did five similar manipulations, evaluated them and concluded they were acceptable, you might want to point that out in the comments section on the Form 398.

Q. 396. If a license holder fails the written requalification exam or operating test administered by the Commission during the six-year license term and subsequently participates in the approved accelerated requalification program per Section 55.59(c)(4)(v), will certification of successful participation in this program be acceptable for renewal, or will a second NRC-administered exam during the six-year term be required?

A. A second NRC examination will be required. That individual can go back on shift after failing the NRC requal exam, after participating in upgrade training and passing the facility's own evaluation. However, the terms of the Regulation are that for renewal he must pass an NRC-administered exam.

Q. 397. Must licensed Operator training records be retained for the life of the plant?

A. Those that deal with the six-year license, per se, only need to be kept for six years. However, some facilities have committed to record retention requirements in their Technical Specifications which are more restrictive than this regulation. In order to get the relief that the regulation permits, you must submit an administrative change request to amend your Technical Specifications to make the record retention requirements equal to six years or the term of the individual's license.

This Rule supersedes all previous requirements for operator licensing and training, unless you currently have a more restrictive requirement. In that case, there are two vehicles you can use. One is an amendment to the license,

if a formal amendment is necessary. The other is a 50.59 review, which you can do administratively and then notify us that it has been completed when you indicate your other changes at the end of the year. In any event, you must conform to the requirements of the regulation, particularly those that are more restrictive than your current program.

Two examples immediately come to mind. Most people today have an annual written examination. The Rule would permit you to go to a two-year examination. The change to go to a two-year exam can be processed under 50.59 and it does not constitute a reduction in scope if the change is for the purpose of conforming to the regulation.

That is, the Commission, in the process of reviewing the regulation, concluded that there were compensatory measures for changing from a one-year written exam to a two-year written exam. In this case the compensatory measure is the annual operating test. So it does not fall into a reduction of scope and it does not require prior NRC approval unless it happens to be involved in an amendment to the license or the Tech Specs.

Q. 398. This is a question about documentation of exams given at the plant. Under the requal program, it says that we must keep the student's answers for the period of the license. Does this mean that we must keep those exams as quality records and keep them for the lifetime of the plant, or are you saying that we keep it for the term of the license?

A. It's for the term of the operator's license. And in this case, for example, his records would include six operating test examination forms, and three comprehensive written examinations in his individual file, until such time as his license is renewed, and then you start over again. Now, if you use a segmented examination in lieu of a comprehensive exam for each requal program, and you have more than three written exams, then that's a function of how you structure your program. You keep them only for the term of that individual license.

Q. 399. So, are you saying for any operator exams that we administer, once we are past the renewal stage, we could destroy those as long as we have quality records to back up the fact that he had the exam -- in other words, the grades, and so forth?

A. Given the fact that he was in a requalification program before, and you certified that, the answer is yes, you could put them in other quality records.

Q. 400. On initial operator exams, are we required to keep the exam itself, or can we just keep a summary that goes in the operator's history file -- a summary of his grades, and things like this? We currently keep the master exams and a copy of the answer key, but are we required to keep the individual student exams and his answers?

A. Our requirement is that the actual exam, or copies of the actual exam, be maintained for the duration of the current license. When you get that license renewed, you may eliminate that material from the files and start over.

Q. 401. So are you saying once an operator gets a license, we could do that on the initial files, too?

A. That is correct. The requirement demonstrates that you've met the requirement of the Regulation to conduct operating tests and comprehensive written examinations during the term of that particular license.

Q. 402. How are microfilm records authenticated to meet 55.59(c)(5)(ii)?

A. They are authenticated by an authorized representative of the facility.

Q. 403. Could you comment on the use of video tape as far as exam documentation. You mentioned keeping a deck log where you would recover strip charts. Would you give us some comment on the use of video tape?

A. We do not intend to use video tape or the equivalent of instant replay during an examination. The records that we are looking for are the same records that would be used for a post-trip review, essentially the same documentation. To the extent that the simulator has the ability to retain the scenario, and you can down load that to a computer tape, you could retain and use that tape.

Q. 404. I'd just like to make one comment on that. That's fine, I think, if the scenario includes a trip. If you're starting in mode four with a scenario, it's more difficult to recover those kind of parameters that you would need to recreate the scenario.

A. The problem with a TV tape is that it is incomplete. You may not hear discussions between the candidate and the examiner because of how microphones are placed. We generally stand back, but at times we are at the operator's elbow.

We have been asked on numerous occasions whether the facility would be allowed to video tape for either record purposes or training purposes. We consider it intrusive, both on the candidate and the examiner, and incomplete.

Q. 405. Most of the manipulations that are listed in the Regulation are not applicable to test and research reactors. Are we still operating under the ten manipulations in a two-year period, as we have been in the past?

A. If that was in your approved requalification program, it would remain approved.

Q. 406. Is it possible for requalification examinations administered by the NRC to be "split", such that the written and operational exams are given during different site visits?

A. This is Regional prerogative, on a case-by-case basis, with advance notice to the licensee.

Q. 407. A licensed RO is enrolled in the facility's SRO upgrade training program. NRC chooses this individual, randomly, to participate in their requal program evaluation examination. He fails the NRC administered exam, yet he is passing or has passed all portions of the upgrade program to this point.

Does he have to be withdrawn from the upgrade program, go through accelerated requal for RO requal exam failure, and be reexamined, or can he just drop RO qualification and pursue an SRO license?

A. A licensed operator must meet the requirements of the facility's requalification program which generally requires accelerated training and/or reexamination. His status in other facility managed training programs is the prerogative of facility management. If the facility elects to "drop RO qualification" for the individual under 10 CFR 55.5(a) the individual could make application for an SRO license under 10 CFR 55.31. However, the individual would not be an SRO upgrade candidate as that status assumes a active RO license.

Q. 408. Will written exams administered by NRC for requalification be totally objective, totally subjective, or some combination?

A. They will be a combination of both. Some examination questions are written with the intent of meeting the definition of an objective question. An objective question is defined as one in which: (1) there is only one correct answer; and (2) all qualified graders would agree on the amount of credit allowed for any given candidate's answer.

Q. 409. Will persons holding a two year license be included in NRC requal exams during the transition?

A. Persons with valid licenses may be included in NRC exams. However, renewals will be under 55.57 which requires the facility licensee to indicate a need for renewal of the license.

Q. 410. Please clarify paragraph 55.59(c)(4)(iii). What is being asked for?

A. The regulation requires a formalized, documented system for evaluating the performance and competency of licensed operators and senior operators. The system must include observation of on-the-job performance and evaluation of the operator's performance and competency through the use of an operating test. The operating test must include evaluation of actions taken during actual or simulated events which require the use of abnormal and emergency procedures.

Q. 411. Concerning paragraph 55.59(c)(3)(iv), what does "on a regularly scheduled basis" mean?

A. The facility licensee must establish a review schedule that will provide reasonable assurance that each licensed operator and senior operator is knowledgeable of all abnormal and emergency procedures. At a minimum, the schedule must require the review of all abnormal and emergency procedures at least once every two years.

Q. 412. Where preplanned lectures are part of the requal program, is it necessary that the licensees participate in <u>all</u> of these lectures, notwithstanding successful completion of the written examinations following these lectures, in order to be able to say that the licensee has met the requal program requirements on the NRC-398 application?

A. Under revised 55.59 no provisions for exemption of lectures is provided. If currently approved programs contain exemption provisions for licensed instructors the programs should continue until the programs are accredited.

INPO guideline 82-026 contains exemption provisions for instructors who teach specific subjects; however, they must attend lectures in subjects they do not teach.

Q. 413. Paragraph 55.59(b) implies that the NRC is notified when an individual fails a comprehensive written examination or operating test. Is this a requirement?

A. The NRC does not expect to be notified if a licensed operator or senior operator fails an examination. Requalification programs have provisions for accelerated training. We expect facility management will provide the necessary retraining and reexaminations before returning to active license status an operator or senior operator who has failed a requalification examination.

Q. 414. How will individuals who are in non-compliance with accreditated requalification training programs (i.e. extended illness, jury duty, etc.) be requalified?

A. Operators will be required to make-up missed portions of the requalification program and to submit evidence to the Commission of successful completion of the training.

Q. 415. We have a program where we have licensed maintenance people as senior reactor operators limited to fuel handling. To what extent will this new rule apply to us, since in the comments preceding the rule there's mention that this is not being covered, that it's going to be covered as it is currently being done.

For the past 14 years, as long as we've had SROs limited to fuel handling, we have not been required to give operating exams. Our annual requalification exam is a written exam only.

A. For a license which is conditioned to fuel handling only, the testing and requalification program should be appropriate to the license as it's conditioned. The licensee is not permitted to operate the facility. You would therefore not be required to give him an operating test, as described in the regulation.

CONFORMING AMENDMENTS TO 10 CFR PART 50

Q. 416. The new 10 CFR 50.54(i-1) requires us to notify you of any change in the scope of our program. Since we are not defining for you what our program is now, what is it that you are looking for?

A. Let's say that you are using an NRC-approved program today, and you make a modification to that program to conform to the Regulation. Say you go from an annual written examination to a comprehensive examination each two years. You may do that pursuant to 50.59, and simply amend your FSAR at the next update. Or, preferably, you would be accredited, have completed your review of your requalification program, and confirmed it as a systems approach to training.

Both methods may be done pursuant to 50.59. They do not require amendments to licenses. It is only when you have committed to something that's a part of the licensing document. For instance, some facilities have the Denton letter incorporated in their Technical Specifications, associated with staffing on shift.

You need to look at your commitments on a case-specific basis for your utility. Our intent is that you be able to do most of those under 50.59. They would not require review and approval by the staff in advance of your implementing the change.

Q. 417. Previously Part 50.54(i) referred to a decrease in scope, frequency, or duration. Now all you are saying is scope. Is that correct?

A. Yes. The reason for that is that the Rule specifies that you shall have a duration of no longer than two years, and it must be followed. The program that you use through INPO describes content.

Q. 418. What about frequency of the parts?

A. That's covered by the systems approach to training, where you look at the task that is performed, and you decide what it is. And that's why we excluded the classroom, OJT, and examination portion of requalification given that you certify that your program is done in accordance with the systems approach to training. For clarification, although you may be giving segmented exams in your requalification program, you should be aware that if NRC conducts a requalification exam at your facility, it will be a comprehensive written exam and will include an operating test.

Q. 419. The systems approach to training in itself is subjected to revisions to the training program. Some of these changes may be considered, at least by the utility, as a reduction in scope. The statement in 50.54 is still there, where it says that Commission approval is required for a reduction in scope in a training program. How do we meet 50.54 and still comply with 55.59?

A. The key words are "except as specifically authorized by the Commission." The Commission itself, in the Policy Statement on Training and Qualification of Nuclear Power Plant Personnel, on March 20, 1985, particularly Element 5, indicates that it expects the program to be evaluated and revised as necessary, based upon job performance needs.

We recognize that if you only added and never subtracted, you would eventually get to the point where you're putting all the time into training and never

doing anything on the job. We expect the evaluation to be reasonable based upon what you're doing. If you want to substitute something that's more important, the fact that you've dropped something does not constitute a reduction in scope for a systems approach to training.

We believe that's a major improvement in the whole training process. You are not locked into doing something for the next six, seven, or eight years because you committed to it in 1980. You now review it and, if it's meaningful, you perform it -- you control that evaluation process.

Q. 420. With respect to that area of 50.54 changes, which basically states that we will have a requalification program and that we cannot lessen the scope, what documents would be looked at as base documents to see whether we did or did not reduce the scope?

A. We will look at your approved requalification training program.

Q. 421. In the 50.74 requirement, you have set up some direction as to sending all correspondence for Part 55 to the Region. However, because this is a Part 50 requirement, should we be sending that to the document control desk in accordance with Part 50.4, which became effective in January of 1987? All correspondence required under Part 50 was supposed to go to the document control desk, with a copy to the Regional Administrator. Please clarify.

A. Communications under each part of the regulation have to conform to the communications requirements of that part.

Q. 422. Is the licensee definition under 50.74 the same as the licensee definition in 10 CFR 55?

A. Yes.

Q. 423. If a licensee is out of conformance with the INPO-accredited training program, is that reportable pursuant to 10 CFR 50.72 and 50.73?

A. It's not reportable to NRC, but you may need to report it to INPO, along with what you're doing to get back into conformance. It may be reportable to NRC if you have certified that someone is a graduate of an accredited program and that he has completed the program, then you find that you have not implemented the program adequately. In that instance, you may have a reporting requirement to NRC.

OPERATOR LICENSING EXAMINER STANDARDS (NUREG-1021)

Q. 424. What weight does NUREG-1021 carry?

A. The purpose of the Examiner Standards, NUREG-1021, is to ensure uniformity and consistency among the regions in the conduct of the examination process. It provides direction to the regions on how we expect them to conduct the operator licensing function. We audit the regions against that Standard. It does not impose new requirements. That is, the requirements that are addressed in the Examiner Standards flow from other documents, whether it be a Regulatory Guide, or Regulation, or other guideline.

That's why many of the changes to Examiner Standards described result from the change to the Rule, the more authoritative document. The standard contains policy on how to carry out the Rule.

Q. 425. It was mentioned that the license examiners would be filling out a simulation facility fidelity feedback report. Could we request that those reports be included in our copy of the examination packages when they are returned to us?

A. They will be. That has been incorporated into Rev. 4 to the Examiner Standards. The simulation facility fidelity feedback report is contained in Examiner Standard ES-104 "Procedures for Postexamination Activities," as section C(3), which requires that a Simulation Facility Fidelity report be prepared for each examination including simulator evaluations of candidates. The Standard also requires this report to be part of the Examination Report sent to the facility.

Q. 426. Will the Simulation Facility Fidelity Feedback Report be used to determine the status of current simulators?

A. The guidance to the examiners is that this information 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 receive informal feedback reports in the exam review process. And that will continue. If the Examiners have a problem conducting the operating test at your simulator, you can expect some feedback, although it won't be as formal as would occur after certification or approval.

Q. 427. It was stated earlier that once Form 474 is submitted, the simulation facility is certified in accordance with ANSI/ANS 3.5, and that there are three different mechanisms that may trigger the process of further evaluation: (1) questions regarding the Form 474 submittal, (2) random visits to the facility for evaluation, and (3) the post-examination activities associated with the examination at the facility.

Would the procedures for the simulation facility evaluation feedback due by May -- specifically, ES-104 -- be specific as to the standards and criteria and mechanisms by which the examiners will make a post-examination evaluation of a facility that would then trigger the evaluation procedure?

A. No. The mechanism is intended to be essentially a simple comment sheet that might contain a comment to the effect that "During Scenario X, the simulation facility failed to perform as expected. There was no flow coast down associated with reactor coolant pumps on a loss of power."

This type of comment would be collected and evaluated. Someone would then determine whether it raised a question in our mind that would be the basis for going back and looking at the simulation facility.

It's not significantly different from comments on the simulator in the examination report -- the inspection report that's issued following an exam. If there are a number of random failures, that's the kind of information we're collecting.

There is no acceptance criteria threshold. It's the examiner's judgment. If he felt there was a problem, we're giving him a vehicle to write it down and communicate it back so that knowledgeable people can look at it and decide whether that would trigger an inspection or evaluation.

Q. 428. Typically after that type of evaluation, there's not going to be a significant amount of data by which someone away from the facility, someone who was not there at the time of the examination, could make a very objective or accurate determination as to whether there is a problem with the simulation facility or not; and I understand that there are a significant number of freezes. If, during an overpressure incident, pressure continues to rise to 3,500 pounds, then obviously there's a problem with the simulation facility, but other examples may not be so clear-cut. Therefore, there's a potential for NRC followup where, perhaps it was not warranted because of an evaluation made by someone who was not there when the event occurred.

A. That's why we're getting the feedback from the examiner who was there at the time it occurred. The facility will also receive a copy of the writeup with the inspection report, and I'm sure it will be a subject in the exit briefing with the chief examiner at the end of the exam week.

We think there are adequate mechanisms in place to alert the facility as to what the potential concern is, but most importantly, we want to get feedback on how well the simulation facility is working during an examination based upon an examiner's observation of that simulation facility.

Further, we have been increasingly requesting that facilities record data during simulator exams to the greatest extent possible so that information is available for review on a more objective scale.

Q. 429. We are required to complete training and experience blocks on Form 398 because we don't yet have an acceptable simulation facility, even though we have an INPO-accredited program. Will we still be evaluated in accordance with current ES-109 requirements?

A. Yes.

Q. 430. Under eligibility, you previously cited Examiner Standard 109. In the future an accredited program with an acceptable simulation facility may be substituted for eligibility. Examiner Standard 109 says two years of power plant experience is required. Does that requirement remain?

A. A facility with an INPO-accredited training program that utilizes a certified or approved simulation facility need not meet other experience requirements.

Revision 4 to the examiner standards revises ES 109 to conform with the Regulation.

Q. 431. Examiner Standard 109 lists the eligibility requirements for licensed operators and senior licensed operator applicants. One of these requirements is that each individual spend three months on shift as an extra man under the supervision of a licensed or senior licensed operator. Is this requirement still in effect? Where does this requirement come from, given that it is not addressed in 10 CFR 55, and the new revision supersedes previous requirements?

A. Although not a requirement, this is consistent with our past practice, and it's consistent with Reg Guide 1.8, which endorses ANSI 3.1-1981. It will be continued in ES-109. Facility licensees can ask for a waiver, and their requests will be considered.

Q. 432. Examiner Standard 109 says that training conducted as part of a license program cannot count for experience. But ANSI/ANS 3.1-1981, which is what the Commissioners have told us to use, allows related technical training to count for experience. Is ES-109 in compliance with 3.1?

A. The training time that doesn't count as experience refers to the training required by the approved license program in which the individual is participating. Related technical training refers to training he may have received in another position, such as auxiliary operator. This time may be counted, up to a certain percentage.

Q. 433. There was an article in Nuclear News, January 1987, page 42, that says the average pass rate for the industry on requalification exams administered by the NRC is 78 percent nationwide. Examiner Standard 601 says that in order for a requalification program to be evaluated as satisfactory, 80 percent or more have to pass. This indicates that the industry, nation-wide, has less than a satisfactory requal program. Do you agree?

A. No, because the statistics that Nuclear News used are somewhat questionable. Last year we evaluated 17 facilities, and 5 of them fell in the marginal or unsatisfactory category because they had substantially higher failure rates. So, a few are causing the national statistics to be different. It was similar the year before, when we had five facilities that were in the marginal or unsatisfactory category.

The program evaluation is based upon whether 80 percent or more pass. It's not based upon the average scores of the candidates taking the exam. In other words, if you examine 10 candidates, and 2 fail, you have 80 percent passing and we determine that program is satisfactory. The average score on that exam may be 78 per cent because the 2 people that failed scored in the 60s, while everybody else scored above 80.

Q. 434. Assume that NRC comes in to give the utility requalification exams, and the scores are between 60 and 80 percent and are rated marginal. After the utility modifies their program, reexamines those failures, and comes out with a satisfactory grade, does NRC change that from a marginal to acceptable program?

A. The marginal rating would be based on the examination given, in accordance with ES-601. We evaluated the program and identified individuals with weaknesses. They require remedial training, which is given. Their training will

not cause us to revise our evaluation. Two years hence, when we come back and do another evaluation, hopefully 80 percent will pass at that time, and you will be evaluated as satisfactory. The original evaluation and conclusion stands until we come back and re-evaluate, either by inspection or re-examination.

Q. 435. Is that true, even if our program was modified to cover those weaknesses that you discovered?

A. Yes. Your program may, indeed, no longer be marginal. But until we come back and independently evaluate, that remains our conclusion of record.

Q. 436. So, the only way we can get that changed, is for you to come back to give another exam, is that true?

A. Yes, we come back and inspect that area, and reach a conclusion based on our inspection at that time.

Q. 437. Can we ask for such a re-evaluation?

A. Sure.

Q. 438. What limits on materials requested from the facility licensee exist, if any?

A. We will be reasonable, but there are no specific limits. Typically, we go through the list with the facility, and indicate what items we need. We are not going to ask for the whole library or every print on the facility. However, we may need more material at times than you issue to the student to learn the plant, because we have to get familiar with different plants that have slight differences from one type vendor to another. So, we may need more in-depth material.

Q. 439. We receive a copy of the written exam after it has been administered, and as part of the documentation, we are provided with the learning objectives of the source documents from which these questions were derived. For simulator examinations, could we be provided with that same documentation, since we go to the effort to develop scenarios that are based on industry events, LERs, and learning objectives that we've derived from our program so that when you design your simulator exams, they would also be based upon these same precepts?

A. We currently fill out Attachments 3 and 5 to Examiner Standard 302, which delineates the objectives that the exam events are trying to accomplish. Those have been provided to all the individuals who have failed the examination. For individuals who passed, we have provided only Attachment 3, the delineation of the overall exercise itself, malfunction by malfunction, or over-ride by over-ride. We have not been providing Attachment 5 to individuals who pass. If you request, we can provide you a copy of Attachment 5, which contains our objectives for that examination.

Q. 440. With regard to IE Information Notice (IEIN) No. 85-101 "Applicability of 10 CFR 21 to Consulting Firms Providing Training," is training material that is found deficient reportable under 10 CFR 21?

A. The answer is yes under certain conditions. IEIN85-101 provides guidance to licensees and consultants concerning applicability of 10 CFR 21 to certain training activities provided by consultants. Further information regarding reporting requirements can be found in NUREG-0302 Rev. 1, "Remarks Presented (Questions/Answers Discussed at Public Regional Meetings to Discuss Regulations (10 CFR Part 21) for Reporting of Defects and Noncompliance."

Q. 441. Would the review of the exam to make our comments within the five working days also apply to the simulator exam?

A. The comment procedure has been limited to the written examination by the Examiner's Standards. You can comment, obviously, on our simulator exam, and we are more than willing to listen to what you have to say. But we have not been going through a formal comment procedure for the simulator exam. One of the reasons is that the simulator examination is on-going during the course of the week. And the written examination is given typically in the first day. And, usually, by the end of the week, you provide us with your written exam comments, and that expedites the grading process.

Our present practice does not solicit written comments on the simulator exam for grading purposes. Normally the dialogue established with the simulator operators (training staff) is adequate to resolve any weaknesses in the simulator scenarios prior to their execution. Otherwise, written comments are accepted during an appeal process for an individual candidate.

Appendix A

Generic Letter 87-07

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

MAR 19 1987

TO ALL FACILITY LICENSEES

SUBJECT: INFORMATION TRANSMITTAL OF FINAL RULEMAKING FOR REVISIONS TO OPERATOR LICENSING - 10 CFR 55 AND CONFORMING AMENDMENTS (Generic Letter No. 87-07)

To provide information about the final revisions to 10 CFR 55, "Operators' Licenses," and their implementation, the Commission is holding a series of public meetings. These meetings will be held as follows:

A. April 9, 1987 for Region II
Richard B. Russell Federal Building
Strom Auditorium, Lower Level
75 Spring Street, SW
Atlanta, Georgia
Point of Contact: Mr. Kenneth E. Brockman
US Nuclear Regulatory Commission, Region II
101 Marietta Street, Suite 3100
Atlanta, GA 30323
(404) 331-5594

B. April 14, 1987 for Regions IV and V
Stouffer Concourse Hotel
3801 Quebec Street
Denver, Colorado (Across from Stapleton Airport)
Points of Contact: Mr. Ralph Cooley
US Nuclear Regulatory Commission, Region IV
Parkway Central Plaza Building
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011
(817) 860-8147

Mr. Phillip Morrill
US Nuclear Regulatory Commission, Region V
1450 Maria Lane, Suite 210
Walnut Creek, CA 94596
(415) 943-3740

C. April 16, 1987 for Region III
Ramada Hotel O'Hare
6600 N. Mannheim Road (corner of Higgins)
Rosemont, Illinois (One mile from O'Hare Airport)
Phone: (312) 827-5131
Point of Contact: Mr. Thomas Burdick
US Nuclear Regulatory Commission, Region III
799 Roosevelt Road
Glen Ellyn, IL 60137
(312) 790-5566

D. April 20, 1987 for Region I
Hilton Hotel Valley Forge
251 West DeKalb Pike
King of Prussia, Pennsylvania
Phone: (215) 337-1200
Point of Contact: Mr. Noel F. Dudley
US Nuclear Regulatory Commission, Region I
631 Park Avenue
King of Prussia, PA 19406
(215) 337-5211

Enclosed with this letter is a double-spaced copy of the regulations and supporting information for your review prior to the public meeting. You are encouraged to forward questions to the appropriate point-of-contact, one week prior to the date of the meeting which you plan to attend. The staff intends to answer these questions and others during the meetings and will consolidate all questions and answers into a NUREG report after the meeting.

In preparation for these meetings, all licensees should pay special attention to the requirements of Sections 55.31(a) and 55.59(c) regarding both initial and requalification training and the option of substituting an accredited training program for initial and requalification training programs previously approved by NRC. This option may be implemented upon written notification to the NRC and does not require any staff review. However, because of conflicts between previous 10CFR55 Appendix A requirements and a systems approach to requalification training, it is necessary to certify that the substitute training program is both accredited and based upon a systems approach to training. The superseded training program description contained in the FSAR need not be revised until the next update required by 50.71(e).

Sincerely,

James H. Sniezek /for

Harold R. Denton, Director
Office of Nuclear Reactor Regulation

Enclosure:
As stated

Appendix B

10 CFR Parts 50 and 55

Operators' Licenses and Conforming Amendments

known brucellosis in cattle for the period of 12 months preceding classification as Class Free. The Class C classification is for States or areas with the highest rate of brucellosis, with Class A and Class B in between. Restrictions on the movement of cattle are more stringent for movements from Class A States or areas compared with movements from Free States or areas, and are more stringent for movements from Class B States or areas compared with movements from Class A States or areas, and so on.

The basic standards for the different classifications of States or areas concern maintenance of: (1) A cattle herd infection rate, based on the number of herds found to have brucellosis reactors, not to exceed a stated level during 12 consecutive months; (2) a rate of infection in the cattle population, based on the percentage of brucellosis reactors found in Market Cattle Identification (MCI)—testing at stockyards and slaughtering establishments—not to exceed a stated level; (3) a surveillance system that requires testing of dairy herds, participation of all slaughtering establishments in the MCI program, identification and monitoring of herds at high risk of infection, including herds adjacent to infected herds and herds from which infected animals have been sold or received; and (4) minimum procedural standards for administering the program.

Prior to the effective date of this document, Alabama was classified as a Class B State because of the herd infection rate and the MCI reactor prevalence rate. However, a review of the brucellosis program establishes that Alabama should be changed to Class A status.

In order to attain and maintain Class A status, a State or area must (1) not exceed a cattle herd infection rate, due to field strain *Brucella abortus* of 0.25 percent or 2.5 herds per 1,000 based on the number of reactors found within the State or area during any 12 consecutive months, except in States with 10,000 or fewer herds; (2) maintain a 12 consecutive months MCI reactor prevalence rate not to exceed one reactor per 1,000 cattle tested (0.10 percent); and (3) have an approved individual herd plan in effect within 15 days of locating the source herd or recipient herd. Alabama now meets the criteria for classification as Class A.

Executive Order 12291 and Regulatory Flexibility Act

We are issuing this rule in conformance with Executive Order 12291, and we have determined that it is not a "major rule" Based on information compiled by the Department, we have determined that this rule will have an effect on the economy of less than $100 million; will not cause a major increase in costs or prices for consumers, individual industries, Federal, State, or local government agencies, or geographic regions; and will not cause a significant adverse effect on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

For this action, the Office of Management and Budget has waived its review process required by Executive Order 12291.

Cattle moved interstate are moved for slaughter, for use as breeding stock, or for feeding. Changing the status of Alabama reduces certain testing and other requirements on the interstate movement of these cattle. However, cattle from certified brucellosis-free herds moving interstate are not affected by these changes in status. We have determined that the changes in brucellosis status made by this document will not affect market patterns and will not have a significant economic impact on those persons affected by this document.

Under these circumstances, the Administrator of the Animal and Plant Health Inspection Service has determined that this action will not have a significant economic impact on a substantial number of small entities.

Executive Order 12372

This program/activity is listed in the Catalog of Federal Domestic Assistance under No. 10.025 and is subject to the provisions of Executive Order 12372, which requires intergovernmental consultation with State and local officials. (See 7 CFR Part 3015, Subpart V.)

Emergency Action

Dr. John K. Atwell, Deputy Administrator of the Animal and Plant Health Inspection Service for Veterinary Services, has determined that an emergency situation exists, which warrants publication of this interim rule without prior opportunity for public comment. Immediate action is warranted in order to delete unnecessary restrictions on the interstate movement of certain cattle from Alabama.

Further, pursuant to administrative procedure provisions in 5 U.S.C. 533, it is found upon good cause that prior notice and other public procedures with respect to this interim rule are impracticable and contrary to the public interest, and good cause is found for making this interim rule effective less than 30 days after the publication of this document in the **Federal Register**. Comments are being solicited for 60 days after publication of this document, and a final document discussing comments received and any amendments required will be published in the **Federal Register** as soon as possible.

List of Subjects in 9 CFR Part 78

Animal diseases, Brucellosis, Cattle, Hogs, Quarantine, Transportation.

PART 78—BRUCELLOSIS

Accordingly, 9 CFR Part 78 is amended as follows:

1. The authority citation for Part 78 continues to read as follows:

Authority: 21 U.S.C. 111–114a–1, 114g, 115, 117, 120, 121, 123–126, 134b, 134f; 7 CFR 2.17, 2.51, and 371.2(d).

§ 78.41 [Amended]

2. Section 78.41, paragraph (b) is amended by adding "Alabama" immediately before "Arizona".

3. Section 78.41, paragraph (c) is amended by removing "Alabama".

Done in Washington, DC, this 20th day of March, 1987.

B. G. Johnson,

Deputy Administrator, Veterinary Services, Animal and Plant Health Inspection Service.

[FR Doc. 87–6421 Filed 3–24–87; 8:45 am]

BILLING CODE 3410-34-M

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 50 and 55

Operators' Licenses and Conforming Amendments

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Regulatory Commission is amending its regulations 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, including a requirement for a simulation facility; (3) codify procedures for administering requalification examinations; and (4) describe the form and content for operator license applications. The rule is necessary to meet NRC responsibilities under Section

306 of the Nuclear Waste Policy Act of 1982.

DATES: Effective Date: May 26, 1987. *Public meeting dates:* April 9, 14, 16, and 20, 1987.

ADDRESSES: Public meeting locations: Public meetings will be held to discuss implementation of the requirements of this rule. The meetings will be held as follows:

A. April 9, 1987 for Region II, Richard B. Russell Federal Building, Strom Auditorium, Lower Level, 75 Spring Street, SW., Atlanta, Georgia.

Point of Contact: Mr. Kenneth E. Brockman, U.S. Nuclear Regulatory Commission, Region II, 101 Marietta Street, Suite 3100, Altanta, GA 30323, (404) 331-5594.

B. April 14, 1987 for Regions IV and V, Stouffer Concourse Hotel, 3801 Quebec Street, Denver, Colorado (Across from Stapleton Airport).

Points of Contact: Mr. Ralph Colley, U.S. Nuclear Regulatory Commission, Region IV, Parkway Central Plaza Building, 611 Ryan Plaza Drive, Suite 1000, Arlington, TX 76011, (817) 860-8147.

Mr. Phillip Morrill, U.S. Nuclear Regulatory Commission, Region V, 1450 Maria Lane, Suite 210, Walnut Creek, CA 94596, (415) 943-3740.

C. April 16, 1987 for Region III, Ramada Hotel O'Hare, 6600 N. Mannheim Road (corner of Higgins), Rosemont, Illinois (One mile from O'Hare Airport), Phone: (312) 827-5131.

Point of Contact: Mr. Thomas Burdick, U.S. Nuclear Regulatory Commission, Region III, 799 Roosevelt Road, Glen Ellyn, IL 60137, (312) 790-5566.

D. April 20, 1987 for Region I, Hilton Hotel Valley Forge, 251 West DeKalb Pike, King of Prussia, Pennsylvania, Phone: (215) 337-1200.

Point of Contact: Mr. Noel F. Dudley, U.S. Nuclear Regulatory Commission, Region I, 631 Park Avenue, King of Prussia, PA 19406, (215) 337-5211.

Background information for the rule includes a copy of the regulatory analysis, the supporting statement for the Office of Management and Budget clearance of the information collection requirements, Regulatory Guides, ANSI/ANS standards, NUREG-series documents, other documents discussed in this notice, and reports that contain a detailed analysis of the public comments received during the public comment period and their resolution may be examined at the NRC Public Document Room, 1717 H Street NW., Washington, DC.

A single copy of the reports concerning public comments may be obtained from Chief, Operator Licensing Branch, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: 301-492-4868.

FOR FURTHER INFORMATION CONTACT: Chief, Operator Licensing Branch, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 492-4868.

SUPPLEMENTARY INFORMATION:

I. Background

Section 107 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2137), requires the Nuclear Regulatory Commission to prescribe uniform conditions for licensing individuals as operators of production and utilization facilities and to determine the qualifications of these individuals and to issue licenses to such individuals. The regulations implementing these requirements are set out in Part 55 of Title 10, Chapter 1, of the Code of Federal Regulations. To assist licensees and others, the Commission also has issued regulatory guides and generic letters that provide guidance on acceptable methods of meeting these regulatory requirements.

The Commission has become increasingly aware of the need to update its operator licensing regulations and related regulatory guides. These revisions are needed to clarify the extent to which simulators should be used in licensing examinations and to reflect upgraded requirements for licensed operator selection, training, and requalification programs resulting from the accident at TMI-2. Although the Commission has been actively engaged in investigating these matters, the schedule for completing these activities was further accelerated by the enactment of January 7, 1983, of the Nuclear Waste Policy Act of 1982, Pub. L. 97-425. Section 306 of that act (42 U.S.C. 10226, 96 Stat. 2201 at 2262-2263) directs the NRC to establish (1) simulator training requirements for applicants for operator licenses and for operator requalification programs, (2) requirements governing NRC administration of requalification examinations, and (3) requirements for operating tests at civilian nuclear power plant simulators.

On November 26, 1984, the Commission published proposed amendments to 10 CFR Part 55, "Operators' Licenses" in the Federal Register (49 FR 46428). These amendments proposed granting, in part, a petition for rulemaking (PRM-55-1) that was filed by KMC, Inc. PRM-55-1 is discussed more fully under Section II.B, "Medical Requirements." A 90-day comment period expired on February 25, 1985. Comments were received from 88 respondents. An additional 47 respondents commented on the three associated regulatory guides, also issued for public comment. Reports that contain a detailed analysis of these comments and their resolution are available as indicated under "**ADDRESSES:**".

These proposed revisions to 10 CFR Part 55 were to improve the operator licensing process and to achieve the following objectives:

(1) Improve the safety of nuclear power plant operations by improving the operator licensing process and examination content,

(2) Provide the NRC with an improved basis for administering operator licensing examinations and conducting operating tests, and

(3) Respond to the specific direction given by Congress in Section 306, Nuclear Waste Policy Act of 1982, Pub. L. 97-425, to promulgate regulations and guidance in the area of examinations.

On March 20, 1985, the Commission published a Final Policy Statement on Training and Qualification of Nuclear Power Plant Personnel (50 FR 11147) that describes the Commission's current policy regarding training of operators. In addition to this policy statement, the Commission is publishing the new rules described in this notice; these rules supercede all current regulations for operator licenses. Those facility licensees that have made a commitment that is less than that required by these new rules must conform to the new rules automatically. Those facility licensees that have made a commitment different from or more than that required by these new rules for license amendments and technical specification changes, may apply to the Commission so that they can conform to these new rules. Other changes should be made in accordance with 10 CFR 50.59.

Production facilities previously included in Part 55 are not referenced in the revisions since there are no operators at production facilities currently licensed by the Commission. Although special consideration has been given to the smaller size and scope of test and research reactors the requirements in this notice apply to all utilization facilities licensed under 10 CFR Part 50, including test and research reactors. Consequently, except where specific wording has been used to note different requirements, these rules apply to test and research reactors.

II. Summary of Public Comments and Final Actions

The proposed amendments to improve the operator licensing process have been modified in response to the comments received. A summary of the public comments and, where appropriate, a description of the changes that resulted from them follows.

(A) *General Comments*—(1) *General purpose of these amendments.* Several commenters provided general support for the proposed rule. Other commenters suggested changes to clarify the purpose and exemptions sections. These sections were reworded as a result of the evaluation of these comments. In particular, the purpose of the rule indicates that terms and conditions of operators' licenses and renewal are covered. Exemption for trainees at a facility is clarified to indicate that a trainee is only exempted while participating in an NRC-approved training program to qualify for an operator license. In addition, employees involved in fuel handling are exempt if they are supervised by a licensed senior operator.

(2) *Definitions.* Many commenters were concerned with the specific definitions in the rule. A number of commenters addressed the definitions of "simulation facility" and "Plant-referenced simulator," and requested clarification of the NRC's intent for the use of such devices in the partial conduct of operating tests. Several commenters believed that only plant-referenced simulators would be permitted.

The definition of a "plant-referenced simulator" is intended to mean a simulator that meets all of the requirements of ANSI/ANS 3.5–1985, as endorsed by Regulatory Guide 1.149, "Nuclear Power Plant Simulation Facilities for Use in Operator License Examinations," (see Section V, Regulatory Guides, of this Supplementary Information).

The definition of a "simulation facility" is intended to provide for flexibility in the conduct of the simulator (non-plant-walkthrough) portion of the operating test. The intent is to permit, under circumstances specified in 10 CFR 55.45(b), the use of the plant itself, and/or a plant-referenced simulator, and/or some other type of simulation device such as a part-task or basic-principles simulator, for the conduct of the simulator portion of the operating test.

A number of commenters expressed concern that a plant, when used as a simulator, could not safely perform the full range of functions that a simulator could perform, and some commenters requested clarification about the limitation of the conditions under which the plant could be used.

It is not the intent of NRC to permit or encourage the initiation of transients on the plant when and if the plant is used as a simulation facility. The use of the plant is envisioned as a possible approach that a facility licensee might propose to use in conjunction with another simulation device or devices, in lieu of a plant-referenced simulator. This approach might be suitable, for example, for older plants without access to plant-referenced simulators, where manipulations of the plant, to the extent consistent with plant conditions, might be used to demonstrate familiarity with the plant for which the candidate would be licensed.

Several commenters suggested that the definition of "reference plant" should not be specific to a plant and its unit. The word "unit" has been deleted from this definition, although it remains the NRC's intent that a reference plant refer to a specific docket number. For those situations in which a multi-unit plant is composed of units from the same vendor and vintage, it is likely that only one simulation facility would be required. For others, Regulatory Guide 1.149 provides specific guidance for those facility licensees that want to consider the use of one simulation facility for use at more than one nuclear power plant. This guidance is based upon existing NRC policy on the granting of multiunit operator's licenses.

(B) *Medical requirements*—(1) *Criteria for medical requirements.* Most commenters agreed with the revisions to the medical certification process, which would require, for the usual case, a brief certification by the facility licensee on Form NRC–396, as revised. Some commenters questioned the relationship of these requirements to drug and alcohol problems and programs. Other commenters were confused about who would have responsibility for determining the medical condition of an operator or applicant for an operator's license. Some comments were made about the specific language in the medical requirements regarding disqualifying conditions and commenters requested changes or clarification. Many commenters noted the need to adjust the medical requirements to the renewal cycle.

The medical requirements reflect the industry standard articulated in ANSI/ANS 3.4–1983, "Medical Certification and Monitoring of Personnel Requiring Operating Licenses for Nuclear Power Plants." [1] The intent is to prevent the manipulation of the controls by an operator whose medical condition and general health would cause operational errors endangering public health and safety. The medical requirements rely on examination of the applicant or operator by a licensed physician who evaluates the medical conditon of the operator, based on the criteria of ANSI/ANS 3.4–1983 that is endorsed by Regulatory Guide 1.134, "Medical Evaluation of Licensed Personnel for Nuclear Power Plants," and makes recommendations to the facility's management. The facility's management is responsible for certifying the suitability of the applicant for a license. The NRC has the responsibility for making an assessment of the applicant for a license, including the applicant's medical fitness. Neither the facility nor the NRC staff will make medical judgments. When a conditional license is requested, the NRC will use a qualified medical expert to review the medical evidence submitted by the facility to make a determination. For minor conditions, such as the need to wear corrective lenses or a hearing aid, the Form NRC 396 is modified to simplify the process for obtaining a medically conditioned license. Moreover, while the biennial medical examination required under § 55.21 is intended to detect alcoholism or drug dependency or both, no reference is made in the rule to alcohol or drug problems. These issues are covered in a Policy Statement on Fitness for Duty of Nuclear Power Plant Personnel (51 FR 27921), published on August 4, 1986, by the Commission. In addition, the license renewal period is changed to 6 years to be compatible with the biennial medical examination requirements.

In July 1983, KMC, Inc., petitioned the Commission (PRM–55–1) "to simplify the procedure for the review of the medical status of applicants for operator- . . . licenses." KMC stated that the current procedures require that a detailed medical history and results of the applicant's medical examination by a licensed physician be sent to the Commission. The petitioner requested that the Commission amend its regulations to permit designated medical examiners, as defined in ANSI N546–1976, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants," to certify that the applicant has

[1] Standards discussed in this rule are available for purchase from American Nuclear Society, 555 North Kensington Avenue, La Grange Park, Illinois 60525.

been examined (using the guidance contained in ANSI N546–1976 as endorsed by Regulatory Guide 1.134) and that the applicant's general health and physical condition is not such as may cause operational errors. Under the petitioner's request the use of the current NRC Form 396 would be discontinued for utility operators and detailed medical records would be retained by the licensee's designated medical examiner. Subpart C to Part 55 responds to the KMC, Inc. petition. NRC grants its request, in part, by eliminating the requirement to submit, in usual cases, medical information for an applicant for an operator's license directly to the NRC. Instead, as described above, a certification to NRC about compliance with the health requirements in § 55.33(a)(1) would be made by the facility licensee.

(2) *Notification of incapacitation because of disability or illness.* Some confusion was noted by several commenters regarding the process to notify the Commission when an operator was incapacitated because of disability or illness. The final rule is changed to reflect more clearly the Commission's intent. That is, if, during the term of the license, an operator's medical condition changes and does not meet the requirements set forth in ANSI/ANS 3.4–1983, notification of the Commission by the facility licensee is required. At the same time, if the examining physician indicates that the condition can be accommodated as noted in § 5.1 of the ANSI/ANS 3.4–1983, a conditional license may be requested by an authorized representative of the facility licensee. Form NRC 396 must be used and supporting medical evidence must be supplied. However, the facility licensee does not have to wait for permission from the Commission before returning an operator to licensed duties, if the operator has been examined by a physician, who, using ANSI/ANS 3.4–1983 as a basis, has recommended to the facility's management that the operator can return.

(3) *Test and research reactors.* Many test and research reactor operators were concerned that the requirements in the rule changed the medical requirements for them. The rule changes only the requirements for test and research reactor facility licensees. It does not change the status quo for reactor operators, for whom ANSI/ANS–15.4–1977(N 380), "Selection and Training of Personnel for Research Reactors," requirements continue.

(C) *Applications.* Applications for an operator license require the facility licensee to certify that there is a need for the applicant to perform assigned duties. Several commenters were concerned that the "need" was not clearly defined. The requirements are intended to simply have the facility licensee's management internally review the need for the license before the application is made. Another concern of many commenters was the relationship between industry-accredited training programs and the details regarding training and experience needed to apply to the NRC on Form NRC–398. In addition, some commenters were concerned with the definition of the phrase "learned to operate." This phrase has been deleted from § 55.31 and replaced by wording which indicates that if a candidate successfully completes the training and experience requirements to be licensed as an operator, the NRC will conduct the appropriate examination and operating test. Section 55.31(a)(5) has been added to specify the minimum number of control manipulations to be conducted by an applicant. Details regarding other training and qualification will not be required to be supplied on Form NRC–398, if these requirements are contained in an NRC-approved training program that uses a simulation facility acceptable to the NRC under § 55.45(b). Subject to continued Commission endorsement of the industry's accreditation process under the Final Policy Statement on Training and Qualification of Nuclear Power Plant Personnel (50 FR 11147; March 20, 1985), a facility licensee's training program would be approved by being accredited by the National Nuclear Accrediting Board.

(D) *Written examinations and operating tests*—(1) *Content.* Most commenters recommended that the principal means of determining the knowledge, skills, and abilities to be included in operator licensing written examinations and operating tests should be the learning objectives derived from a systematic analysis of the job performance requirements. These commenters recommended that these learning objectives form the basis and scope of examinations and tests and that other sources of information should only be used until the learning objectives are available for a facility. Conversely, some commenters questioned as premature the endorsement by NRC of a systematic analysis from which to draw the content for licensing examinations and tests. One commenter recommended that NRC issue a document that specifically delineates what an operator is responsible for on NRC examinations and operating tests.

Systematic analysis of job performance requirements is an accepted methodology for deriving licensing examination content. The job-task analyses are being performed as part of the performance-based programs that are being implemented by facility licensees as part of the industry supported accreditation program. The learning objectives derived from these 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 these programs are being developed and reviewed for accreditation, the NRC has activities underway to improve the content validity of NRC examinations and operating tests.

(2) *Specific wording of categories.* Many commenters made specific wording recommendations for the categories listed under content of the written examinations and operating test. These suggestions were reviewed by subject-matter experts and changes were made to clarify or improve the content categories. No major changes resulted except to two categories under the operating test. Under § 55.45, categories (12) and (13) were reworded as follows:

(12) Demonstrate the knowledge and ability as appropriate to the assigned position to assume that responsibilities associated with the safe operation of the facility.

(13) Demonstrate the applicant's ability to function within the control room team as appropriate to the assigned position, in such a way that the facility licensee's procedures are adhered to and that the limitations in its license and amendments are not violated.

(3) *Waivers.* Several commenters suggested that examinations and tests be automatically waived under specific circumstances. As the agency responsible for public health and safety with regard to nuclear facilities, the Commission cannot waive its independent assessment of operators. Waivers are based on operators previously passing all or part of a licensing examination. Details regarding the processing of waivers are addressed in NUREG–1021, "Operator Licensing Examiner Standards." [2]

[2] NUREG-series documents are available for public inspection and copying for a fee in the Commission's Public Document Room at 1717 H

Continued

(4) *Integrity and examinations and tests.* Although many commenters supported the addition of § 55.49, "Integrity of Examinations and Tests," they felt that the penalties in § 55.71 were excessive. Other commenters were afraid that any action might be interpreted as cheating and that the role of facility licensees in enforcement was unclear. The NRC always has prosecutorial discretion not to take enforcement action in unclear cases. The language in § 55.71 on criminal violations only covers persons who "willfully violate" the Atomic Energy Act or the 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 examination.

(E) *Simulation facilities*—(1) *Application process.* Many commenters were concerned with what they termed the burdensome procedure requiring initial and subsequent application for approval to use a simulation facility. Most of these commenters felt that certification by the facility licensee to the NRC that the simulation facility met industry standards should suffice, when combined with the NRC's ability to audit the simulation facility and review the supporting documentation.

The Commission has amended the final rule to reflect the position taken in these comments. Any facility licensee that proposes to use a simulation facility that meets the definition of a plant-referenced simulator (essentially a simulator that meets the requirements of ANS–3.5, 1985, "Nuclear Power Plant Simulators for Use In Operator Training," as modified by Regulatory Guide 1.149) will be required only to certify this to the Commission, and to maintain records pertaining to performance testing results for Commission review or audit. Any facility licensee that proposes to use a simulation facility that is other than a plan-referenced simulator will be required to submit a plan detailing how the requirements of § 55.45 will be met on the alternative device or devices, followed by an application for NRC approval for use of the simulation facility. However, in response to the numerous comments received, this application process has been greatly simplified, and the requirement for a periodic "subsequent" application has been eliminated. In support of its certification or its application, as appropriate, each facility licensee will be required to conduct periodic performance tests on its simulation facility, and maintain records pertaining to the conduct of these tests and the results obtained.

It is the Commission's intent that those facility licensees that submit a certification for a simulation facility may immediately begin use of the certified simulation facility for the conduct of operating tests at the reference plant.

(2) *Performance testing.* Many comments addressed the requirement for the conduct of a series of performance tests, in which an extensive range of tests would be conducted over a 4-year cycle, 25 percent per year. The industry standard which was in effect at the time of the proposed rulemaking, ANSI/ANS 3.5–1981, required complete simulator performance testing every four years, and R.G. 1.149 endorsed that requirement. In addition, the R.G. specified that all malfunctions which a simulation facility was capable of performing should be tested to the extent that such malfunctions could be used in the conduct of operating tests. The majority of commenters felt that the burden of conducting these tests would demand an excessive amount of time on the part of the simulation facility as well as the facility licensee's staff. Numerous suggestions were made proposing lists of performance tests thought to be appropriate, suggesting alternative formulas for the cycle of performance testing, or offering suggestions that the rule merely endorse a new version of the industry standard which was in preparation at the time.

A new version of the standard, identified as ANSI/ANS 3.5–1985, was published after the expiration of the public comment period. In response to the comments received and to the newly issued industry standard, R.G. 1.149 has been changed to endorse the new standard, with exceptions, and to include in its endorsement the specific, limited list of malfunction performance tests contained in the standard. However, although the new standard continues to require the conduct of simulator performance tests, it has deleted the requirement that these tests be conducted on a four-year cycle for the life of the simulator. Instead it has substituted an annual operability test, and now required that performance tests be conducted only upon completion of initial simulator construction and in the event that simulator design changes result in significant simulator configuration or performance variations.

In addition, the standard is silent on the subject of periodic testing of malfunctions. The NRC endorsement of the standard in the R.G. takes exception to the deletion of periodic performance testing. The regulations will require performance testing to be conducted throughout the life of a simulation facility, on a four-year cycle, at the rate of approximately 25 percent per year.

The protection of public health and safety requires that licensed operators not only be proficient in general operations but be able to safely cope with plant transients and malfunctions. Thus a reactor operator license candidate's response to malfunctions during an operating test is an important factor in the examiner's assessment of that candidate's performance. It is also necessary to avoid misleading or negative training, which could result from the use of a simulation facility which does not correctly portray plant response to malfunctions. Therefore the ability of a simulation facility to faithfully portray plant malfunctions as well as general operability is to be verified by periodic performance testing. Such testing provides assurance that the simulation facility remains acceptable over time and continues to meet the Commission's regulations. A definition of performance testing has been added to § 55.4, and the requirements for performance testing have been clarified in the applicable paragraphs of § 55.45(b), as they apply to all simulation facilities, whether certified or approved.

(3) *Schedule.* A number of comments included criticism of the time schedules specified as being unreasonably short for submitting a simulation facility plan and for having a simulation facility in full compliance with the regulation.

The regulation has been changed to allow 1 year (versus 120 days) for a facility licensee to submit a plan detailing its approach to the simulation facility requirement; and to allow 4 years (versus 3) for its simulation facility to be in full compliance with the regulation. Those facility licensees that certify the use of a plant-referenced simulator will not have to submit a plan.

(4) *Penalty for unavailability of simulation facility.* Several comments expressed concern that the penalty was too harsh for the unavailability of a simulation facility acceptable to the Commission.

It is the Commission's intent that every facility licensee have available a simulation facility that meets the

Street NW., Washington, DC These documents may be purchased from the U S Government Printing Office (GPO) by calling 202–275–2060 or by writing the GPO, P O Box 37082, Washington DC 20013–7082 They may also be purchased from the National Technical Information Service, U S Department of Commerce, 5285 Port Royal Road Springfield, VA 22161

Commission's requirements within a reasonable period of time after the effective date of the rule, and that, once available, the simulation facility be maintained and upgraded, as needed, to continue its acceptability for the conduct of operating tests. The Commission recognizes that unique circumstances may arise on a plant-specific basis that cause some deviation from the time requirements established in the rule and that, from time-to-time, a previously certified or approved simulation facility may become temporarily unacceptable for the conduct of operating tests. It is the Commission's intent to address any such situations on a case-by-case basis.

(5) *Lack of guidance for assessment.* A number of comments expressed concern that the guidance to be used by the Commission in its assessment of simulation facility adequacy was not yet available. It is the Commission's intent that no simulation facility audits will be conducted until this guidance has been fully developed and made publicly available for a minimum of 6 months.

(6) *Applicability to future facility licensees.* Several commenters questioned whether the Commission's regulations regarding simulation facilities were intended to apply to future facility licensees.

It is the Commission's intent that these regulations apply to future facility licensees as well as current facility licensees.

(7) *Test and research reactor operators.* Several test and research reactor operators were concerned that the requirements in the rule changed the licensing process for them. As stated above, the rule does not change the status quo for this category of operator. The definition of "simulation facility" in § 55.4 allows the plant to be used to meet the requirements of § 55.45(b). In addition, specific wording in § 55.45(b) permits test and research reactor facility licensees to be exempted from submitting a plan for the use of a simulation facility that is other than a plant-referenced simulator.

(F) *Licenses*—(1) *Special senior operator licenses.* Many commenters questioned the issuance of special senior licenses. Several argued that current instructor certification requirements were sufficient, others indicated that industry-accredited programs include instructor evaluation, and others cited the Commission's Policy Statement on Training and Qualifications of Nuclear Power Plant Personnel as conflicting with these licenses.

The Commission has deleted the provision for the issuance of special senior operator licenses from the final rule. This action is in recognition of the industry accreditation of training programs, which includes instructor training, qualification and evaluation, and is in keeping with the intent of the Commission Policy Statement on Training and Qualifications of Nuclear Power Plant Personnel. Industry efforts in implementing instructor training, qualification and evaluation programs will be monitored as described by the Policy Statement. Moreover, senior operator licenses limited to fuel handling will continue to be issued as they are currently. However, since industry accreditation includes instructor evaluation, current NRC instructor certification will not continue at facilities with industry accreditation.

A great number of commenters had specific suggestions regarding the requirements for special senior operators. These comments are no longer applicable since the Commission has deleted these licenses from the final rule.

(2) *"Actively performing the functions of an operator or senior operator."* Although only one commenter specifically questioned the definition of "actively performing the [functions] of," a great many commenters questioned this phrase in regard to R.G. 1.8, "Personnel Qualifications and Training for Nuclear Power Plants," as it was published for public comment in conjunction with the proposed rule. From the comments made in response to the regulatory guide and other comments made regarding the provision in the rule under "Requalification," which required that an operator or senior operator be "actively and extensively engaged" as an operator or senior operator, it is clear that many commenters were confused about the degree of participation in plant operations that is required as a condition to maintain an operator's or senior operator's license. To prevent further confusion, the rule has been modified in § 55.4, "Definitions," to provide the following definition:

Actively performing the functions of an operator or senior operator" means 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 by that position.

In addition, several commenters were concerned that the requirements were unclear regarding the return to "active" status following a period during which a licensee has not been "actively performing the functions of an operator or senior operator" for a period of 4 months or longer. Therefore, the following requirements have been added:

If an operator has not performed licensed duties on a minimum of seven 8-hour shifts or five 12-hour shifts per quarter, before resumption of activities authorized by a license issued under these regulations, an authorized representative of the facility licensee shall certify that the qualifications and status of the licensee are current and valid, and that the licensee has completed a minimum of 40 hours of shift functions under the direction of the operator or senior operator, as appropriate, and in the position to which the individual licensee will be assigned. For licenses limited to fuel handling, one supervised shift is sufficient. Certification shall be maintained at the facility.

The revision in the wording of the rule was made so that it is no longer necessary to include the wording "actively and extensively engaged" under requalification. A licensee can now maintain licensed status by successfully completing the facility licensee's NRC-approved requalification program and passing the requalification examinations and operating tests. However, to return to active performance after a period of not participating on shift, the conditions of a license in § 55.53(f) must be met. In this manner, a licensee without current knowledge of the facility would not be able to perform shift duties.

For test and research reactors, the requirements for "actively performing the functions of an operator or senior operator" would be met with a minimum of four hours per calendar quarter. Similarly, under § 55.53(f), a minimum of six hours parallel work would be required to return to active status.

(3) *Notification of the Commission.* Some commenters noted that the Commission had no need to know about the criminal conviction of a licensee. However, § 55.53(g) is intended to cover criminal behavior. NRC is interested in felonious criminal convictions of a licensee. The NRC considers that there may be a relationship between conviction for a felony and job performance.

(G) *Expiration.* Currently, licenses expire after two years. To lessen the paperwork burdens of facility licensees and the NRC, a five year expiration was proposed. Many commenters suggested that the proposed five year expiration and renewal of licenses be adjusted to meet the biennial medical examination requirements. The renewal cycle has been changed and licenses will now expire after 6 years.

(H) *Requalification and renewal*—(1) *Requalification program and*

examination content. A great many commenters were unclear about the relationship of the NRC requalification requirements and performance-based training programs. Moreover, many commenters urged more flexibility in the requalification cycle and more clarity in the program content requirements.

Although the requirement for NRC approval of requalification programs will remain, the list of content areas under §§55.41, 55.43 and 55.45 will be referenced in § 55.59 to clarify the issue of examination and operating test content. In addition, § 55.59(c) content requirements (formerly Appendix A to 10 CFR Part 55) can be met with a performance-based program for a facility as approved by the NRC. In its Final Policy Statement on Training and Qualification of Nuclear Power Plant Personnel, the Commission endorsed industry-accredited programs as performance based. The frequency of the comprehensive requalification written examination has been changed to a maximum of every 2 years and of the requalification operating test to once a year. The requalification program must be conducted for a continuous period not to exceed 24 months. The specific cycle will be approved by the NRC as part of each facility's training program.

(2) *"Actively and extensively engaged."* As explained above, many commenters were concerned with the implementation of the provision for "actively and extensively engaged as an operator or senior operator" as it related to renewal. This provision is deleted in the final rule. This action complements the additions § 55.53 (e) and (f) to "Conditions of Licenses."

(3) *Test and research reactors.* Several commenters were concerned that the requalification requirements for operators at this class of reactor were changed. The requirements in § 55.59(c)(7) continue the requirements of former Appendix A to 10 CFR Part 55 for test and research reactors. No change in requirements is intended.

(4) *NRC administration of requalification examinations.* Some commenters questioned the NRC administration of requalification examinations. The Commission believes that an NRC administered examination for license renewal provides assurance that an operator or senior operator can operate the controls in a safe and competent manner and that a senior operator can direct the activities of other licensed operators in a safe and competent manner. The Commission also believes that NRC administered examinations provide assurance that facility licensee administered requalification programs are successfully maintaining the proficiency and knowledge of licensed personnel. To this end, the rule requires in § 55.57 that each applicant for renewal of a six-year license pass an NRC administered comprehensive requalification written examination and operating test at least once during each six-year license. The NRC will administer these requalification written examinations and operating tests on a random basis so that no operator or senior operator will go longer than six years without being examined by the NRC once a six-year license is issued.

(I) *Modification and revocation of licenses.* Some comments were received about the Commission's authority to modify and revoke licenses. The Commission has the authority to modify, suspend or revoke a license under the Atomic Energy Act. Moreover, inherent in the Commission's authority to modify, suspend, or revoke a license is its ability to place a licensed operator or senior operator under probation, if warranted.

(J) *Editorial.* Many commenters had non-substantive editorial changes to suggest. These comments were reviewed by an NRC technical editor and incorporated as appropriate.

(K) *Conforming amendments.* A conforming amendment, 10 CFR 50.74, requires the facility licensee to notify the Commission of a change in operator status. This amendment complements § 55.53(g).

(L) *Revision to 10 CFR 50.54 and 10 CFR 50.34(b)(8).* Revisions have been made to 10 CFR 50.34(b)(8) and 50.54 to reflect the changes made to 10 CFR Part 55.

Separate Views of Commissioner Asselstine

This rule is a good idea, but it does not go far enough. The Commission should have required all licensees to obtain plant referenced simulators. There are two reasons for this. First, I believe that section 306 of the Nuclear Waste Policy Act of 1982 (Pub. L. 97-425) requires it. Second, plant referenced simulators are an excellent way for reactor operators to practice control manipulations for the plant and to actually see how the plant would respond. This is especially important in training the operators to deal with emergency or other situations when the plant is not in its normal state. It is a much more effective teaching tool for the operators to actually manipulate controls and watch the "plant" respond than to have them merely memorize emergency procedures. Further, a simulator which is referenced to the plant on which the operator will be licensed will be a much more effective training tool than one which is not.

The Commission decided, however, that because there might be special circumstances in some cases which would weigh against requiring that a particular utility purchase a simulator the Commission would not make it a requirement. This kind of case-specific special circumstances is precisely what our exemption procedures are intended to handle. If a licensee had appropriate justification, the Commission could always consider whether to grant an exemption to the regulation. Instead, the Commission chose to water down the regulation and require less.

Separate Views of Commissioner Bernthal

I fully support the Commission's broad objective that operators be reexamined on a regular basis. But I believe the final rule is too inflexible for good regulatory and administrative practice. NRC may indeed need to examine operators every six years; in some cases, perhaps more often. But if a licensee satisfactorily demonstrates its ability to conduct high quality, performance-based examinations in accordance with § 55 57(b)(2)(iii), such licensee performance may well justify extension or relaxation of this requirement. This approach would have been consistent with the Commission's policy of rewarding good licensee performance and focusing attention and resources on deficient performers. The Commission thus could have provided incentive to licensees and flexibility to the NRC examiner staff, and should have thereby focused NRC's limited regulatory resources where they are most urgently needed.

I also continue to believe that the time has come (given the decreased cost and increased sophistication of the technology) for all but a few small powerplants to be required to have plant reference simulators for operator training While there may be some special cases that would qualify for exemption from such a requirement, on the basis of geography and/or plant similarity, licensees could in those circumstances apply for and receive an exemption.

III. Regulatory Analysis

The regulatory analysis describes the values (benefits) and impacts (costs) of implementing the proposed regulations and guidance for operator licensing. The accuracy of these estimates in the regulatory analysis is limited by the lack of extensive data on human performance improvement associated

with an improved licensing process. Where possible, quantitative measures were qualitatively compared to related information from other sources for verification. The full text of the regulatory analysis on these amendments is available for inspection in the NRC Public Document Room, 1717 H Street NW., Washington, DC. Single copies of the analysis may be obtained from Chief, Operator Licensing Branch, telephone: (301) 492-4868.

IV. Backfit Analysis

The Commission has determined that these rules are in response to section 306 of the Nuclear Waste Policy Act of 1982 and, therefore, are exempt from the backfit rule 10 CFR 50 109 (50 FR 38097).

V. Regulatory Guides

Three regulatory guides were published in draft form for public comment in conjunction with the proposed rule. These guides were intended to provide guidance on acceptable methods of implementing the revisions to the regulations. As a result of public comment and additional staff review, these three guides are being issued in final form:

(1) R G. 1.134, Revision 2, "Medical Evaluation of Licensed Personnel for Nuclear Power Plants."

(2) R.G. 1.149, Revision 2, "Nuclear Power Plant Simulation Facilities for Use in Operator License Examinations."

(3) R.G. 1.8, Revision 2, "Qualification and Training of Personnel for Nuclear Power Plants."

Copies of these guides may be purchased from the Government Printing Office at the current GPO price. Information on current GPO prices may be obtained by contacting the Superintendent of Documents, U.S. Government Printing Office, Post Office Box 37082, Washington, DC 20013-7082, telephone (202) 275-2060 or (202) 275-2171.

VI. Environmental Impact: Categorical Exclusion

The NRC has determined that this regulation is the type of action described in categorical exclusion 10 CFR 51.22(c)(1). Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for this regulation.

VII. Paperwork Reduction Act Statement

This final rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). These paperwork requirements were approved by the Office of Management and Budget approval number 3150-0018.

VIII. Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission hereby certifies that this rule will not have a significant economic impact on a substantial number of small entities. The conforming amendment to 10 CFR Part 50 and the revision of 10 CFR Part 55 affect primarily the companies that own and operate light-water nuclear power reactors and the vendors of those reactors. They also affect individuals licensed as operators at these companies. Neither the companies that own and operate reactors nor these individuals fall within the scope of the definition of "small entity" set forth in section 501(b) of the Regulatory Flexibility Act, NRC's Size Standards adopted December 9, 1985 (50 FR 50241), or the Small Business Size Standards set out in regulations issued by the Small Business Administration in 13 CFR Part 121.

List of Subjects

10 CFR Part 50

Antitrust, Classified information, Fire prevention, Incorporation by reference, Intergovernmental relations, Nuclear power plants and reactors, Penalty, Radiation protection, Reactor siting criteria, Reporting and recordkeeping requirements.

10 CFR Part 55

Manpower training programs, Nuclear power plants and reactors, Penalty, Reporting and recordkeeping requirements.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, the Nuclear Waste Policy Act of 1982, and 5 U.S.C. 553, the NRC is adopting the following amendments to 10 CFR Part 55 and 10 CFR Part 50.

1. 10 CFR Part 55 is revised to read as follows:

PART 55—OPERATORS' LICENSES

Subpart A—General Provisions

Sec
55.1 Purpose.
55.2 Scope.
55.3 License requirements.
55.4 Definitions.
55.5 Communications.
55 6 Interpretations
55 7 Additional requirements.
55.8 Information collection requirements: OMB approval.

Subpart B—Exemptions

55 11 Specific exemptions.
55.13 General exemptions.

Subpart C—Medical Requirements

55.21 Medical examination.
55.23 Certification.
55.25 Incapacitation because of disability or illness.
55.27 Documentation.

Subpart D—Applications

55.31 How to apply.
55.33 Disposition of an initial application.
55.35 Re-applications.

Subpart E—Written Examinations and Operating Tests

55 41 Written examination: Operators.
55.43 Written examination: Senior operators.
55.45 Operating tests.
55.47 Waiver of examination and test requirements.
55.49 Integrity of examinations and tests.

Subpart F—Licenses

55.51 Issuance of licenses.
55.53 Conditions of licenses.
55.55 Expiration.
55.57 Renewal of licenses.
55.59 Requalification.

Subpart G—Modification and Revocation of Licenses

55.61 Modification and revocation of licenses.

Subpart H—Enforcement

55.71 Violations.

Authority: Secs. 107, 161, 182, 68 Stat. 939, 948, 953 as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2137, 2201, 2232, 2282); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842).

Sections 55.41, 55.43, 55.45 and 55.59 also issued under sec. 306, Pub. L. 97-425, 96 Stat. 2262 (42 U.S C. 10226). Section 55.61 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S C 2236, 2237).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273) §§ 55.3, 55.21, 55.49 and 55 53 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 55.23, 55.25 and 55.53(f) are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

Subpart A—General Provisions

§ 55.1 Purpose.

The regulations in this part:

(a) Establish procedures and criteria for the issuance of licenses to operators and senior operators of utilization facilities licensed pursuant to the Atomic Energy Act of 1954, as amended, or section 202 of the Energy Reorganization Act of 1974, as amended, and Part 50 of this chapter,

(b) Provide for the terms and conditions upon which the Commission will issue or modify these licenses, and

(c) Provide for the terms and conditions to maintain and renew these licenses.

§ 55.2 Scope.

The regulations in this part apply to—

(a) Any individual who manipulates the controls of any utilization facility licensed pursuant to Part 50 of this chapter, and

(b) Any individual designated by a facility licensee to be responsible for directing any licensed activity of a licensed operator.

§ 55.3 License requirements.

A person must be authorized by a license issued by the Commission to perform the function of an operator or a senior operator as defined in this part.

§ 55.4 Definitions.

As used in this part:

"Act" means the Atomic Energy Act of 1954, including any amendments to the Act.

"Actively performing the functions of an operator or senior operator" means 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 by that position.

"Commission" means the Nuclear Regulatory Commission or its duly authorized representatives.

"Controls" when used with respect to a nuclear reactor means apparatus and mechanisms the manipulation of which directly affects the reactivity or power level of the reactor.

"Facility" means any utilization facility as defined in Part 50 of this chapter. In cases for which a license is issued for operation of two or more facilities, "facility" means all facilities identified in the license.

"Facility licensee" means an applicant for or holder of a license for a facility.

"Licensee" means an individual licensed operator or senior operator.

"Operator" means any individual licensed under this part to manipulate a control of a facility.

"Performance testing" means testing conducted to verify a simulation facility's performance as compared to actual or predicted reference plant performance.

"Physician" means an individual licensed by a State or territory of the United States, the District of Columbia or the Commonwealth of Puerto Rico to dispense drugs in the practice of medicine.

"Plant-referenced simulator" means a simulator modeling the systems of the reference plant with which the operator interfaces in the control room, including operating consoles, and which permits use of the reference plant's procedures. A plant-referenced simulator demonstrates expected plant response to operator input, and to normal, transient, and accident conditions to which the simulator has been designed to respond.

"Reference plant" means the specific nuclear power plant from which a simulation facility's control room configuration, system control arrangement, and design data are derived.

"Senior operator" means any individual licensed under this part to manipulate the controls of a facility and to direct the licensed activities of licensed operators.

"Simulation facility" means one or more of the following components, alone or in combination, used for the partial conduct of operating tests for operators, senior operators, and candidates:

(1) The plant,

(2) A plant-referenced simulator,

(3) Another simulation device.

"Systems approach to training" means a training program that includes the following five elements:

(1) Systematic analysis of the jobs to be performed.

(2) Learning objectives derived from the analysis which describe desired performance after training.

(3) Training design and implementation based on the learning objectives.

(4) Evaluation of trainee mastery of the objectives during training.

(5) Evaluation and revision of the training based on the performance of trained personnel in the job setting.

"United States," when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

§ 55.5 Communications.

(a) Except as provided under a regional licensing program identified in paragraph (b) of this section, an applicant or licensee or facility licensee shall submit any communication or report concerning the regulations in this part and shall submit any application filed under these regulations to the Commission as follows:

(1) By mail addressed to—Director of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, or

(2) By delivery in person to the Commission offices at—(i) 1717 H Street NW., Washington, DC or (ii) 7920 Norfolk Avenue, Bethesda, Maryland.

(b)(1) The Director of Nuclear Reactor Regulation has delegated to the Regional Administrators of Regions I, II, III, IV, and V authority and responsibility pursuant to the regulations in this part for the issuance and renewal of licenses for operators and senior operators of nuclear reactors licensed under 10 CFR Part 50 and located in these regions.

(2) Any application for a license or license renewal filed under the regulations in this part involving a nuclear reactor licensed under 10 CFR Part 50 and any related inquiry, communication, information, or report must be submitted by mail or in person to the Regional Administrator. The Regional Administrator or the Administrator's designee will transmit to the Director of Nuclear Reactor Regulation any matter that is not within the scope of the Regional Administrator's delegated authority.

(i) If the nuclear reactor is located in Region I, submission must be made to the Regional Administrator, Region I, U.S. Nuclear Regulatory Commission, 631 Park Avenue, King of Prussia, Pennsylvania 19406.

(ii) If the nuclear reactor is located in Region II, submission must be made to the Regional Administrator, Region II, U.S. Nuclear Regulatory Commission, 101 Marietta Street, Suite 2900, Atlanta, Georgia 30303.

(iii) If the nuclear reactor is located in Region III, submission must be made to the Regional Administrator, Region III, U.S. Nuclear Regulatory Commission, 799 Roosevelt Road, Glen Ellyn, Illinois 60137.

(iv) If the nuclear reactor is located in Region IV, submission must be made to the Regional Administrator, Region IV, U.S. Nuclear Regulatory Commission, 611 Ryan Plaza Drive, Suite 1000, Arlington, Texas 76011.

(v) If the nuclear reactor is located in Region V, submission must be made to the Regional Administrator, Region V, U.S. Nuclear Regulatory Commission, 1450 Maria Lane, Suite 210, Walnut Creek, California 94596.

§ 55.6 Interpretations.

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 55.7 Additional requirements.

The Commission may, by rule, regulation, or order, impose upon any licensee such requirements, in addition to those established in the regulations in this part, as it deems appropriate or necessary to protect health and to minimize danger to life or property.

§ 55.8 Information collection requirements: OMB approval.

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). OMB has approved the information collection requirements contained in this part under control number 3150–0018.

(b) The approved information collection requirements contained in this part appear in §§ 55.45, 55.53, and § 55.59.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In §§ 55.23, 55.25, 55.27, 55.31, Form NRC–396 is approved under control number 3150–0024.

(2) In §§ 55.31, 55.35, 55.47, and 55.57, Form NRC–398 is approved under control number 3150–0090.

(3) In § 55.45, Form NRC–474 is approved under control number 3150–0138.

Subpart B—Exemptions

§ 55.11 Specific exemptions.

The Commission may, upon application by an interested person, or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property and are otherwise in the public interest.

§ 55.13 General exemptions.

The regulations in this part do not require a license for an individual who—

(a) Under the direction and in the presence of a licensed operator or senior operator, manipulates the controls of—

(1) A research or training reactor as part of the individual's training as a student, or

(2) A facility as a part of the individual's training in a facility licensee's training program as approved by the Commission to qualify for an operator license under this part.

(b) Under the direction and in the presence of a licensed senior operator, manipulates the controls of a facility to load or unload the fuel into, out of, or within the reactor vessel.

Subpart C—Medical Requirements

§ 55.21 Medical examination.

An applicant for a license shall have a medical examination by a physician. A licensee shall have a medical examination by a physician every two years. The physician shall determine that the applicant or licensee meets the requirements of § 55.33(a)(1).

§ 55.23 Certification.

To certify the medical fitness of the applicant, an authorized representative of the facility licensee shall complete and sign Form NRC–396, "Certification of Medical Examination by Facility Licensee," available from Publication Services Section, Document Management Branch, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(a) Form NRC–396 must certify that a physician has conducted the medical examination of the applicant as required in § 55.21.

(b) When the certification requests a conditional license based on medical evidence, the medical evidence must be submitted on NRC Form 396 to the Commission and the Commission then makes a determination in accordance with § 55.33.

§ 55.25 Incapacitation because of disability or illness.

If, during the term of the license, the licensee develops a physical or mental condition that causes the licensee to fail to meet the requirements of § 55.21 of this part, the facility licensee shall notify the Commission within 30 days of learning of the diagnosis. For conditions for which a conditional license (as describing in § 55.33(b) of this part) is requested, the facility licensee shall provide medical certification on Form NRC 396 to the Commission (as described in § 55.23 of this part).

§ 55.27 Documentation.

The facility licensee shall document and maintain the results of medical qualifications data, test results, and each operator's or senior operator's medical history for the current license period and provide the documentation to the Commission upon request. The facility licensee shall retain this documentation while an individual performs the functions of an operator or senior operator.

Subpart D—Applications

§ 55.31 How to apply.

(a) The applicant shall:

(1) Complete Form NRC–398, "Personal Qualification Statement—Licensee," available from Publication Services Section, Document Management Branch, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, DC 20555;

(2) File an original and two copies of Form NRC–398, together with the information required in paragraphs (a)(3), (4), (5) and (6) of this section, with the appropriate Regional Administrator;

(3) Submit a written request from an authorized representative of the facility licensee by which the applicant will be employed that the written examination and operating test be administered to the applicant;

(4) Provide evidence that the applicant has successfully completed the facility licensee's requirements to be licensed as an operator or senior operator and of the facility licensee's need for an operator or a senior operator to perform assigned duties. An authorized representative of the facility licensee shall certify this evidence on Form NRC–398. This certification must include details of the applicant's qualifications, and details on courses of instruction administered by the facility licensee, and describe the nature of the training received at the facility, and the startup and shutdown experience received. In lieu of these details, the Commission may accept certification that the applicant has successfully completed a Commission-approved training program that is based on a systems approach to training and that uses a simulation facility acceptable to the Commission under § 55.45(b) of this part;

(5) Provide evidence that the applicant, as a trainee, has successfully manipulated the controls of the facility for which a license is sought. At a minimum, five significant control manipulations must be performed which affect reactivity or power level. For a facility that has not completed preoperational testing and initial startup test program as described in its Final Safety Analysis Report, as amended and approved by the Commission, 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 acceptable to the Commission under § 55.45(b) of this part. For a facility which has (i) completed preoperational testing as described in its Final Safety Analysis Report, as amended and approved by the Commission, and (ii) is in an extended shutdown which precludes manipulation of the control of the facility in the control room, the Commission may process the

application and may administer the written examination and operating test required by §§ 55.41 or 55.43 and 55.45 of this part, but may not issue the license until the required evidence of control manipulations is supplied. For licensed operators applying for a senior operator license, certification that the operator has successfully operated the controls of the facility as a licensed operator shall be accepted; and

(6) Provide certification by the facility licensee of medical condition and general health on Form NRC–396, to comply with §§ 55.21, 55.23 and 55.33(a)(1).

(b) The Commission may at any time after the application has been filed, and before the license has expired, require futher information under oath or affirmation in order to enable it to determine whether to grant or deny the application or whether to revoke, modify, or suspend the license.

(c) An applicant whose application has been denied because of a medical condition or general health may submit a further medical report at any time as a supplement to the application.

(d) Each application and statement must contain complete and accurate disclosure as to all matters required to be disclosed. The applicant shall sign statements required by paragraphs (a)(1) and (2) of this section.

§ 55.33 Disposition of an initial application.

(a) *Requirements for the approval of an initial application.* The Commission will approve an initial application for a license pursuant to the regulations in this part, if it finds that—

(1) *Health.* The applicants medical condition and general health will not adversely affect the performance of assigned operator job duties or cause operational errors endangering public health and safety. The Commission will base its finding upon the certification by the facility licensee as detailed in § 55.23.

(2) *Written examination and operating test.* The applicant has passed the requisite written examination and operating test in accordance with §§ 55.41 and 55.45 or 55.43 and 55.45. These examinations and tests determine whether the applicant for an operator's license has learned to operate a facility competently and safely, and additionally, in the case of a senior operator, whether the applicant has learned to direct the licensed activities of licensed operators competently and safely.

(b) *Conditional license.* If an applicant's general medical condition does not meet the minimum standards under § 55.33(a)(1) of this part, the Commission may approve the application and include conditions in the license to accommodate the medical defect. The Commission will consider the recommendations and supporting evidence of the facility licensee and of the examining physician (provided on Form NRC–396) in arriving at its decision.

§ 55.35 Re-applications.

(a) An applicant whose application for a license has been denied because of failure to pass the written examination or operating test, or both, may file a new application two months after the date of denial. The application must be submitted on Form NRC–398 and include a statement signed by an authorized representative of the facility licensee by whom the applicant will be employed that states in detail the extent of the applicant's additional training since the denial and certifies that the applicant is ready for re-examination. An applicant may filed a third application six months after the date of denial of the second application, and may file further successive applications two years after the date of denial of each prior application. The applicant shall submit each successive application on Form NRC–398 and include a statement of additional training.

(b) An applicant who has passed either the written examination or operating test and failed the other may request in a new application on Form NRC–398 to be excused from re-examination on the portions of the examination or test which the applicant has passed. The Commission may in its discretion grant the request, if it determines that sufficient justification is presented.

Subpart E—Written Examinations and Operating Tests

§ 55.41 Written examination: Operators.

(a) *Content.* The written examination for an operator will contain a representative selection of questions on the knowledge, skills, and abilities needed to perform licensed operator duties. The knowledge, skills, and abilities will be identified, in part, from learning objectives derived from a systematic analysis of licensed operator duties performed by each facility licensee and contained in its training program and from information in the Final Safety Analysis Report, system description manuals and operating procedures, facility license and license amendments, Licensee Event Reports, and other materials requested from the facility licensee by the Commission.

(b) The written examination for an operator for a facility will include a representative sample from among the following 14 items, to the extent applicable to the facility.

(1) Fundamentals of reactor theory, including fission process, neutron multiplication, source effects, control rod effects, criticality indications, reactivity coefficients, and poison effects.

(2) General design features of the core, including core structure, fuel elements, control rods, core instrumentation, and coolant flow.

(3) Mechanical components and design features of the reactor primary system.

(4) Secondary coolant and auxiliary systems that affect the facility.

(5) Facility operating characteristics during steady state and transient conditions, including coolant chemistry, causes and effects of temperature, pressure and reactivity changes, effects of load changes, and operating limitations and reasons for these operating characteristics.

(6) Design, components, and functions of reactivity control mechanisms and instrumentation.

(7) Design, components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features.

(8) Components, capacity, and functions of emergency systems.

(9) Shielding, isolation, and containment design features, including access limitations.

(10) Administrative, normal, abnormal, and emergency operating procedures for the facility.

(11) Purpose and operation of radiation monitoring systems, including alarms and survey equipment.

(12) Radiological safety principles and procedures.

(13) Procedures and equipment available for handling and disposal of radioactive materials and effluents.

(14) Principles of heat transfer thermodynamics and fluid mechanics.

§ 55.43 Written examination: Senior operators.

(a) *Content.* The written examination for a senior operator will contain a representative selection of questions on the knowledge, skills, and abilities needed to perform licensed senior operator duties. The knowledge, skills, and abilities will be identified, in part, from learning objectives derived from a systematic analysis of licensed senior operator duties performed by each facility licensee and contained in its

training program and from information in the Final Safety Analysis Report, sytem description manuals and operating procedures, facility license and license amendments, Licensee Event Reports, and other materials requested from the facility licensee by the Commission.

(b) The written examination for a senior operator for a facility will include a representative sample from among the following seven items and the 14 items specified in § 55.41 of this part, to the extent applicable to the facility:

(1) Conditions and limitations in the facility license.

(2) Facility operating limitations in the technical specifications and their bases.

(3) Facility licensee procedures required to obtain authority for design and operating changes in the facility.

(4) Radiation hazards that may arise during normal and abnormal situations, including maintenance activities and various contamination conditions.

(5) Assessment of facility conditions and selection of appropriate procedures during normal, abnormal, and emergency situations.

(6) Procedures and limitations involved in initial core loading, alterations in core configuration, control rod programming, and determination of various internal and external effects on core reactivity.

(7) Fuel handling facilities and procedures.

§ 55.45 Operating tests.

(a) *Content.* The operating tests administered to applicants for operator and senior operator licenses in accordance with paragraph (b)(1) of this section are generally similar in scope. The content will be identified, in part, from learning objectives derived from a systematic analysis of licensed operator or senior operator duties performed by each facility licensee and contained in its training program and from information in the Final Safety Analysis Report, system description manuals and operating procedures, facility license and license amendments, Licensee Event Reports, and other materials requested from the facility licensee by the Commission. The operating test, to the extent applicable, requires the applicant to demonstrate an understanding of and the ability to perform the actions necessary to accomplish a representative sample from among the following 13 items.

(1) Perform pre-startup procedures for the facility, including operating of those controls associated with plant equipment that could affect reactivity.

(2) Manipulate the console controls as required to operate the facility between shutdown and designated power levels.

(3) Identify annunciators and condition-indicating signals and perform appropriate remedial actions where appropriate.

(4) Identify the instrumentation systems and the significance of facility instrument readings.

(5) Observe and safely control the operating behavior characteristics of the facility.

(6) Perform control manipulations required to obtain desired operating results during normal, abnormal, and emergency situations.

(7) Safely operate the facility's head removal systems, including primary coolant, emergency coolant, and decay heat removal systems, and identify the relations of the proper operation of these systems to the operation of the facility.

(8) Safely operate the facility's auxiliary and emergency systems, including operation of those controls associated with plant equipment that could affect reactivity or the release of radioactive materials to the environment.

(9) Demonstrate or describe the use and function of the facility's radiation monitoring systems, inlcuding fixed radiation monitors and alarms, portable survey instruments, and personnel monitoring equipment.

(10) Demonstrate knowledge of significant radiation hazards, including permissible levels in excess of those authorized, and ability to perform other procedures to reduce excessive levels of radiation and to guard against personnel exposure.

(11) Demonstrate knowledge of the emergency plan for the facility, including, as appropriate, the operator's or senior operator's responsibility to decide whether the plan should be executed and the duties under the plan assigned.

(12) Demonstrate the knowledge and ability as appropriate to the assigned position to assume the responsibilities associated with the safe operation of the facility.

(13) Demonstrate the applicant's ability to function within the control room team as appropriate to the assigned position, in such a way that the facility licensee's procedures are adhered to and that the limitations in its license and amendments are not violated.

(b) *Implementation*—(1) *Administration.* The operating test will be administered in a plant walkthrough and in either—

(i) A simulation facility which the Commission has approved for use after application has been made by the facility licensee, or

(ii) A simulation facility consisting solely of a plant-referenced simultator which has been certified to the Commission by the facility licensee.

(2) *Schedule for facility licensees.* (i) Within one year after the effective date of this part, each facility licensee which proposes to use a simulation facility pursuant to paragraph (b)(1)(i) of this section, except test and research reactors, shall submit a plan by which its simulation facility will be developed and by which an application will be submitted for its use.

(ii) Those facility licensees which propose to conform with paragraph (b)(1)(i) of this section, not later than 42 months after the effective date of this rule, shall submit an application for use of this simulation facility to the Commission, in accordance with paragraph (b)(4)(i) of this section.

(iii) Those facility licensees which propose to conform with paragraph (b)(1)(ii) of this section, not later than 46 months after the effective date of this rule, shall submit a certification for use of this simulation facility to the Commission on Form NRC–474, "Simulation Facility Certification," available from Publication Services Section, Document Management Branch, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, DC 20555, in accordance with paragraph (b)(5)(i) of this section.

(iv) The simulation facility portion of the operating test will not be administered on other than a certified or an approved simulation facility after May 26, 1991.

(3) *Schedule for facility applicants.* (i) For facility licensee applications after the effective date of this rule, except test and research reactors, the applicant shall submit a plan which identifies whether its simulation facility will conform with paragraph (b)(1)(i) or (b)(1)(ii) of this section at the time of application.

(ii) Those applicants which propose to conform with paragraph (b)(1)(i) of this section, not later than 180 days before the date when the applicant proposes that the Commission conduct operating tests, shall submit an application for use of its simulation facility to the NRC, in accordance with paragraph (b)(4)(i) of this section.

(iii) Those applicants which propose to conform with paragraph (b)(1)(ii) of this section, not later than 60 days before the date when the applicant

proposes that NRC conduct operating tests, shall submit a certification for use of its simulation facility to the Commission on Form NRC-474, in accordance with paragraph (b)(5)(i) of this section.

(4) *Application for and approval of simulation facilities.* Those facility licensees which propose, in accordance with paragraph (b)(1)(i) of this section, to use a simulation facility that is other than solely a plant-referenced simulator as defined in § 55.4 shall—

(i) 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. This application must include:

(A) A statement that the simulation facility meets the plan submitted to the Commission pursuant to paragraph (b)(2)(i) or (b)(3)(i) of this section, as applicable;

(B) A description of the components of the simulation facility which are intended to be used for each part of the operating test; and

(C) A description of the performance tests as part of the application, and the results of such tests.

(ii) The Commission will approve a simulation facility if it finds that the simulation facility and its proposed use are suitable for the conduct of operating tests for the facility licensee's reference plant, in accordance with paragraph (a) of this section.

(iii) Submit, every four years on the anniversary of the application, a report to the Commission which identifies any uncorrected performance test failures, and submit a schedule for correction of these performance test failures, if any.

(iv) Retain the results of the performance test conducted until four years after the submittal of the application under paragraph (b)(4)(i), each report pursuant to paragraph (b)(4)(iii), or any reapplication under paragraph (b)(4)(iv) of this section, as appropriate.

(v) If the Commission determines, based upon the results of performance testing, that an approved simulation facility does not meet the requirements of this part, the simulation facility may not be used to conduct operating tests.

(vi) If the Commission determines, pursuant to paragraph (b)(4)(v) of this section, that an approved simulation facility does not meet the requirements of this part, the facility licensee may again submit an application for approval. This application must include a description of corrective actions taken, including results of completed performance testing as required for approval.

(vii) Any application or report submitted pursuant to paragraphs (b)(4)(i), (b)(4)(iii) and (b)(4)(vi) of this section must include a description of the performance testing completed for the simulation facility, and must include a description of performance tests, if different, to be conducted on the simulation facility during the subsequent four-year period, and a schedule for the conduct of approximately 25 percent of the performance tests per year for the subsequent four years.

(5) *Certification of simulation facilities*—Those facility licensees which propose, in accordance with paragraph (b)(1)(ii) of this section, to use a simulation facility consisting solely of a plant-referenced simulator as defined in § 55.4, shall—

(i) Submit a certification to the Commission that the simulation facility meets the Commission's regulations. The facility licensee shall provide this certification on Form NRC-474 in accordance with the schedule in paragraph (b)(2)(iii) or (b)(3)(iii) of this section, as applicable.

(ii) Submit, every four years on the anniversary of the certification, a report to the Commission which identifies any uncorrected performance test failures, and submit a schedule for correction of such performance test failures, if any.

(iii) Retain the results of the performance test conducted until four years after the submittal of certification under paragraph (b)(5)(i), each report pursuant to paragraph (b)(5)(ii), or recertification under paragraph (b)(5)(v) of this section, as applicable.

(iv) If the Commission determines, based upon the results of performance testing, that a certified simulation facility does not meet the requirements of this part, the simulation facility may not be used to conduct operating tests.

(v) If the Commission determines, pursuant to paragraph (b)(5)(iv) of this section, that a certified simulation facility does not meet the requirements of this part, the facility licensee may submit a recertification to the Commission on Form NRC-474. This recertification must include a description of corrective actions taken, including results of completed performance testing as required for recertification.

(vi) Any certification report, or recertification submitted pursuant to paragraph (b)(5)(i), (b)(5)(ii) or (b)(5)(v) of this section must include a description of performance testing completed for the simulation facility, and must include a description of the performance tests, if different, to be conducted on the simulation facility during the subsequent four-year period, and a schedule for the conduct of approximately 25 percent of the performance tests per year for the subsequent four years.

§ 55.47 Waiver of examination and test requirements.

(a) On application, the Commission may waive any or all of the requirements for a written examination and operating test, if it finds that the applicant—

(1) Has had extensive actual operating experience at a comparable facility, as determined by the Commission, within two years before the date of application;

(2) Has discharged his or her responsibilities competently and safely and is capable of continuing to do so; and

(3) Has learned the operating procedures for and is qualified to operate competently and safely the facility designated in the application.

(b) The Commission may accept as proof of the applicant's past performance a certification of an authorized representative of the facility licensee or of a holder of an authorization by which the applicant was previously employed. The certification must contain a description of the applicant's operating experience, including an approximate number of hours the applicant operated the controls of the facility, the duties performed, and the extent of the applicant's responsibility.

(c) The Commission may accept as proof of the applicant's current qualifications a certification of an authorized representative of the facility licensee or of a holder of an authorization where the applicant's services will be utilized.

§ 55.49 Integrity of examinations and tests.

Applicants, licensees, and facility licensees shall not engage in any activity that compromises the integrity of any application, test, or examination required by this part.

Subpart F—Licenses

§ 55.51 Issuance of licenses.

Operator and senior operator licenses. If the Commission determines that an applicant for an operator license or a senior operator license meets the requirements of the Act and its regulations, it will issue a license in the form and containing any conditions and limitations it considers appropriate and necessary

§ 55.53 Conditions of licenses.

Each license contains and is subject to the following conditions whether stated in the license or not:

(a) Neither the license nor any right under the license may be assigned or otherwise transferred.

(b) The license is limited to the facility for which it is issued.

(c) The license is limited to those controls of the facility specified in the license.

(d) The license is subject to, and the licensee shall observe, all applicable rules, regulations, and orders of the Commission.

(e) If a licensee has not been actively performing the functions of an operator or senior operator, the licensee may not resume activities authorized by a license issued under this part except as permitted by paragraph (f) of this section. To maintain active status, the licensee shall actively perform the functions of an operator or senior operator on a minimum of seven 8-hour or five 12-hour shifts per calendar quarter. For test and research reactors, the licensee shall actively perform the functions of an operator or senior operator for a minimum of four hours per calendar quarter.

(f) If paragraph (e) of this section is not met, before resumption of functions authorized by a license issued under this part, an authorized representative of the facility licensee shall certify the following:

(1) That the qualifications and status of the licensee are current and valid; and

(2) That the licensee has completed a minimum of 40 hours of shift functions under the direction of an operator or senior operator as appropriate and in the position to which the individual will be assigned. The 40 hours must have included a complete tour of the plant and all required shift turnover procedures. For senior operators limited to fuel handling under paragraph (c) of this section, one shift must have been completed. For test and research reactors, a minimum of six hours must have been completed.

(g) The licensee shall notify the Commission within 30 days about a conviction for a felony.

(h) The licensee shall complete a requalification program as described by § 55.59.

(i) The licensee shall have a biennial medical examination.

(j) The licensee shall comply with any other conditions that the Commission may impose to protect health or to minimize danger to life or property.

§ 55.55 Expiration.

(a) Each operator license and senior operator license expires six years after the date of issuance, upon termination of employment with the facility licensee, or upon determination by the facility licensee that the licensed individual no longer needs to maintain a license.

(b) If a licensee files an application for renewal or an upgrade of an existing license on Form NRC–398 at least 30 days before the expiration of the existing license, it does not expire until disposition of the application for renewal or for an upgraded license has been finally determined by the Commission. Filing by mail or telegram will be deemed to be complete at the time the application is deposited in the mail or with a telegraph company.

§ 55.57 Renewal of licenses.

(a) The applicant for renewal of a license shall—

(1) Complete and sign Form NRC–398 and include the number of the license for which renewal is sought.

(2) File an original and two copies of Form NRC–398 with the appropriate Regional Administrator specified in § 55.5(b).

(3) Provide written evidence of the applicant's experience under the existing license and the approximate number of hours that the licensee has operated the facility.

(4) Provide a statement by an authorized representative of the facility licensee that during the effective term of the current license the applicant has satisfactorily completed the requalification program for the facility for which operator or senior operator license renewal is sought.

(5) Provide evidence that the applicant has discharged the license responsibilities competently and safely. The Commission may accept as evidence of the applicant's having met this requirement a certificate of an authorized representative of the facility licensee or holder of an authorization by which the licensee has been employed.

(6) Provide certification by the facility licensee of medical condition and general health on Form NRC–396, to comply with §§ 55.21, 55.23 and 55.27.

(b) The license will be renewed if the Commission finds that—

(1) The medical condition and the general health of the licensee continue to be such as not to cause operational errors that endanger public health and safety. The Commission will base this finding upon the certification by the facility licensee as described in § 55.23.

(2) The licensee—

(i) Is capable of continuing to competently and safely assume licensed duties;

(ii) Has successfully completed a requalification program that has been approved by the Commission as required by § 55.59; and

(iii) Has passed the requalification examinations and annual operating tests as required by § 55.59.

(iv) Has passed a comprehensive requalification written examination and operating test administered by the Commission during the term of a six-year license.

(3) There is a continued need for a licensee to operate or for a senior operator to direct operators at the facility designated in the application.

(4) The past performance of the licensee has been satisfactory to the Commission. In making its finding, the Commission will include in its evaluation information such as notices of violations or letters of reprimand in the licensee's docket.

§ 55.59 Requalification.

(a) *Requalification requirements.* Each licensee shall—

(1) Successfully complete a requalification program developed by the facility licensee that has been approved by the Commission. This program shall be conducted for a continuous period not to exceed 24 months in duration.

(2) Pass a comprehensive requalification written examination and an annual operating test.

(i) the written examination will sample the items specified in §§ 55.41 and 55.43 of this part, to the extent applicable to the facility, the licensee, and any limitation of the license under § 55.53(c) of this part.

(ii) The operating test will require the operator or senior operator to demonstrate an understanding of and the ability to perform the actions necessary to accomplish a comprehensive sample of items specified in § 55.45(a) (2) through (13) inclusive to the extent applicable to the facility.

(iii) In lieu of the Commission accepting a certification by the facility licensee that the licensee has passed written examinations and operating tests administered by the facility licensee within its Commission-approved program developed by using a systems approach to training under paragraph (c) of this section, the Commission may administer a comprehensive requalification written examination and an annual operating test.

(b) *Additional training.* If the requirements of paragraphs (a) (1) and (2) of this section are not met, the Commission may require the licensee to complete additional training and to submit evidence to the Commission of successful completion of this training before returning to licensed duties.

(c) *Requalification program requirements.* A facility licensee shall have a requalification program reviewed and approved by the Commission. The requalification program must meet the requirements of paragraphs (c) (1) through (7) of this section. In lieu of paragraphs (c) (2), (3), and (4) of this section, the Commission may approve a program developed by using a systems approach to training.

(1) *Schedule.* The requalification program must be conducted for a continuous period not to exceed two years, and upon conclusion must be promptly followed, pursuant to a continuous schedule, by successive requalification programs.

(2) *Lectures.* The requalification program must include preplanned lectures on a regular and continuing basis throughout the license period in those areas where operator and senior operator written examinations and facility operating experience indicate that emphasis in scope and depth of coverage is needed in the following subjects:

(i) Theory and principles of operation.
(ii) General and specific plant operating characteristics.
(iii) Plant instrumentation and control systems.
(iv) Plant protection systems.
(v) Engineered safety systems.
(vi) Normal, abnormal, and emergency operating procedures.
(vii) Radiation control and safety.
(viii) Technical specifications.
(ix) Applicable portions of Title 10, Chapter I, *Code of Federal Regulations.*

(3) *On-the-job training.* The requalification program must include on-the-job training so that—

(i) Each licensed operator of a utilization facility manipulates the plant controls and each licensed senior operator either manipulates the controls or directs the activities of individuals during plant control manipulations during the term of the licensed operator's or senior operator's license. For reactor operators and senior operators, these manipulations must consist of the following control manipulations and plant evolutions if they are applicable to the plant design. Items described in paragraphs (c)(3)(i) (A) through (L) of this section must be performed annually; all other items must be performed on a two-year cycle. However, the requalification programs must contain a commitment that each individual shall perform or participate in a combination of reactivity control manipulations based on the availability of plant equipment and systems. Those control manipulations which are not performed at the plant may be performed on a simulator. The use of the Technical Specifications should be maximized during the simulator control manipulations. Senior operator licensees are credited with these activities if they direct control manipulations as they are performed.

(A) Plant or reactor startups to include a range that reactivity feedback from nuclear heat addition is noticeable and heatup rate is established.

(B) Plant shutdown.

(C) Manual control of steam generators or feedwater or both during startup and shutdown.

(D) Boration or dilution during power operation.

(E) Significant (>10 percent) power changes in manual rod control or recirculation flow.

(F) Reactor power change of 10 percent or greater where load change is performed with load limit control or where flux, temperature, or speed control is on manual (for HTGR).

(G) Loss of coolant, including—

(1) Significant PWR steam generator leaks

(2) Inside and outside primary containment

(3) Large and small, including lead-rate determination

(4) Saturated reactor coolant response (PWR).

(H) Loss of instrument air (if simulated plant specific).

(I) Loss of electrical power (or degraded power sources).

(J) Loss of core coolant flow/natural circulation.

(K) Loss of feedwater (normal and emergency).

(L) Loss of service water, if required for safety.

(M) Loss of shutdown cooling.

(N) Loss of component cooling system or cooling to an individual component.

(O) Loss of normal feedwater or normal feedwater system failure.

(P) Loss of condenser vacuum.

(Q) Loss of protective system channel.

(R) Mispositioned control rod or rods (or rod drops).

(S) Inability to drive control rods.

(T) Conditions requiring use of emergency boration or standby liquid control system.

(U) Fuel cladding failure or high activity in reactor coolant or offgas.

(V) Turbine or generator trip.

(W) Malfunction of an automatic control system that affects reactivity.

(X) Malfunction of reactor coolant pressure/volume control system.

(Y) Reactor trip.

(Z) Main steam line break (inside or outside containment).

(AA) A nuclear instrumentation failure.

(ii) Each licensed operator and senior operator has demonstrated satisfactory understanding of the operation of the apparatus and mechanisms associated with the control manipulations in paragraph (c)(3)(i) of this section, and knows the operating procedures in each area for which the operator or senior operator is licensed.

(iii) Each licensed operator and senior operator is cognizant of facility design changes, procedure changes, and facility license changes.

(iv) Each licensed operator and senior operator reviews the contents of all abnormal and emergency procedures on a regularly scheduled basis.

(v) A simulator may be used in meeting the requirements of paragraphs (c) (3)(i) and (3)(ii) of this section, if it reproduces the general operating characteristics of the facility involved and the arrangement of the instrumentation and controls of the simulator is similar to that of the facility involved. If the simulator or simulation device is used to administer operating tests for a facility, as provided in § 55.45 (b)(1), the device approved to meet the requirements of § 55 45(b)(1) must be used for credit to be given for meeting the requirements of paragraphs (c)(3)(i) (G through AA) of this section.

(4) *Evaluation.* The requalification program must include—

(i) Comprehensive requalification written examinations and annual operating tests which determine areas in which retraining is needed to upgrade licensed operator and senior operator knowledge.

(ii) Written examinations which determine licensed operators' and senior operators' knowledge of subjects covered in the requalification program and provide a basis for evaluating their knowledge of abnormal and emergency procedures.

(iii) Systematic observation and evaluation of the performance and competency of licensed operators and senior operators by supervisors and/or training staff members, including evaluation of actions taken or to be taken during actual or simulated abnormal and emergency procedures.

(iv) Simulation of emergency or abnormal conditions that may be

accomplished by using the control panel of the facility involved or by using a simulator. Where the control panel of the facility is used for simulation, the actions taken or to be taken for the emergency or abnormal condition shall be discussed; actual manipulation of the plant controls is not required. If a simulator is used in meeting the requirements of paragraph (c)(4)(iii) of this section, it shall accurately reproduce the operating characteristics of the facility involved and the arrangement of the instrumentation and controls of the simulator shall closely parallel that of the facility involved. After the provisions of § 55.45(b) have been implemented at a facility, the certified or approved simulation facility must be used to comply with this paragraph.

(v) Provisions for each licensed operator and senior operator to participate in an accelerated requalification program where performance evaluations conducted pursuant to paragraphs (c)(4) (i) through (iv) of this section clearly indicated the need.

(5) *Records.* The requalification program documentation must include the following:

(i) The facility licensee shall maintain records documenting the participation of each licensed operator and senior operator in the requalification program. The records must contain copies of written examinations administered, the answers given by the licensee, and the results of evaluations and documentation of operating tests and of any additional training administered in areas in which an operator or senior operator has exhibited deficiencies. The facility licensee shall retain these records until the operator's or senior operator's license is renewed.

(ii) Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period.

(iii) If there is a conflict between the Commission's regulations in this part, and any license condition, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified for these records by the regulations in this part apply unless the Commission, pursuant to § 55.11, grants a specific exemption from this record retention requirement.

(6) *Alternative training programs.* The requirements of this section may be met by requalification programs conducted by persons other than the facility licensee if the requalification programs are similar to the program described in paragraphs (c) (1) through (5) of this section and the alternative program has been approved by the Commission.

(7) *Applicability to research and test reactor facilities.* To accommodate specialized modes of operation and differences in control, equipment, and operator skills and knowledge, the requalification program for each licensed operator and senior operator of a research reactor or test reactor facility must conform generally but need not be identical to the requalification program outlined in paragraphs (c) (1) through (6) of this section. Significant deviations from the requirements of paragraphs (c) (1) through (6) of this section will be permitted only if supported by written justification and approved by the Commission.

Subpart G—Modification and Revocation of Licenses

§ 55.61 Modification and revocation of licenses.

(a) The terms and conditions of all licenses are subject to amendment, revision, or modification by reason of rules, regulations, or orders issued in accordance with the Act or any amendments thereto.

(b) Any license may be revoked, suspended, or modified, in whole or in part:

(1) For any material false statement in the application or in any statement of fact required under section 182 of the Act,

(2) Because of conditions revealed by the application or statement of fact or any report, record, inspection or other means that would warrant the Commission to refuse to grant a license on an original application,

(3) For willful violation of, or failure to observe any of the terms and conditions of the Act, or the license, or of any rule, regulation, or order of the Commission, or

(4) For any conduct determined by the Commission to be a hazard to safe operation of the facility.

Subpart H—Enforcement

§ 55.71 Violations.

(a) An injunction or other court order may be obtained prohibiting any violation of any provision of:

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) Any regulation or order issued under these Acts.

(b) A court order may be obtained for the payment of a civil penalty imposed under section 234 of the Aomic Energy Act for violation of:

(1) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act;

(2) Section 206 of the Energy Reorganization Act of 1974;

(3) Any rule, regulation, or order issued under these Acts;

(4) Any term, condition, or limitation of any license issued under these Acts; or

(5) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act.

(c) Any person who willfully violates any provision of the Atomic Energy Act or any regulation issued under the Act, including the regulations in this part, may be guilty of a crime and, upon conviction, may be punished by fine or imprisonment, or both, as provided by law.

PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

2. The authority citation for Part 50 continues to read as follows:

Authority: Secs. 103, 104, 161, 182, 183, 186, 189, 68 Stat. 936, 937, 948, 953, 954, 955, 956, as amended, sec. 234, 83 Stat. 1244, as amended (42 U.S.C. 2133, 2134, 2201, 2232, 2233, 2236, 2239, 2282); secs. 201, 202, 206, 88 Stat. 1242, 1244, 1246, as amended (42 U.S.C. 5841, 5842, 5846), unless otherwise noted.

Section 50.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Sections 50.58, 50.91, and 50.92 also issued under Pub. L. 97-415, 96 Stat. 2071, 2073 (42 U.S.C. 2133, 2239). Section 50.78 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Sections 50.80-50.81 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Sections 50.100-50.102 also issued under sec. 186, 68 Stat. 955 (42 U.S.C. 2236).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273), §§ 50.10 (a), (b), and (c), 50.44, 50.46, 50.48, 50.54, and 50.80(a) are issued under sec. 161b, 68 Stat. 948, as amended (42 U.S.C. 2201(b)); §§ 50.10(b) and (c) and 50.54 are issued under sec. 161i, 68 Stat. 949, as amended (42 U.S.C. 2201(i)); and §§ 50.55(e), 50.59(b), 50.70, 50.71, 50.72, 50.73, and 50.78 are issued under sec. 161o, 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

3. In § 50.34, paragraph (b)(6) is revised as follows:

§ 50.34 Contents of applications; technical information.

* * * * *

(b) * * *

(8) A description and plans for implementation of an operator requalification program. The operator requalification program must as a minimum, meet the requirements for those programs contained in § 55.59 of Part 55 of this chapter.

* * * * *

4. In **§ 50.54, paragraphs (i) and (i-1)** are revised to read as follows:

§ 50.54 Conditions of licenses.

* * * * *

(i) Except as provided in § 55.13 of this chapter, the licensee may not permit the manipulation of the controls of any facility by anyone who is not a licensed operator or senior operator as provided in Part 55 of this chapter.

(i-1) Within three months after issuance of an operating license, the licensee shall have in effect an operator requalification program which must as a minimum, meet the requirements of § 55.59(c) of this chapter. Notwithstanding the provisions of § 50.59, the licensee may not, except as specifically authorized by the Commission decrease the scope of an approved operator requalification program.

* * * * *

5. Immediately following § 50.73, "Licensee Event Report System," a new § 50.74 is added as a conforming amendment to read as follows:

§ 50.74 Notification of change in operator or senior operator status.

Each licensee shall notify the Commission in accordance with § 50.4 within 30 days of the following in regard to a licensed operator or senior operator:

(a) Permanent reassignment from the position for which the licensee has certified the need for a licensed operator or senior operator under § 55.31(a)(3) of this chapter;

(b) Termination of any operator or senior operator;

(c) Disability or illness as descrided in § 55.25 of this chapter.

Dated at Washington, DC, this 20th day of March 1987.

For the Nuclear Regulatory Commission

John C. Hoyle,

Acting Secretary for the Commission

[FR Doc. 87-6478 Filed 3-24-87; 8:45 am]

BILLING CODE 7590-01-M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 86-NM-215-AD; Amdt. 39-5588]

Airworthiness Directives; Boeing Model 747 and 757 Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to Boeing Models 747 and 757 series airplanes, which requires inspection of the passenger door emergency power reservoir for integrity of the pressure relief rupture disk, repair, if necessary, and replacement of defective disk retainers. This amendment is prompted by numerous reports of emergency power reservoirs found to be prematurely discharged. This condition, if not corrected, would render the emergency power reservoir incapable of providing power to assist in opening the door quickly when required for emergency evacuation.

DATES: Effective May 1, 1987.

ADDRESSES: The applicable Boeing service information may be obtained from the Boeing Commercial Airplane Company, P.O. Box 3707, Seattle, Washington 98124; the applicable H.R. Textron service information may be obtained from H.R. Textron, 25200 West Rye Canyon Road, Valencia, California 91355. This information may be examined at the FAA, Northwest Mountain Region, 17900 Pacific Highway South, Seattle, Washington, or the Seattle Aircraft Certification Office, 9010 East Marginal Way South, Seattle, Washingon 98168.

FOR FURTHER INFORMATION CONTACT: Mr. Pliny Brestel, Airframe Branch, ANM-120S; telephone (206) 431-1931. Mailing address: FAA, Northwest Mountain Region, 17900 Pacific Highway South, C-68966, Seattle, Washington 98168.

SUPPLEMENTARY INFORMATION: A proposal to amend Part 39 of the Federal Aviation Regulations to include an airworthiness directive which requires inspection of the passenger door emergency power reservoir on Boeing Models 747 and 757 series airplanes for integrity of the pressure relief rupture disk, repair, if necessary, and replacement of defective disk retainers, was published in the Federal Register on December 24, 1986 (51 FR 46687). The comment period for the NPRM, which ended February 16, 1987, afforded interested persons an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

The Air Transport Association (ATA) of America, representing operators of Boeing Model 747 and 757 airplanes stated that the proposed rule requiring inspection of all 747 and 757 airplanes is not justified for those operators whose records list the serial numbers and applicable aircraft of the subject reservoirs installed. The ATA, therefore, requested that paragraph A. of the proposed rule be deleted and that the effectivity be revised to read "*Boeing*: Applies to all Model 747 and 757 series airplanes equipped with emergency power reservoirs listed in H.R. Textron Service Bulletin No. 803300-52-05." The FAA agrees that it is unnecessary to inspect the airplanes if records are available to determine the serial numbers of the reservoirs installed, and the AD has been revised accordingly; however, in absence of such records, operators must inspect for serial numbers in accordance with the applicable service bulletin.

The ATA also commented that the "NOTE" in the proposed rule which advises readers that the affected reservoirs may be installed on other airplanes should be deleted because, if adopted, will create confusion in the field since the effectivity of the proposed rule is clearly only against Boeing aircraft. The FAA concurs that the effectivity is only Boeing aircraft and specifically Models 747 and 757; however, the "NOTE" should not be deleted because, while some Boeing 747 and 757 aircraft may have been delivered without defective reservoirs, a defective reservoir could have been installed in the field since delivery. The note has been revised to reflect "Boeing Model 747 and 757 series airplanes."

The ATA also requested that the initial compliance period in paragraph A. of the proposed rule be changed from 60 to 90 days to afford those operators, who may not have records listing serial numbers of reservoirs, additional time to complete the fleet inspection to determine if they are affected by the rule. The ATA stated that, in some instances (likely 50%), the installed reservoirs would require removal to read the serial number. Further, some operators check the reservoirs every four days and, therefore, need time to change their maintenance program to comply with the daily check requirement of paragraph B. The FAA does not concur with an extension of the initial compliance period from 60 to 90 days in that air safety and public interest

Appendix C

Regulatory Guide 1.134

Medical Evaluation of Licensed Personnel for Nuclear Power Plants

U.S. NUCLEAR REGULATORY COMMISSION

Revision 2*
April 1987

REGULATORY GUIDE

OFFICE OF NUCLEAR REGULATORY RESEARCH

REGULATORY GUIDE 1.134
(Task OL 401-5)

MEDICAL EVALUATION OF LICENSED PERSONNEL FOR NUCLEAR POWER PLANTS

A. INTRODUCTION

Sections 55 31, "How To Apply," and 55 57, "Renewal of Licenses," of 10 CFR Part 55, "Operators' Licenses," require that each initial or renewal application for an operator or senior operator license contain a medical examination certification following the form prescribed in Subpart C of Part 55, "Medical Requirements " Sections 55 33, "Disposition of Initial Application," and 55 57 state that the initial or renewal applications for these licenses will be approved if, among other things, the applicant has no medical or general health condition that might cause operational errors endangering public health and safety Paragraph (i) of § 55 53, "Conditions of Licenses," requires that an examination be conducted every 2 years.

Section 55 25, "Incapacitation Because of Disability or Illness," deals with an operator or senior operator who becomes incapacitated because of a mental or physical condition that might cause impaired judgment or motor coordination

Section 55 27, "Documentation," requires that the facility licensee document and maintain the medical qualifications data, current test results, and each operator's medical history and provide these to the NRC upon its request

This guide describes a method acceptable to the NRC staff for providing the information needed by the staff for its evaluation of the medical qualifications of applicants for initial or renewal operator or senior operator licenses for nuclear power plants and for providing notification to the NRC of an incapacitating disability or illness.

The Advisory Committee on Reactor Safeguards has been consulted concerning this guide and has concurred in the regulatory position.

Any information collection activities mentioned in this regulatory guide are contained as requirements in 10 CFR Part 55, which provides the regulatory basis for this guide The information collection requirements in 10 CFR Part 55 have been cleared under OMB Clearance No 3150-0018

B. DISCUSSION

Section 55 23, "Certification," of Subpart C, "Medical Requirements," of 10 CFR Part 55 requires that a physician examine the applicant in accordance with NRC's regulatory guidance and determine that the examinee's medical condition and general health meet the requirements for granting or renewing an operator license. The physician must send a full medical examination report to the facility licensee, which will then transmit a completed Form 396 to the NRC. The intent of these requirements is to have the facility licensee certify the health of its operators. However, the facility licensee is expected to maintain those records that may be reviewed by the NRC. Therefore, § 55.27 requires the facility licensee to document and maintain the full medical examination report, including the results of medical qualifications data, test results, and each operator's medical history In addition, § 55.27 requires the facility licensee to retain the most recent medical information as a result of the biennial physical examination and provide that information to the NRC on request The certification form would be sent by the facility licensee to the NRC

There are two instances in which medical information must be sent to the NRC One is when a conditional license based on medical evidence is requested under the provisions of paragraph 55.33(b). The second instance is when a licensed individual has become mentally or physically unable to

*The substantial number of changes in this revision has made it impractical to indicate the changes with lines in the margin.

USNRC REGULATORY GUIDES

Regulatory Guides are issued to describe and make available to the public methods acceptable to the NRC staff of implementing specific parts of the Commission's regulations, to delineate techniques used by the staff in evaluating specific problems or postulated accidents, or to provide guidance to applicants. Regulatory Guides are not substitutes for regulations, and compliance with them is not required. Methods and solutions different from those set out in the guides will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a permit or license by the Commission.

This guide was issued after consideration of comments received from the public. Comments and suggestions for improvements in these guides are encouraged at all times, and guides will be revised, as appropriate, to accommodate comments and to reflect new information or experience.

Written comments may be submitted to the Rules and Procedures Branch, DRR, ADM, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

The guides are issued in the following ten broad divisions:

1. Power Reactors
2. Research and Test Reactors
3. Fuels and Materials Facilities
4. Environmental and Siting
5. Materials and Plant Protection
6. Products
7. Transportation
8. Occupational Health
9. Antitrust and Financial Review
10. General

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Issued guides may also be purchased from the National Technical Information Service on a standing order basis. Details on this service may be obtained by writing NTIS, 5285 Port Royal Road, Springfield, VA 22161.

perform job duties. In this case, the facility licensee must notify the NRC within 30 days after learning that the diagnosis has been made. The facility licensee must forward to the NRC Form 396 and medical records describing the disability. This related information is required by § 55 27 to be documented and maintained by the facility

An American National Standard developed by the American Nuclear Society, ANSI/ANS-3.4-1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants,"[1] prescribes minimum requirements necessary to determine that the medical condition and general health of nuclear reactor operators will not cause operational errors The criteria presented in this standard provide an examining physician a basis for determining whether a potentially disqualifying abnormal health condition exists. Establishing minimum health requirements should aid in more uniform medical evaluations. However, it is necessary to recognize that, although it is the physician's responsibility to identify and evaluate any potentially disqualifying medical conditions, NRC makes the final determination of the applicant's medical fitness.

[1]Copies may be obtained from the American Nuclear Society, 555 North Kensington Avenue, La Grange Park, Illinois 60525.

Nothing in ANSI/ANS-3.4-1983 or this guide should be construed to mean that such matters as an individual's reading habits, political or religious beliefs, or attitudes on social, economic, or political issues should be investigated or judged.

C. REGULATORY POSITION

The requirements contained in ANSI/ANS-3 4-1983, "Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants,"[1] provide a method acceptable to the NRC staff for determining the medical qualifications of applicants for initial or renewal operator or senior operator licenses.

D. IMPLEMENTATION

The purpose of this section is to provide information to applicants and licensees about the staff's plans for using this regulatory guide.

Except in those cases in which the licensee proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the methods described in the guide will be used in evaluating the part of an application for initial or renewal operator or senior operator licenses on NRC Form 396, "Certificate of Medical Examination by Facility Licensee."

VALUE/IMPACT ANALYSIS

A separate value/impact analysis has not been prepared for this regulatory guide. A value/impact analysis was included in the regulatory analysis for the amendments to 10 CFR Part 55 published on March 25, 1987, a copy of which was placed in the Public Document Room at that time. This analysis is also appropriate to Revision 2 of Regulatory Guide 1.134. A copy of the regulatory analysis is available for inspection and copying for a fee at the NRC Public Document Room, 1717 H Street NW., Washington, DC.

Appendix D

Regulatory Guide 1.149

Nuclear Power Plant Simulation Facilities for Use in Operator License Examinations

Revision 1*
April 1987

U.S. NUCLEAR REGULATORY COMMISSION

REGULATORY GUIDE

OFFICE OF NUCLEAR REGULATORY RESEARCH

REGULATORY GUIDE 1.149
(Task OL 402-5)

NUCLEAR POWER PLANT SIMULATION FACILITIES FOR USE IN OPERATOR LICENSE EXAMINATIONS

A. INTRODUCTION

Paragraph 55.45(a) of 10 CFR Part 55, "Operators' Licenses," requires that an applicant for an operator or senior operator license demonstrate both an understanding of and the ability to perform certain essential job tasks. Paragraph 55 45(b) specifies that these operating tests will be administered, in part, either in a simulation facility consisting solely of a plant-referenced simulator that has been certified to the Commission by the facility licensee or in a simulation facility approved by the Commission after application has been made by the facility licensee.[1]

This regulatory guide describes a method acceptable to the NRC staff for complying with those portions of the Commission's regulations regarding (1) certification of a simulation facility consisting solely of a plant-referenced simulator and (2) application for prior approval of a simulation facility

The Advisory Committee on Reactor Safeguards has been consulted concerning this guide and has concurred in the regulatory position

Any information collection activities mentioned in this regulatory guide are contained as requirements in those sections of 10 CFR Part 55 that provide the regulatory basis for this guide. The information collection requirements in 10 CFR Part 55 have been cleared under Clearance No. 3150-0018 and No 3150-0138.

*The substantial number of changes in this revision has made it impractical to indicate the changes with lines in the margin.

[1]A simulation facility is defined in §55.4 as one or more of the following components, alone or in combination, used for the partial conduct of operating tests for operators, senior operators, and candidates: (i) the plant, (ii) a plant-referenced simulator, (iii) another simulation device.

B. DISCUSSION

Although ensuring that individuals who receive operator or senior operator licenses possess the knowledge, skills, and abilities necessary to operate the facility in a safe manner is the responsibility of facility licensees, the Nuclear Regulatory Commission must perform an independent audit of this process through its operator licensing examinations. Section 55.45, "Operating Tests," of 10 CFR Part 55 requires the candidate for a license to demonstrate (1) an understanding of and the ability to perform the actions necessary during normal, abnormal, and emergency situations, (2) the operation of systems that affect heat removal or reactivity changes, and (3) behaviors that show the individual's ability to function within the control room team in such a way that the facility licensee's procedures are adhered to and that the limitations in its license and amendments are not violated

The use of a plant-referenced simulator for testing enables the examiner to evaluate a candidate's performance in an environment closely correlated with conditions in the specific plant for which that candidate has applied for a license With major facility differences minimized between the testing and operating environments, examiners have been able to make pass-fail judgments with confidence

Although the increased use of plant-referenced simulators has provided to examiners the capability for better discrimination between success and failure in a candidate than could be achieved with non-plant-referenced simulators, the staff recognizes the existence of several factors that could suggest the use of alternative systems or devices for conducting the non-walkthrough portions of operating tests These factors

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This guide was issued after consideration of comments received from the public. Comments and suggestions for improvements in these guides are encouraged at all times, and guides will be revised, as appropriate, to accommodate comments and to reflect new information or experience.

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include the cost and lead time associated with procurement or upgrading of a plant-referenced simulator. Moreover, rapidly changing technology in the simulation industry is resulting in previously unavailable options that could lead a facility licensee to seek alternative ways to meet the requirements of §55.45. ANSI/ANS-3.5-1985, "Nuclear Power Plant Simulators for Use in Operator Training"[2] (the standard), in conjunction with this regulatory guide, provides guidance in these areas.

C. REGULATORY POSITION

Requirements are set forth in ANSI/ANS-3.5-1985 for specifying minimum performance and configuration criteria for a simulator, for comparing a simulator to its reference plant, and for upgrading simulators to reflect changes to reference plant response or control room configuration These requirements provide a method acceptable to the NRC staff for a facility licensee (1) to certify a simulation facility consisting solely of a plant-referenced simulator or (2) to obtain approval of a simulation facility for use in portions of reactor operator and senior operator license examinations subject to the following:

1. The references to operator training in Section 1, "Scope," of the standard should be taken to apply to operating tests for operators, senior operators, and candidates

2. Simulation facilities as defined in §55.4 of 10 CFR Part 55, to the extent that the facility licensee applies for approval under the requirements of paragraph 55.45(b), should meet the applicable requirements of the standard.

3. The standard identifies in Section 1.1, "Background," other documents to be included as part of the standard The applicability of one of these documents, ANSI/ANS-3.1,[2] should be determined by referring to Revision 2 to Regulatory Guide 1 8, "Qualification and Training of Personnel for Nuclear Power Plants."

4. Section 5.2, "Simulator Update Design Data," requires that reference plant modifications be reviewed annually against the simulator and that the simulator update design data be revised as appropriate. This should be taken to mean that the first such annual review and update should take place within one year following the facility licensee's certification as specified in paragraph 55.45(b)(5)(i) or within 18 months following the submittal of the application for approval as specified in paragraph 55 45(b)(4)(i).

5. Section 5.4, "Simulator Testing," requires the conduct of specific tests to establish simulator performance and verify its operability. In addition to these procedures, applicable malfunctions, identified in Section 3.1.2, "Plant Malfunctions," should be periodically tested to ensure the continued acceptability of the simulation facility. These malfunctions, if applicable to the facility, should be tested in their entirety not less than every four years, approximately 25% per year. When conducted in addition to the tests required by Section 5.4 and when subjected to the performance criteria for transient operations specified in Section 4.2, "Transient Operation," these malfunction tests provide an acceptable means of demonstrating the performance and operability of the simulation facility.

6 Appendix A to the standard, "Guide for Documenting Simulator Performance," and Appendix B to the standard, "Simulator Operability Tests," should be considered integral parts of the standard.

D. IMPLEMENTATION

The purpose of this section is to provide information to facility licensees about the NRC staff's plans for using this regulatory guide.

In accordance with the requirements in §55.45 of 10 CFR Part 55, the simulation facility portion of the operating test will not be administered on other than an approved or a certified simulation facility after:

1. The facility licensee has submitted a certification in accordance with paragraph 55.45(b)(5)(i), or

2. The staff has approved an application submitted by the facility licensee in accordance with paragraph 55.45(b)(4), or

3. May 28, 1991, whichever occurs sooner.

Until that time, the NRC will continue to give examinations for a facility licensee's reference plant in accordance with Generic Letter 82-18, "Reactor Operator and Senior Reactor Operator Requalification Examinations,"[3] October 12, 1982.

Licensees and applicants may propose means other than those specified in Section C of this guide for meeting applicable regulations. Except in those cases in which a facility licensee submits a certification for its simulation facility or proposes an acceptable alternative method for complying with specified portions of the Commission's regulations, the NRC will use the method described in this guide in the evaluation of the application for approval submitted by the facility licensee for its simulation facility. The guidance provided in Section C has been approved for use by the staff in the evaluation of all submittals as an acceptable means of complying with the Commission's regulations specified in Section A.

If a facility licensee wishes to utilize a simulation facility for more than one nuclear power plant, it must

[2]Copies may be obtained from the American Nuclear Society, 555 North Kensington Avenue, La Grange Park, IL 60525.

[3]Available for copying for a fee or inspection at the NRC Public Document Room, 1717 H Street NW., Washington, DC.

demonstrate to the NRC in its certification or in its 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 requirements and guidance of ANSI/ANS-3.5-1985 as qualified in this regulatory guide for each of the plants. This demonstration should include an analysis and summary of the differences between each plant and the simulation facility, including:

1 Facility design and systems relevant to control room personnel;

2. Technical specifications;

3. Procedures, primarily abnormal and emergency operating procedures;

4. Control room design and instrument/control location; and

5. Operational characteristics.

VALUE/IMPACT ANALYSIS

A separate value/impact analysis has not been prepared for this regulatory guide. A value/impact analysis was included in the regulatory analysis for the amendments to 10 CFR Part 55 published on March 25, 1987, a copy of which was placed in the Public Document Room at that time. This analysis is also appropriate to Revision 1 of Regulatory Guide 1.149. A copy of the regulatory analysis is available for inspection and copying for a fee at the NRC Public Document Room, 1717 H Street NW., Washington, DC.

Appendix F

Regulatory Guide 1.8

Qualification and Training of Personnel for Nuclear Power Plants

U.S. NUCLEAR REGULATORY COMMISSION

Revision 2*
April 1987

REGULATORY GUIDE

OFFICE OF NUCLEAR REGULATORY RESEARCH

REGULATORY GUIDE 1.8
(Task OL 403-5)

QUALIFICATION AND TRAINING OF PERSONNEL FOR NUCLEAR POWER PLANTS

A. INTRODUCTION

Paragraph 50.34(b)(6)(i) of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," requires that an application for a license to operate a nuclear power plant include information concerning organizational structure, personnel qualifications, and related matters. Subpart D, "Applications," of 10 CFR Part 55, "Operators' Licenses," requires that operator license applications include information concerning an individual's education and experience and related matters. This regulatory guide describes a method acceptable to the NRC staff for complying with those portions of the Commission's regulations with regard to the training and qualifications of nuclear power plant personnel. Personnel of test, training, research, and mobile reactors are not covered by this regulatory guide.

The Advisory Committee on Reactor Safeguards has been consulted concerning this guide and has concurred in the regulatory position.

Any information collection activities mentioned in this regulatory guide are contained as requirements in 10 CFR Parts 50 and 55, which provide the regulatory basis for this guide. The information collection requirements in 10 CFR Part 50 have been approved under OMB Clearance No. 3150-011, those in 10 CFR Part 55, under OMB Clearance No. 3150-0018.

B. DISCUSSION

Subcommittee ANS-3, Reactor Operations, American Nuclear Society Standards Committee, developed a standard containing criteria for the qualification and training of nuclear power plant personnel. This standard was approved by the American National Standards Institute (ANSI) Committee N18, Design Criteria for Nuclear Power Plants, and designated ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel." Regulatory Guide 1.8, "Personnel Selection and Training," endorsing ANSI N18.1-1971, was issued in March 1971, and Revision 1 was issued in September 1975. A revision of ANSI N18.1-1971 was subsequently approved by the ANSI Board of Standards Review and designated ANSI/ANS-3.1-1978, "Selection and Training of Nuclear Power Plant Personnel."

A first proposed Revision 2 to Regulatory Guide 1.8 endorsing ANSI/ANS-3.1-1978 was issued for public comment in February 1979. As a result of experience gained from the accident at Three Mile Island Unit 2 (TMI-2), additional public comments in the area of personnel qualifications were requested on proposed Revision 2 to Regulatory Guide 1.8 in May 1979. All of the comments from both requests were forwarded to the ANS-3 Subcommittee for its use during the development of a revision to ANSI/ANS-3.1-1978. Subsequently, Draft Standard ANS 3.1, dated December 6, 1979, incorporating the upgraded requirements was issued. In September 1980, public comments were requested on a second proposed Revision 2 to Regulatory Guide 1.8 that endorsed Draft Standard ANS 3.1. The public comments received were held in abeyance pending Commission action on proposed rules on operator qualifications and licensing in SECY 81-84, "Qualification of Reactor Operators,"[1] February 2, 1981, and SECY 81-84A, "Discussion of Revisions to Reactor Operator Qualifications,"[1] June 15, 1981. The Commission did not approve either of these proposals and directed the staff to continue to study the issue.

*The substantial number of changes in this revision has made it impractical to indicate the changes with lines in the margin.

[1]Copies are available for inspection or copying for a fee in the NRC Public Document Room, 1717 H Street NW., Washington, DC.

During 1981, Draft Standard ANS 3.1 was updated to factor in additional lessons learned from the TMI-2 accident and changing regulatory requirements. The standard was approved by the American Nuclear Society's Nuclear Power Plant Standards Committee (NUPPSCO) and the ANSI Board of Standards Review and was reissued as ANSI/ANS-3.1-1981, "Selection, Qualification and Training of Personnel for Nuclear Power Plants."[2] A third proposed Revision 2 of Regulatory Guide 1.8 was developed to endorse ANSI/ANS-3.1-1981 with certain additions and exceptions and was issued for public comment in January 1985. As a result of the public comments and Commission actions concerning training and qualifications, this Revision 2 of Regulatory Guide 1.8 now endorses Sections 4 3.1.1, "Shift Supervisor," 4.3.1.2, "Senior Operator," 4.5.1.2, "Licensed Operators," 4.4.8, "Shift Technical Advisor," and 4.4.4, "Radiation Protection," of ANSI/ANS-3.1-1981. Endorsement for all other positions will remain with ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel." The bases for the additions and exceptions to ANSI/ANS-3.1-1981 are contained in NUREG-0737, "Clarification of TMI Action Plan Requirements,"[3] which includes the March 28, 1980 letter to all power reactor applicants and licensees regarding qualification of reactor operators, and NUREG-0094, "Guide for the Licensing of Facility Operators, Including Senior Operators,"[3] and the Commission's "Policy Statement on Engineering Expertise on Shift" (50 FR 43621). The regulatory position related to the radiation protection manager is revised from what was included in Revision 1 of Regulatory Guide 1.8 (1975). The industry has adopted the requisite qualifications in ANSI/ANS 3 1-1981, and the current change endorses that industry position.

On March 20, 1985, the Commission issued a "Policy Statement on Training and Qualification of Nuclear Power Plant Personnel" (50 FR 11147) that recognizes industry commitment to accredit training programs. In the policy statement, the NRC endorsed the training accreditation program managed by the Institute of Nuclear Power Operations (INPO) because it encompasses the elements of performance-based training and will provide the basis to ensure that personnel have qualifications commensurate with the performance requirements of their jobs. The Commission has decided to withhold action on promulgating new training and qualifications regulations during an evaluation period. During that period, NRC will continue to evaluate the results of the accreditation program to determine if the voluntary industry efforts ensure qualifications that meet or exceed the minimum standards included in this guide.

The Commission's "Policy Statement on Engineering Expertise on Shift" issued on October 28, 1985 (50 FR 43621) provides two options for meeting nuclear power plant staffing requirements (paragraph 50.54(m)(2)(i) of 10 CFR Part 50) and the requirement to have a shift technical advisor (STA) available to the shift (NUREG-0737, I.A.1.1). One option in the Policy Statement, which is preferred by the Commission, allows combining the functions of the STA with one of the required senior operators as long as specific training and education requirements are met. The other option allows for continuation of an approved independent STA program. Regulatory Position C.1.j reflects the guidance provided in this Policy Statement

C. REGULATORY POSITION

1. Positions in ANSI/ANS-3.1-1981 that Are Endorsed by this Regulatory Guide

For the positions listed in ANSI/ANS-3.1-1981, "Selection, Qualification and Training of Personnel for Nuclear Power Plants," as shift supervisor, senior operator, licensed operator, and shift technical advisor, the requirements contained in the standard provide an approach acceptable to the NRC staff for complying with the qualifications and training requirements of 10 CFR Parts 50 and 55 subject to the guidance regarding the STA function provided in the Commission's "Policy Statement on Engineering Expertise on Shift" and the clarifications, additions, and exceptions in paragraphs a through k below. For radiation protection supervisory personnel, Section 4.4.4 of the standard contains an approach acceptable for the position of radiation protection manager (RPM) subject to the following

a. In lieu of the description in Section 5.1 of ANSI/ANS-3 1-1981, cold license examinations should be defined as those that are administered before the unit has completed preoperational testing and initial operations as described in its Final Safety Analysis Report as amended and approved by the Commission. Hot examinations are those administered after this condition is attained.

b. Hot license applicants must meet the training elements in Sections 4.3.1.1.c, 4.3.1.2.c, and 4.5.1.2.c of the standard and the experience elements in Sections 4.3.1.1.b, 4.3.1.2.b, and 4.5.1.2.b of the standard. Cold license applicants are subject to the training elements identified above, but they are exempt from the experience elements.

c. Paragraph 2 of Section 4.3.1.1.a of ANSI/ANS-3.1-1981 is not applicable. An individual who meets the Commission's "Policy Statement on Engineering Expertise on Shift" is required on all shifts to provide engineering expertise (see Regulatory Position C.1.j).

d. The minimum educational requirement for shift supervisors, Section 4.3.1.1.a, and for senior operators, Section 4.3.1.2.a, is a high school diploma or equivalent.

e An applicant for a senior operator (SO) license should have 4 years of responsible power plant experience. Responsible power plant experience for an SO is defined as having actively performed as a designated

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[3]Copies may be obtained from the Government Printing Office, Post Office Box 37082, Washington, DC 20013-7082.

control room operator (fossil or nuclear) or as a power plant staff engineer involved in the day-to-day activities of the facility during or after the final year of construction. A maximum of 2 years of responsible power plant experience may be fulfilled by academic or related technical training on a one-for-one time basis. Two years should be nuclear power plant experience. At least 6 months of the nuclear power plant experience should be at the plant for which an applicant seeks a license In addition, applicants for an SO position not holding a bachelor's degree in engineering or equivalent should have held an operator's license and should have been actively involved in the performance of licensed duties for at least 1 year.

f In addition to the requirements stated in Section 5 2 1 2 1 of ANSI/ANS-3 1-1981, classroom instruction for all license applicants should include training in the use of installed plant systems for the control and mitigation of an accident in which the core is severely damaged.

g In addition to the requirements in Section 5.2 1.3.1 of ANSI/ANS-3 1-1981, each applicant for an operator or senior operator license should serve 3 months as an extra person on shift in training for that position. These 3 months as an extra person on shift in training should include all phases of day-to-day operations under the supervision of licensed personnel.

h Control room operating experience for hot license applicants, described in Section 5 2.1.3 1 of ANSI/ANS-3 1-1981, should include manipulation of controls of the facility during a minimum of five reactivity changes. Every effort should be made to have a diversity of reactivity changes for each applicant Startups, shutdowns, large load changes, and changes in rod programming are some examples and could be accomplished by manually using such systems as rod control, chemical shim control, or recirculation flow

i All cold license applicants should participate in practical work assignments as described in Section 5.2 1.4 of ANSI/ANS-3 1-1981 for a minimum of 6 months.

j In addition to the responsibilities described in Section 4.4 8 of ANSI/ANS-3.1-1981, the STA should assume an active role in shift activities. For example, the STA should review plant logs, participate in shift turnover, and maintain awareness of plant configuration and status. The educational requirements for the STA specified in Section 4 4 8.a of ANSI/ANS-3.1-1981 are not applicable An independent STA should have a bachelor's degree or equivalent in a scientific or engineering discipline

"Actively performing STA functions" means performing at least three shifts per quarter as the STA. If an STA has not actively performed, the STA should receive training sufficient to ensure that the STA is cognizant of facility and procedure changes that occurred during the absence.

Combining the functions of a senior operator and the STA is acceptable if the provisions of the Commission's "Policy Statement on Engineering Expertise on Shift" are met. In addition to the requirements specified in Section 4.4.8.c of ANSI/ANS-3.1-1981, the STA should have specific training in the response to and analysis of plant transients and accidents and training in the relationship of accident conditions to offsite consequences and protective action strategies.

k. The radiation protection manager should have the qualifications described in Section 4.4.4 of ANSI/ANS-3.1-1981 with the clarification that 3 of the 4 years of experience in applied radiation protection should be professional-level experience.

2. Positions in ANSI/ANS N18.1-1971 that Are Endorsed by this Regulatory Guide

For positions listed in the standard other than those under Regulatory Position 1 above, the requirements contained in ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel," provide an approach acceptable to the NRC staff for complying with the qualifications and training requirements of 10 CFR Parts 50 and 55.

D. IMPLEMENTATION

The purpose of this section is to provide information to applicants and licensees regarding the NRC staff's plans for using this regulatory guide.

Applicants and licensees may propose means other than those specified in Section C of this guide for meeting applicable regulations

Except in those cases in which the applicant or licensee proposes an acceptable alternative means of complying with the Commission's regulations specified in Section A, the guidance provided in Section C has been approved for use by the staff after March 31, 1988, in the evaluation of the qualifications and training requirements for (1) nuclear power plant personnel as described in applications for an operating license, (2) applicants for operator and senior operator licenses, and (3) replacement personnel in those positions in operating nuclear power plants whose training programs have not yet been accredited by an accreditation program endorsed by the NRC.

VALUE/IMPACT ANALYSIS

A separate value/impact analysis has not been prepared for this regulatory guide. A value/impact analysis was included in the regulatory analysis for the amendments to 10 CFR Part 55 published on March 25, 1987, a copy of which was placed in the Public Document Room at that time. This analysis is also appropriate to Revision 2 of Regulatory Guide 1.8. A copy of the regulatory analysis is available for inspection and copying for a fee at the NRC Public Document Room, 1717 H Street NW., Washington, DC.

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