

## Archived Operator Licensing Program Feedback Questions

### **201.13**

**Why does ES-1.3, Section C.3, Bullet #1, permit a person signed onto the initial exam security agreement to operate the simulator from the booth when this is not permitted in ES-601 for requalification? Why the inconsistency?**

This inconsistency, which resulted from an oversight during the development of Revision 8 of [NUREG-1021](#), has been corrected. The security restrictions on Form 6.1-3 are now the same as in ES-1.3.

### **201.31**

**What are the final Rev. 8 of [NUREG-1021](#) and supplemental security relaxation benefits?**

Final Revision 8 of NUREG-1021 removed all restrictions on who can write the initial operator licensing examinations. However, the NUREG still requires anyone who has knowledge of the examination contents to sign a security agreement and refrain from most training-related activities involving the license applicants. Refer to Section D.2 of ES-201 for the details.

Additional changes in Supplement 1 further clarified the types of training-related activities that managers and supervisors can perform once they have knowledge of the examination contents.

### **202.6**

**We believe an applicant meets the eligibility requirements, but ask the NRC to evaluate this to make sure - is this a waiver request?**

Update: The NRC does not process waivers for eligibility requirements, but deferrals may be processed.

No. It would not constitute a waiver request until you submit a license application ([NRC Form-398](#)) that specifically requests a waiver of the eligibility guideline or requirement.

### **202.8**

**Can self-study hours be counted on the application as part of the required training hours?**

As a general rule, self-study time should NOT be used as a substitute for classroom instruction time that is specified in a facility licensee's approved (i.e., accredited) training program and licensing basis. However, if the licensee's program includes provisions for waivers and equivalence determinations, it may be appropriate to customize an individual's training based on prior instruction and experience. Such a program might include independent study with specific learning objectives and follow-up testing to ensure that the learning objectives have been mastered.

## **202.11**

**Regarding the 6-months on-site experience requirement:**

- ANSI allows 13 weeks on-shift training to count toward the 6 months
- ANSI allows simulator training to count (simulator training is usually 3 or more months)

**Can training program provide the 6-months of on-site experience?**

**What is "responsible power plant experience?" Need a definition that is broader than staff engineer and operator? For example, operations instructor, ex-NRC examiner, and maintenance supervisor.**

**"Responsible" power plant experience - This issue needs to be resolved; INPO, NRC, NEI need to determine the specifics and let us know. We need to know without reservation that SRO-instant candidates meet this ambiguous "experience" requirement prior to them entering a license class.**

**Responsible Power Plant experience acceptance needs to be explicit. For example, why does an NRC Resident or Water Treatment power plant engineer receive one for one credit while a licensed simulator instructor or plant equipment operator receives no credit?**

As noted in Section D of ES-202, the NRC considers training and experience to be separate aspects of license eligibility. Per [NUREG-1262](#) (Question No. 113), a person should meet the experience guidelines before entering the license training program. Time spent in training before entering the license training program may qualify as experience, but time spent in a training program leading up to license application (including the time spent on-shift and in simulator training) should normally not be double-counted as experience.

Refer to [Regulatory Issue Summary \(RIS\) 2001-01](#), "Eligibility of Operator License Applicants," for a detailed discussion of the NRC's current guidelines for the qualification and training of licensed operators. Also note that, in May 2000, the NRC issued [Revision 3 of Regulatory Guide 1.8](#), which endorses ANSI/ANS-3.1-1993, and that ES-202 has been updated to reflect this change.

As stated in the Executive Summary of [NUREG-1021](#), facility licensees are encouraged to resolve any applicant eligibility questions with their NRC Regional Office before commencing a license training class. Pursuant to SAT-based (systematic approach to training) principles, the NRC expects facility licensees to formally evaluate and document their applicants' training and experience vis-a-vis the facility's requirements and commitments. As discussed in Section D.2.a(4) of ES-202, the NRR operator licensing program office will assess the eligibility of equipment operators, plant technicians, and non-degreed licensed operator instructors, who do not satisfy the strict definition of RNPPE and might otherwise be disqualified, on a case-by-case basis to determine the amount of credit to be granted.

### **202.15**

**Can a "program" be split as follows: Complete phase 1 which concludes with a GFE; then suspend the program so that the trainees can get 6-months onsite experience; then restart and complete the program and get a license.**

Possibly. The NRC does not require the site-specific training to begin immediately after taking the generic fundamentals examination. However, the NRC does expect facility licensees to comply with their licensing basis requirements and commitments regarding licensed operator experience and training. Also, note that, beginning with Revision 9 of [NUREG-1021](#), applicants must satisfactorily complete the GFE within 24 months before the date of license application.

### **202.18**

**The instructions for [NRC Form 398](#), "Personal Qualification Statement – Licensee," state that "checking 'YES' in item 20.a indicates that you have completed a SAT-based training program that is accredited by the National Nuclear Accrediting Board and meets the education and experience requirements outlined by the National Academy for Nuclear Training in its current guidelines for initial training and qualification of licensed operators." How should item 12.a be checked if an applicant is requesting an eligibility waiver in item 4.f because they have not completed all the training, education, or experience requirements?**

UPDATE: The NRC no longer processes eligibility waivers and this is for historical information only.

With regard to training requirements, facility licensees have the mechanisms and authority within their accredited training programs to evaluate, grant, and document waivers on a case-by-case basis. Granting such a training waiver would not preclude the applicant/facility from checking "YES" in item 12.a because the applicant has still completed the facility's SAT-based training program. This long-standing policy is explained in response to Question #103 in [NUREG-1262](#), "Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operators' Licenses."

If an applicant requests an eligibility waiver by checking item 4.f on [NRC Form 398](#), the instructions clearly direct the applicant/facility to enter a detailed explanation/justification in item 17, the "Comments" section of the license application. Moreover, the instructions for item 12 indicate that checking "YES" in both items 12.a and 12.b eliminates the requirement to complete items 13 and 15 unless the applicant is taking an exception or waiver from the education and experience requirements outlined by the National Academy for Nuclear Training, which must be explained in item 17. Given that the NRC reviews the information on the application in its entirety when making eligibility determinations, the most important consideration is to ensure that the information in items 4.f, 12.a, 15, and 17 is consistent. If item 4.f is checked, then there needs to be an explanation in item 17, regardless whether item 12.a is checked "YES" or "NO." Checking "NO" in item 12.a would not disqualify a license applicant as long as there is a satisfactory explanation/justification in item 17.

The NRC clarified these instructions in the NRC Form 398.

## 202.22

Please provide a summary of the changes for the [NRC Form 396](#), “Certification of Medical Examination by Facility Licensee” and [NRC Form 398](#), “Personal Qualification Statement – Licensee,” revisions in October 2017.

NRC Form 396 noteworthy changes:

- Added an applicant/operator mailing address block.
- Added a [10 CFR Part 52](#) Facility Docket check box to support operator license applications for those facilities licensed under 10 CFR 52.
- Revised the Section A, “MEDICAL EXAM INFORMATION,” to include, as part of the physician’s certification statement, that the applicant/operator meets “THE MEDICAL REQUIREMENTS FOR LICENSED OPERATORS” at the facility.
- Updated the “GUIDANCE USED” check blocks to allow applicants to certify their medical status using the most recent revisions of American National Standards Institute/American Nuclear Society (ANSI/ANS) 3.4-2013, “Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants,” and ANSI/ANS 15.4-2016, “Selection and Training of Personnel for Research Reactors.”
- Added “Physician’s Certification Date” to document the date on which the facility licensee’s Physician/Medical Review Officer (MRO) makes the final certification of the applicant/operator’s medical suitability.
- Added “Name of Applicant/Operator” and “Docket Number” to Page 2 of the form.
- Added an applicant/operator acknowledgement statement and an applicant/operator’s signature and date to ensure that the individual applicant/operator understands and acknowledges the details of the medical certification being submitted in support of their license application and authorizes the release of the related medical information to the NRC.

NRC Form 398 noteworthy changes:

- Added an “E-mail Address box” (Block 5) to allow for additional communication options for correspondence with licensed operators and license applicants.
- Added Deferral/Excusal/Waiver check boxes (Block 12) to better align with the [10 CFR 55.35](#) (excusals) and [10 CFR 55.47](#) (waivers) processes and the terminology used in [NUREG-1021](#), “Operator Licensing Examination Standards for Power Reactors, Rev. 11.”
- Added 10 CFR Part 52 Facility Docket check boxes (Block 14) to support license applications for those facilities licensed under 10 CFR 52.
- Added “Trainee” position to Block 18, “Current Position at Facility,” and removed Non-Licensed Operator position details.
- Added an “Electronic Correspondence Option” certification check box (Block 27a) to support current effort to develop an electronic correspondence option for initial operator license applications.

### **205.3**

#### **What is meant by operational validity and have GFE test items become more difficult by testing plant-specific system knowledge?**

In the development process for the GFE, the NRC strives to create questions that are technically, operationally, and psychometrically valid. For example, to achieve operational validity -- a hallmark of good test item writing that seeks to ask questions within the context of the actual job -- we strive to develop questions that assess applicant understanding, use, and application of the safety-significant knowledge that is required for licensing. These types of items assess whether applicants can use and apply the knowledge they learned vice merely recalling the facts. To improve operational validity, GFE questions will often use basic plant terms and situational contexts.

(PLEASE NOTE: The operational validity of a GFE question does not require that the applicant be able to operate the plant. The GFE does not test knowledge of plant-specific system design, general or emergency operating procedures. However, an operationally valid GFE question does assess understanding and application of components, reactor theory, and thermodynamics within a realistic, job-related context. Therefore, applicants are expected to possess some basic understanding of plant systems and plant response.)

The NRC has received occasional comments that selected GFE questions require an inappropriate level of plant systems knowledge. There are many GFE knowledge and abilities (K/As) that directly or indirectly require some basic knowledge of power plant systems. For example, knowledge of the basic function of some plant systems (such as the reactor, reactor coolant system, control rod drive system, main turbine and main generator) is required. Without some assumed basic system knowledge, we would have to limit fundamentals knowledge testing to theoretical facts alone. By assuming some basic plant systems knowledge, we are able to move from theoretical fact testing (i.e., fundamental knowledge) into the real, or physical, domain where our examinations are more operationally valid.

During the GFE review process, the examination author and NRC staff evaluate each question to determine whether inappropriate plant systems knowledge is required. In striving to achieve high operational validity, there is some risk that we will occasionally cross the fine line that separates appropriate (basic) plant systems knowledge from inappropriate (more advanced) plant systems knowledge. On a few occasions, utility post-examination comments have expressed this concern, and the NRC has made changes to the examination answer key prior to issuing final grades. The NRC endeavors to administer licensing examinations that are valid and reliable indicators of the applicants' knowledge and abilities. The most valid operator licensing written examinations (including the GFE) use questions that have valid content, operational relevance, and the ability to discriminate between different levels of applicant knowledge. Therefore, the fundamental knowledge addressed by a K/A will often be tested by requiring the applicant to apply the knowledge in the context of a realistic, or operational, setting.

The fact that a specific word or term is absent from a generic fundamentals K/A statement does not disqualify a related knowledge from being tested on the GFE. K/A statements are often written as general statements of required knowledge. Therefore, GFE questions are not required to contain specific words found in generic fundamentals K/A statements. However, they are required to preserve the intent of the valid K/A. In summary, the NRC staff endeavors to exercise good judgment and not to go beyond normal GFE training bounds. We welcome feedback from utilities that believe we may have transcended those boundaries and will seek to

correct those instances. (Please see Questions [4.2.3 \(Error! Reference source not found.\)](#), [4.1.8 \(Error! Reference source not found.\)](#), [4.2.4 \(Error! Reference source not found.\)](#) and [4.2.11 \(Error! Reference source not found.\)](#) for related discussions).

#### **205.4**

##### **Are there any other statistical factors involved in evaluating GFE questions?**

The GFE is a nationally-administered, standardized examination. Since a large number of individuals are evaluated (in comparison to the site-specific examinations), the NRC is able to calculate statistics that provide insight into how the examination performed. After every GFE, we evaluate the overall examination and individual question performance statistics to determine, among other things, if there is a basis to make any changes in the answer key or the questions before they are reused. One statistical indicator of the overall exam is the mean score of the applicants taking the GFE. Typically, the mean scores have been relatively high, hovering in the 88 to 91 percent range. This is indicative of a moderately easy examination for well-trained applicants.

Another statistic evaluated during the post-examination review is the item discrimination ratio (IDR). The IDR is calculated and expressed as a correlation coefficient for each test question. The IDR indicates whether the question discriminated between masters and non-masters, i.e., between high scorers and low scorers. We would expect higher performers overall to answer any given question correctly more often than lower performers overall. Therefore, when the IDR is a positive number, it confirms that the question discriminated as intended.

#### **205.6**

##### **NUREG-1021, Rev. 11 becomes effective August 15, 2017. How will the changes implemented by Rev. 11 of NUREG-1021 effect the content of the September 2017 GFE?**

[NUREG-1021](#), ES-205, Attachment 4, "GFE Test Item Distribution," was revised in Rev. 11 to include a new topic, "Basic Energy Concepts." This new topic will be tested with one question on the BWR GFE and one question on the PWR GFE, using a selected K/A for "Basic Energy Concepts," as listed in [NUREG-1123](#), Rev. 2, Supplement 1, or in either [NUREG-1122](#) or [-1123](#), Rev. 3 Draft Reports for Comment, published in April 2017 (82 FRN 18018).

In order to account for the addition of one question associated with "Basic Energy Concepts," both the BWR and PWR GFEs will test one less question associated with the GFE topic, "Thermal Hydraulics."

#### **301.6**

**The continuous ratcheting of expectations is bypassing the [systematic approach to training] SAT process. Example - Cannot use a high importance JPM because it is perceived to be too easy, and operators are trained and tested on it.**

**Current subjectivity on what is a discriminatory JPM with the removal of the questions.**

**Why can't the selection of JPMs for the license exam be driven by the SAT process and K/A value? "Low discriminatory value" is a euphemism for "too easy" and as a result,**

**the difficulty of the exam is ratcheting up to an unreasonable level. This is contrary to the NRC stated goals.**

The NRC does not agree that the difficulty of the walk-through portion of the operating test is being ratcheted up to an unreasonable level. On a nationwide basis, the RO and SRO operating test passing rates have generally ranged between 94 and 98 percent since the early 1990s. Refer to the examination performance trend graphs posted on the [Licensing Process](#) page.

Keep in mind that the NRC licensing examination is not a part of the facility licensee's SAT-based training process. As stated in [10 CFR 55.45](#)(a), the content of the operating test will be

identified, in part, from the learning objectives derived from a systematic analysis of operator duties performed by the facility licensee.

As stated in Section A.4 of ES-3.2 ([NUREG-1021](#)), the JPMs should, individually and as a group, have meaningful performance requirements that will provide a legitimate basis for evaluating the applicant's understanding of and ability to safely operate the associated systems and the plant (as required by 10 CFR 55.45). Previously, when each system evaluation consisted of a JPM plus at least two prescribed follow-up questions, the questions would sometimes compensate for the minimal discriminatory potential of the JPM. Now that the prescribed questions have been eliminated, examiners have been instructed to place increased emphasis on the discriminatory value of the JPMs. However, that does not mean that high importance JPMs will be excluded from the sample. High-importance JPMs will always be acceptable if they discriminate and provide a legitimate basis for evaluating the applicants' understanding of and ability to safely operate the associated system. A walk-through test that is heavily weighted with simplistic, one- or two-step tasks during which everything works as designed will not provide the NRC with an adequate basis to make a licensing decision.

### **301.7**

**My 1998 exam was comprised of 20 JPMs. The 1999 exam is comprised of 30 JPMs (3 sets of 10). If I repeat 30% of the 1998 JPMs, I can use a total of 6 JPMs on the 1999 exam or 30% of each of the 3 sets of 10 JPMs is 9 JPMs. Is it 30% of the JPMs of the previous exam or is it 30% of the current exam that can be repeated?**

The repetition limits specified in ES-301 (refer to Forms ES-301-1 and 2) apply to the current operating test, and, beginning with Revision 9 of [NUREG-1021](#), will limit the use of JPMs to be randomly selected from the last two licensing examinations at the facility. Therefore, each of the three 10-JPM sets for 2004 can include no more than three JPMs from among the 20 that were used on your 2002 and 2003 operating tests. You cannot use all nine of the repeated JPMs on one test set and none on the other two, and the same JPMs cannot be repeated on subsequent days. Ideally, the test sample should be developed systematically from the total population of operator tasks and then checked to confirm that the repetition from the previous exam is within limits.

### **301.12**

**Why are we using more JPM's [job performance measures] for the administrative section?**

Since Revision 8 of [NUREG-1021](#), the NRC has preferred to test the five administrative topics using JPMs rather than questions because JPMs are generally a better, more performance-based measurement tool. When Revision 9 combined the administrative and systems walk-through portions of the operating test, good testing and measurement practice prompted the NRC to shift entirely to a JPM format rather than retain the option for mixed testing media in the combined walk-through.

### **301.15**

**Operating Exam - Admin.:** This part of the exam process needs to be integrated into the written and JPM (walk-through) segments, and eliminated as a separate entity - only a couple of areas are examined, with no margin for error! An individual can score high on the written exam, do excellent on the simulator, and pass all of the systems JPMs yet fail



**to get licensed due to not passing a couple of admin "questions" - the knowledge and/or abilities could easily be included with other exam segments.**

**Why is the administrative area a stand-alone area on the exam? Why is it even there at all?**

**JPM [job performance measure]/Admin sample rate is small. Therefore, more than 1 failure results in an overall failure. Is it possible to get something with more balance?**

As discussed in Section B.1 of ES-301([NUREG-1021](#)), the "Administrative Topics" of the operating test implement Items 9 through 12 of [10 CFR 55.45\(a\)](#). Prior to Revision 4 of NUREG-1021, which was issued in May 1987, examiners often made too many inferences regarding the applicants' understanding of the administrative topics based upon their actions in the simulator. Therefore, the NUREG was revised to require examiners to discuss and evaluate a selection of administrative topics in a separate operating test category.

However, based on stakeholder feedback during a number of public meetings in 2001 and 2002 (refer to the Operator Licensing [Public Involvement](#) page), the NRC concluded that the scope and format of the operating test had placed too much emphasis on the administrative topics. Consequently, with Revision 9 of NUREG-1021, the NRC has consolidated the administrative and systems topics into a single walk-through operating test, consisting entirely of JPMs. The revised test structure replaces one of the RO administrative tasks with an extra task in the systems area and generally de-emphasizes the administrative topics (refer to Section D.3 of ES-301).

### **301.19**

**Revision 10 of [NUREG-1021](#), Form ES-301-5, "Transient and Event Checklist," added new Instruction 4 to allow placement of SRO-I applicants in either RO position to provide the best evaluation of these applicants in the manipulation of controls.**

**However, Section D.5.a of ES-301 and Instruction 1 on Form ES-301-5 were not changed. Both of these guidelines indicate that Instant SRO (SRO-I) applicants must serve in both the SRO and the "at-the-controls" (ATC) positions.**

**Please clarify this seeming inconsistency. In other words, are SRO-I applicants required to serve in the SRO and ATC positions or is it now allowable to evaluate SRO-I applicants in the SRO and 'balance-of-plant' (BOP) positions?**

The intent of new Instruction 4 was to address new reactor facility licensees *only* and allow the NRC chief examiner to place SRO-I applicants in *either* the ATC *or* BOP position taking into consideration which position - ATC or BOP - that provides the best evaluation of SRO-I applicants in manipulating plant controls. There was no intent to change the requirement per Instruction 1 for existing reactor facility licensees that SRO-I applicants "*must*" be evaluated in both the SRO and ATC positions.

Therefore, given that new Instruction 4 (Form ES-301-5) was intended for only new reactor facility licensees, the following clarifications/changes will be implemented immediately and incorporated into the next revision of NUREG-1021:

### ES-301 D.5.a

Based on the anticipated crew compositions, determine the number of scenarios and scenario sets necessary to rotate each RO and SRO-I applicant into the lead reactor operator (i.e., the “at-the-controls”) position. For example, ... and every RO applicant rotates through the balance-of-plant (BOP) position for at least one scenario.

However, for new reactor facility licensees that use the ATC operator primarily for monitoring plant parameters, the chief examiner may place the SRO-I applicants in either the ATC or BOP position to best evaluate the SRO-I in manipulating plant component controls per Competency 3.

### Form 301-5 Instruction 4

For new reactor facility licensees that use the ATC operator primarily for monitoring plant parameters, the chief examiner may place SRO-I applicants in either the ATC or BOP position to best evaluate the SRO-I in manipulating plant controls.

### **302.13**

**Can a surrogate operator be used to replace an applicant who has already completed the minimum event/scenario requirements in ES-301 (of [NUREG-1021](#)), thereby limiting the applicant’s risk of making additional errors?**

UPDATE: refer to Section B of ES-3.4.

The NRC staff generally will not accept this practice for the following reasons:

- Section D.1.j of ES-302 (of [NUREG-1021](#)), which addresses the use of surrogate operators, clearly states that surrogate operators would be used when they “are required to complete the operating crew (e.g., during retake tests or for a class consisting entirely of ROs)”.
- Section D.3.o of ES-302 directs examiners to run additional scenarios, if necessary, to ensure that all required evolutions and competencies are covered. For example, if an applicant has only one opportunity to demonstrate competence on a particular rating factor, but makes an error that does not affect his or her performance of a critical task, the examiners shall give the applicant another opportunity to demonstrate competence or to make a second error that would justify an unsatisfactory score for the subject rating factor (refer Section D.2.b of ES-303 for detailed simulator grading instructions).
- Part E, Item 11, of Appendix E (of [NUREG-1021](#)), which is used to brief license applicants in preparation for the simulator operating test, clearly states that the initial test will normally consist of two or three scenarios.
- Although the staff routinely emphasizes the maintenance of consistency and fairness in the examination process, those objectives are generally subordinate to the overriding goal of maintaining reactor safety by ensuring that only qualified and proficient applicants are licensed to manipulate the controls. The minimum event/scenario requirements specified in ES-301 are meant to ensure that examiners will have sufficient performance data to evaluate the applicant on every competency applicable to their license level. Exceeding the minimum requirement by one scenario is not a significant consistency issue; moreover, a reasonable amount of variation in the number and level of difficulty of events and scenarios between one applicant and another is to be expected and does not invalidate the examination process. A properly-trained and

competent license applicant should easily be able to pass the operating test regardless whether it contains two or three scenarios. Additionally, the staff generally prefers to use surrogates only when necessary because they are specifically briefed on the scenario contents and could inadvertently affect the operating test outcome and complicate the licensing decisions.

Therefore, surrogate operators will not be permitted to replace applicants solely because these applicants have performed the minimum event/scenario requirements.

#### **401.4**

##### **Evaluate changing initial exam grading to a curve for pass/fail.**

As noted in Section B.3.a of Appendix A of [NUREG-1021](#), the NRC's initial and requalification examinations, like most licensing examinations, are criterion-referenced rather than norm-referenced tests. This means that there is a pass-fail or minimal cut score or grade that every examinee must achieve to demonstrate sufficient knowledge and ability to safely operate the power plant.

If the passing grade is determined by comparing each applicant's score with that of the group taking the examination at that time, an applicant who scores in the low 80s could fail if all the other applicants score above 90%.

#### **401.6**

##### **Clarify what you mean by "random selection." Does the random selection have to go all the way down to the specific K/A number?**

UPDATE: refer to Section B of ES-4.1 for random sampling process

For purposes of the NRC's licensing examination, random means without bias or predisposition.

Yes. Section D.1.b of ES-401 in [NUREG-1021](#) requires the K/As to be systematically and randomly selected from the applicable NRC K/A catalog ([NUREG-1122](#) or [-1123](#)). Attachment 1 of ES-401 describes a sample method for selecting K/As, with Step 4 specifically instructing that the K/A statements within each randomly selected K/A Category will also be randomly selected. If you select a K/A that is not applicable to your plant or that has an importance value less than 2.5, you may have to randomly select another K/A statement. Failure to train on a selected K/A is not an acceptable basis for selecting another one. If you determine, when reviewing the completed outline in accordance with Section D.1.d, that one of the K/A Categories is over- or under-sampled, you should randomly select another K/A. In accordance with Section D.2.f, if your question bank contains more than one question applicable to the selected K/A and there is no appropriate basis for selecting a specific question (e.g., cognitive level, discrimination validity, operational orientation) it would be best to randomly select from among the questions rather than chose the same question every time.

In accordance with Section D.1.b, facility licensees shall describe for the NRC the process that was used to generate the examination outline and the reasons for rejecting any randomly selected K/A statements.

#### **401.10**

**After systematically/randomly generating a sample plan you discover it is lopsided in one area, how do you "balance" the exam? Where do the questions come from?**

If, for example, the systematic/random outline for Tier 2 ends up with 7 items under Category K1 and only 1 item under Category K4, you can balance the coverage by randomly deselecting one of the items in Category K1 and then randomly selecting a replacement item for the same system from Category K4. If Category K4 for that system does not include a K/A with an importance rating of 2.5 or higher, you can randomly select another system within the same group. Always remember to document and justify any changes in accordance with Section B of ES-4.1. The questions used to implement the outline once it is approved by the NRC shall be taken from the bank, modified from bank questions, or newly developed in accordance with Section B of ES-4.2.

#### **401.20**

**How large must the exam bank be before you can select 50 questions from it for use on an exam?**

**Is there a bank size limitation for use of 50 questions?**

**How can facilities maximize use of bank question (up to 50) if they don't fit the sample plan? Recommend systematically selecting the first 50 questions from bank, then systematically selecting remaining K/As to complete outlines. Could also select 40 questions from bank systematically for modification.**

The NRC is not controlling the size of examination banks. The limits on bank use in Section B.4 of ES-4.2 apply to every facility licensee, regardless of its bank size. However, from a practical standpoint, the larger the licensee's bank is, the more questions will match the systematically and randomly selected sample plan, and the fewer questions the licensee will have to modify or develop. The national examination question bank being maintained by the Institute of Nuclear Power Operations should greatly enhance licensees' ability to find bank questions that fit their systematically developed sample plans. Recommendations noted.

#### **401.21**

**We are allowed to use 50 questions from the exam bank (including 25% exact repeats from the last two exams and quizzes), 40 modified questions, and 10 new questions.**

**In theory we would only need to write 10 new questions. This reduces burden for the exam writer and reduces difficulty on the student. Students generally are exposed to the entire exam bank during the program so the "50" becomes 25. Also, with the lottery (systematic-random) method of choosing K/As, the likelihood of having more than a handful of repeat or modified questions.**

**Recommend allowing exam writers to randomly select the 25 repeats and 40+ for modification by pulling questions randomly from all questions asked of the students during the program.**

Comment and recommendation noted.

The NRC has made no effort to control the size of licensees' examination banks, nor does it control the number of quizzes or questions asked of the students during their training program. The proposed solution would certainly make it easier to prepare an examination, but it would also be a disincentive for licensees to ask any more than 65 questions during the training program.

The changes implemented with Supplement 1 to [NUREG-1021, Revision 8](#) (refer to Section D of ES-401) raised the upper limit on the number of questions on an exam that can be taken directly from an examination bank from 50 to 75 percent. However, because only those questions that fit the systematic and randomly generated sample plan can be used on the examination, the practical limit on bank use is, for the time being, determined by the size of the bank from which the questions are drawn. Although facility licensees may have to develop more new and modified questions in the short term, the burden should decrease as the local and national examination banks grow in size.

#### **401.27**

**With a National Exam Bank, how should utilities address number of questions from bank, modified, or new?**

**If the Institute of Nuclear Power Operations (INPO) creates a national initial licensed operator exam bank, will the NRC consider the INPO bank to be current questions that cannot be used as new questions on the exam to be developed?**

**If INPO develops/maintains a national exam bank, what will be the limitations associated with this bank? i.e., will exams still be subject to the 50/40/10 criteria? If so, can 50% of the questions come from the bank? Current NUREG-1021 guidance allows NRC review for "obvious flaws" for exam questions used on NRC exams since October 1995, "at that facility." How will this affect NRC review of exam questions that are part of the national exam bank used at other facilities? What type of security restrictions will be placed on the bank?**

**Is there a current effort to share "opened and published" exam banks between utilities? If not, who would be interested in this?**

**On Form ES-2.3-4, it is required to categorize questions as to the number questions from the bank, modified, or new. For questions taken from a non-facility specific exam bank (the INPO bank for example) the questions must be changed as appropriate to make them correct for the facility. In this situation, the question may be different than the original bank question, but may not meet the criteria to be a "modified question" and are also not "new." What should these questions be called and how should they be categorized on the ES-2.3-4 form?**

The NRC reassessed its policies regarding bank use based on the results of the Revision 8, Supplement 1 trial examinations. In accordance with Section C.1.h of ES-201, questions obtained from any bank will now be treated as "bank" questions. However, only those bank questions that are previously validated at that facility will be eligible for reduced review by the NRC. In accordance with Section D of ES-401 the upper limit on the number of questions on an exam that can be taken directly from an examination bank has been raised from 50 to 75 percent.

Other than the National Examination Bank being developed by INPO, the NRC is not aware of any utility initiatives to share banks. The regional training organizations, owners' groups, Nuclear Energy Institute, and INPO might be able to provide more information in this area.

The use of an INPO bank item - by tailoring or adapting the item to meet the technical specifications of your utility for examination use - is an acceptable and appropriate step toward meeting both technical and psychometric validity. As such, this kind of bank item adaptation results in an item that remains a BANK item and should be categorized as a BANK item. In this instance, you have not MODIFIED the item, as per the definition (ES-401, Section D.2.f), nor can you consider it to be NEW since it has been drawn from the INPO bank. The difference lies in the degree of change you make to the bank item. We expect utilities to make some adaptations to BANK questions so as to fit the logical terminology (stem and distracters) for its own utility. In such cases, you still have a BANK item. However, if you use a bank item and modify it (beyond nomenclature changes) by (1) changing one or more of the conditions in the stem and (2) changing at least one distracter such that you have created a similar, but like kind item, then you can properly categorize it as a MODIFIED item. NEW items, on the other hand, do not have their basis from a drawn bank test item. Rather, they have been developed from the author's "fresh start" and, as such, are categorized as NEW.

#### **401.28**

**In light of the NRC's new goals of reducing unnecessary regulatory burden and increasing efficiency and effectiveness, would it be possible to allow a licensee to build an initial license exam entirely from the bank (rather than 50% new questions), assuming the bank was an appropriate size and security concerns could be solved?**

The NRC continues to believe that every examination should have some new and/or modified questions. Based on the results of the Revision 8, Supplement 1 (of [NUREG-1021](#)) trial examinations, the NRC staff raised the upper limit on bank questions to 75 percent, with the remaining questions being either new (at least 10) or modified bank questions (refer to Section D.2.f of ES-401). However, because only those questions that fit the systematic and randomly generated sample plan can be used on the examination, the practical limit on bank use is, for the time being, determined by the size of the bank from which the questions are drawn. Although facility licensees may have to develop more new and modified questions in the short term, the burden should decrease as the local and national examination banks grow in size.

#### **401.30**

**Regarding ES-401, Section D.2.d: Cannot write SRO only questions for all seven items listed under §55.43(b). Only three items lend themselves to SRO only type questions. Need multiple examples and training for writing SRO only questions for all seven items.**

The NRC's initial response to this question indicated a commitment to look "into the quality and consistency of SRO-only questions and [the NRC] may develop additional guidance in this area." The review was completed in March 2010. The clarification guidance for SRO written exam items is located

<https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?AccessionNumber=ML100710003> and provides examples of SRO exam items for each of the seven 10 CFR 55.43(b) topics.

#### **401.34**

**For 5 hour exams, do the exams need to be time validated for 5 hours (i.e., does the exam have to be made more difficult because the time has been extended?)**

No. The exams do not have to be made more difficult. Section D.2.c of ES-401 (in [NUREG-1021](#)) indicates that the examination should be designed so that competent applicants can take and review it within four hours, the same as before. Moreover, Section D.4.d of ES-402 has been revised to increase the nominal time limit for the RO exam to 6 hours in order to reduce the need for interaction with the NRC regarding minor time extensions and to ensure that the applicants are not time-limited when taking the exam.

#### **401.39**

**What would it take to go back to (pre-revision 8) a site-specific knowledge and abilities (K/A) catalog in line with the systems approach to training (SAT) based process?**

Before Revision 8 of [NUREG-1021](#), when the NRC and its contractors prepared all of the licensing examinations, the NRC determined what K/As would be tested. The NRC generally used [NUREG-1122](#) or [-1123](#) (which are based on a generic job task analysis performed by the Institute of Nuclear Power Operations with importance ratings established by a panel of industry and NRC subject matter experts) to ensure that the examinations were content-valid, but site-specific catalogs were permitted on a case-by-case basis. Now that facility licensees are preparing most of the examinations and determining what K/As will be tested, the NRC believes that certain measures are necessary to ensure that consistency and public confidence are maintained. The NRC staff believes that it would be inappropriate to give licensees complete control over the content of the training program as well as the licensing examinations. As explained in response to Question 4.1.7 (401.12) [NUREG-1021](#) contains provisions for facility licensees to add, substitute, or delete specific K/A requirements on a case-by-case basis if they are justified and agreed to by the NRC chief examiner.

#### **401.44**

**With a completely random process, the generic K/As tend to get over-sampled (about 30%) on the written exam. Since the administrative section of the operating test is all generics, they tend to get way over-sampled. Can the generics be eliminated from the plant systems and emergency/abnormal plant evolutions (E/APE) tiers?**

Revision 0 of the NRC's K/A Catalogs ([NUREGs-1122](#) and [-1123](#)) included a list of system-generic K/As at the end of every system and E/APE. Those K/As were sampled as part of Tiers

1 (E/APEs) and 2 (plant systems) of the examination. When the NRC revised the K/A Catalogs, the system-generic K/As were subsumed in Section 2, "Generic Knowledge and Abilities," but there was no intent to change the distribution of questions among the three tiers of the exam. Consequently, the guidance in Section D.1.b of ES-401 indicates that only those generic topics that are relevant to the selected evolution or system will be included in the sample for Tiers 1 and 2. Section D.2.a of ES-401 further clarifies that the questions selected for Tier 3 shall maintain their focus on plant-wide generic knowledge and abilities and not become an extension of Tier 2, "Plant Systems." If none of the generic K/As were testable in Tiers 1 and 2, it would not be possible to ask a system-specific technical specification question.

#### **401.50**

**Is NRC considering allowing the Institute of Nuclear Power Operations (INPO) to oversee the development and administration of the written test?**

The Nuclear Energy Institute (NEI) at one time proposed that option for consideration by the NRC staff, but it was determined to be unworkable.

#### **401.51**

**Why isn't the Control Room Ventilation System listed as one of the systems in the PWR KA catalog? Was this a deliberate omission? I noticed that Control Room Ventilation is included in the BWR catalog.**

8/10/2021 Update: incorporated into NUREG-1122 and [-1123] "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Pressurized [Boiling] Water Reactors" revision 3.

The NRC's K/A catalogs, [NUREG-1122](#) [and [1123](#)] are based on the job/task analysis (JTA) performed on the licensed operator position by the Institute of Nuclear Power Operations (INPO). The INPO JTA identified more than 28,000 knowledge, skills, and abilities (K/As) and nearly 800 tasks to be used as a basis for developing training programs applicable to all PWR and BWR facilities. The K/A catalogs were reviewed by licensed SROs as well as license examiners from the NRC. These experts reviewed each statement for accuracy and completeness and then rated each statement with respect to its importance to safe operation. Many of the INPO K/A statements were omitted from the NRC's K/A catalogs because they were too specific and/or too elementary for use in developing license examinations, or, more importantly, because they had little bearing on the safe operation of the nuclear plant - the job content that is of primary interest to the NRC.

The two K/A catalogs were developed independently and, consequently, had a number of significant differences. The PWR catalog was issued in July 1985, and the BWR catalog was issued in September 1986. Both catalogs were revised in 1995 and again in 1998 to incorporate links to the applicable [10 CFR 55.41-45](#) item numbers, and to reorganize and/or expand the generic K/A statements, the safety functions and plant systems, and the emergency and abnormal plant evolutions. Revision 1 added the component cooling water and instrument air systems (which were already covered in the PWR catalog) to the BWR catalog; however, no new systems were added to the PWR catalog. Without doing a significant amount of research into the archives, it would be difficult to say for sure whether the inconsistency you have raised was deliberate or coincidental.

As noted above, the K/As in NUREG-1122 and 1123 are but a subset of the total population of K/As that a license applicant needs to master to become a competent operator or senior



operator. The fact that a particular K/A or system did not make it from the original INPO JTA into the NRC's K/A catalog does not justify its omission from a facility licensee's systematically-developed operator training program, nor does it mean that the K/A or system is inappropriate for testing on the licensing examination. As indicated in 10 CFR 55.41-45, the K/As covered on the RO and SRO license examinations will be drawn, in part, from learning objectives derived from a systematic analysis of the operators' duties performed by each facility licensee and contained in its training program. Although the control room ventilation system is not included among the 45 systems in the PWR catalog, K/As related to that system may still be selected for testing in connection with other systems (e.g., area radiation monitoring (ARM) system - K1.04), abnormal plant evolutions (e.g., accidental gaseous rad waste release - AA1.02), and the generic K/As (e.g., 2.1.26 - knowledge of industrial safety procedures such as chlorine). Moreover, note that Revision 9 of ES-401 (in [NUREG-1021](#)) requires test developers to add any operationally-important systems or E/APEs that pertain to the facility but are not included in the generic lists on Form ES-401-1 to the examination outline before selecting examination topics.

#### **401.52**

**Are technical specification (TS) action statements that require action "within one hour" addressed by [NUREG-1123](#), K/A 2.2.39? We have received different interpretations from different examiners. We believe that they are NOT since action could be taken at the end of sixty minutes and still be within compliance.**

Although the "within one hour" TS action statements and K/A 2.2.39 were not identically worded, the TS action statements and the K/A 2.2.39 wording was equivalent in their intent and meaning. It is agreed that action might not be taken or initiated until 60 minutes have elapsed. However, should that be the case, the requisite action or actions must also be completed by the end of 60 minutes. In other words, the knowledge required for the operators to properly complete the required system action statements is the same no matter if completed in 59 or 60 minutes. Therefore, the wording difference has been rectified by revising K/A 2.2.39 in NUREG-1122 and NUREG-1123 to read "less than or equal to one hour." Related clarification for valid testing of TS K/As and K/As without a related facility learning objective can be found in the responses to Questions **Error! Reference source not found.** and **Error! Reference source not found.**

#### **402.1**

**Regarding the written exam duration: The exam duration should be presented to candidates as: "The exam duration is scheduled (targeted) for 5 hours: but extensions can be granted," i.e. don't rush through exam to meet the 5 hour time limit.**

**What is the interpretation of "prior approval" for extensions of 5 hours for the initial written examination? Why is there a time limit for written exams?**

**Why not just an upper limit with no extensions? Maybe 7 hours?**

Comments noted. The time limit is largely an examination design and resource planning tool, and is not intended to rush the applicants. Some applicants will take whatever time is allowed, which would place an additional burden on facility proctors and NRC examiners who are required to be available by telephone while examinations are being administered.

As noted in Attachment 1 (Section II) of [SECY-98-266](#), the nature of the NRC licensing examination is such that allowing sufficient time to demonstrate knowledge is of primary concern. Section E.4 of ES-401 (in [NUREG-1021](#)) encourages facility licensees to conduct a

peer review of the examination, which should confirm that the level of difficulty is appropriate and that the applicants will have sufficient time to complete the exam.

As discussed in Section C of ES-402, it is important that the licensee coordinate the administration of the written examination so there will always be an NRC contact available to respond to questions or problems that might arise. Therefore, if the facility licensee determines, while proctoring the exam, that any of the applicants will not be able to complete the examination within the time allotted, the licensee shall contact the NRC Regional Office as discussed in Section D.4.d of ES-402, before granting the extension and, again, after all the applicants have completed the examination. The NRC does not want to discover after the fact that the licensee has given the applicants more than the allotted time to complete the examination. Per Section E.3.a of ES-501, the NRC will document the time extension in the examination report and expect the facility licensee to evaluate whether a problem with the examination validation or the training of the applicants is indicated.

The fact that Supplement 1 to Revision 8 (specifically Section D.4.d of ES-402) extended the nominal time limit for completing the RO exam to six hours, that the examination is designed for four hours (refer to Section D.2.c of ES-401), and that Revision 9 shortened the examination to 75 questions should eliminate the need for time extensions under normal circumstances.

#### **501.2**

**ES-501, Section C.1.a (Bullet 4) states that any comments made by the applicant(s) after the written exam with explanations of why the comment was accepted or rejected must\* be submitted to the NRC. (\* To be consistent with ES-402, Section E.4, this submission should be "optional.")**

**Do all comments made regarding the written exam by the applicant and a reason for accepting/rejecting the comment need to be submitted (ES-402, Sections E.4 and 5). I was told not to submit student's rejected comments, only those that cause an exam change. This is a "should," can it be changed to only sending in comments requiring an exam change?**

ES-402 (Section E) and ES-403 (Section D) encourage facility licensees to collect examination comments from the license applicants and consider them during the initial grading process because this will enhance examination validity. Although licensees are only required to submit comments and documentation to the NRC to justify question deletions and changes in the answer key, it is useful for the NRC to know, if an applicant submits an appeal, that the facility licensee had previously reviewed and rejected the applicant's concern(s). If the facility licensee wrote the examination, the NRC may request the licensee to state its position regarding the applicant's contentions.

Supplement 1 to Revision 8 of [NUREG-1021](#) changed Section C.1 of ES-501 to make it consistent with ES-402.

#### **501.4**

**Since senior site management tends to "expect perfection," maybe the NRC could communicate that a number of comments are expected in the final examination report.**

**Comments contained in reports should remain specific to deviations from 10 CFR part 55 or NUREG-1021. (e.g. state the facts, refrain from the use of "several" or "many.")**

**When does the clock start for the 20% untestable questions?**

Comment noted. The NRC has tried to communicate exactly that message during the operator licensing workshops conducted by each of the NRC Regional Offices.

Supplement 1 to Revision 8 of [NUREG-1021](#) clarified the guidance in Section E.3 of ES-501 regarding the portrayal of examination quality in the final report. It established a 20% unacceptable test item threshold below which the report will simply indicate that the proposed examination was within the expected range of acceptability. This policy has been in effect since the spring of 2000.

#### **501.7**

**Has the NRC considered changes resulting from deregulation with regard to making examinations public?**

In accordance with [10 CFR 2.390](#), all final NRC records and documents will be made available in the NRC's Public Electronic Reading Room unless there is a compelling reason for non-disclosure or the document qualifies for one of the exceptions specified in the regulation. It is the intent of the NRC to automatically make publicly available information that is anticipated to be of interest to the public without anyone having to file a request under the Freedom of Information Act. Without more specific information, it is unclear how the deregulation of the electric power industry would or should affect the NRC's responsibility to keep the public informed regarding its health and safety mission.

#### **602.1**

**Why is there a static written exam if the NRC administers requalification? What value is added?**

**Static Exams - If the NRC administers a requalification exam, a static is required. If we administer our own, a static is not required. Some utilities have stopped maintaining a static exam bank and use of it, while others (such as us) are continuing to use them. The reason we do is, if NRC comes into a program that hasn't done statics for a long time, and the crews are subjected to statics, and they aren't used to them, a high failure is likely. So, why does this difference exist?**

**Why is there a difference between what the NRC would do for a "for cause" requalification exam versus facility requalification exam? This is unfair to the operators and may lead to a high failure rate.**

The requalification examination format, including the static written examination, was developed by an NRC/industry working group in 1987. The NRC understands that most facility licensees have stopped using the static written format since the NRC shifted to an inspection-based oversight program in 1994, and the fact that it is still included in the ES-600 series of [NUREG-](#)

[1021](#) has prompted some facility licensees to continue using it as well or at least to maintain their static scenario banks. As discussed in Section C of ES-601, if a facility licensee's requalification program uses an examination structure or methodology different from that described in the ES-600 series and the NRC decides to conduct an examination, the NRC will consider preferentially using the facility licensee's requalification examination structure or methodology if it is different from that described in the ES, provided it complies with [10 CFR 55.59](#) and is free of significant flaws; the regional office shall consult with the NRR operator licensing program office to determine the appropriate examination procedure.

#### **602.2**

**What is the policy/requirement regarding extension of time limit for the requalification written exam? ES-401 allows time extensions. Does the ES-600 series? Are time extensions for requalification exams similar to the initial written?**

Update: The NRC no longer approves time extensions for initial written examinations so the basis for this determination is no longer in effect.

Although the examination should be time-validated to preclude the need for extensions, the NRC would consider extending the time limit for NRC-conducted requalification examinations, as it does for initial licensing examinations. When facility licensees conduct their own requalification examinations, the NRC expects them to comply with their program requirements (including the ES-600 series, as written, if the licensee has endorsed the ES as part of its program).

#### **602.4**

**If the yearly requalification exam is randomly and systematically developed, can we eliminate the 50% overlap restriction that currently exists?**

Although there is no official 50% overlap restriction (refer to Section E.3.b(6) of ES-601 of [NUREG-1021](#)), the random and systematic development of requalification exams would eliminate the NRC's concerns regarding exam integrity and validity. Moreover, assuming that a facility has a reasonably sized examination question bank, it would be highly improbable that a 50% overlap would occur under a random and systematic selection process.

#### **605.14**

**Revision 11 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," states that an amendment to an operator's license requires a signature from the affected licensed operator. It also states that for medical condition license amendments the affected licensed operator can satisfy this requirement by signing the NRC Form 396, "Certification of Medical Examination by a Facility Licensee."**

**Given that the current NRC Form 396 does not have a block for the signed statement of fact from the licensed operator, how should the facility licensee proceed to properly request a medical license amendment for a licensed operator?**

The next planned revision to NRC Form 396 will include a block for the operator's signature regarding the facility licensee's submission of a medical condition license amendment. However, the planned NRC Form 396 revision is currently still in progress and not in effect. Therefore, in the interim, the NRC Form 396 submittal requesting a medical condition license amendment should be accompanied by a letter from the licensed operator acknowledging the

proposed amendment. Please note that we anticipate the revised NRC Form 396 will be finalized and go into effect in early Fall 2017.

#### **IP.12**

The term "biennial" is defined in NUREG-1021, Appendix F as being: "In most instances, a period of time equal to 730 days and synonymous with the term "two years." Biennial requirements can extend beyond 730 days if the requirement is met during the anniversary month of the second year. For example, a biennial medical examination last performed on January 10, 1995, would be due again by January 31, 1997. January is seen as the anniversary month, the period of time between the two examinations is longer than 730 days, but the biennial requirement is satisfied."

This term (biennial) has often been used in discussing the requirement for a comprehensive written examination required as part of the 24 month continuous requalification program noted in 10 CFR 55.59(a).

**QUESTION: Is the comprehensive written examination required at the end of the 24 month program to be completed for each licensee within 30 days of the anniversary date of their last written examination?**

Update: It can be found in Section A.1.a of ES-5.3 in NUREG-1021 revision 12 and biennial is defined in ES-8.

This issue has been addressed in Section C.1.a of ES-605 in [NUREG-1021](#) revision 11

#### **Gen.2**

**Will there be a revision to [NUREG-1262](#) at any time soon? NUREG-1262 contains information that conflicts with [NUREG-1021](#). Is there any intent to make NUREG-1262 current?**

No. The NRC does not plan to revise NUREG-1262, "Answers to Questions at Public Meetings Regarding Implementation of Title 10, Code of Federal Regulations, Part 55 on Operators' Licenses," which was published in November 1987. At the NRC staff's request, the Nuclear Energy Institute provided a list of questions and answers that appear to be out-of-date, but revising the NUREG remains a low priority. If there are conflicts between NUREG-1262 and any other guidance issued since then (including NUREG-1021 and the answers to these questions), the more recent guidance would take precedence.

#### **Gen.4**

**Low power scenarios are defined as criticality to 5% reactor power. Is this the expectation to receive credit for a low power scenario?**

Yes. The NRC staff's evaluation of shutdown and low-power operations at commercial nuclear power plants, which was reported in [NUREG-1449](#), included operations with the reactor in the subcritical (i.e., shutdown) state and in transition between subcriticality and 5 percent power (i.e., low power). When NUREG-1021 was revised to place more emphasis on those operating conditions, it made more sense to use the same definition than to develop a new one. The definition, which has been incorporated in ES-8 of NUREG-1021, applies to both the initial and requalification examinations.

The NRC intends for the operating tests to sample the full range of operating conditions and power levels so they do not become predictable. It is unlikely that the NRC would deny credit for a scenario simply because it exceeded the power limit specified in a somewhat arbitrary definition.

### **Gen.12**

#### **Will you "endorse" the Sonalyst Workshop?**

The NRC reviewed the Sonalyst Workshop to ensure that it was consistent with NUREG-1021. Legally, the NRC cannot endorse specific vendors or programs provided by them.

### **Gen.15**

#### **Why did the NRC, Institute of Nuclear Power Operations (INPO) , and Nuclear Energy Institute (NEI) meet on December 16, 1999 to discuss future options for the exam process without involving industry representatives in the process?**

The NRC issued a meeting notice on December 7, 1999, and members of the public and nuclear industry were welcome to attend. The NRC assumed that NEI would follow up with the appropriate operator licensing task force representatives as it had for previous meetings.

### **Gen.33**

#### **Does the NRC expect us to report an episode of vasovagal syncope only during blood draw? Should an operator with such an episode have a no-solo license?**

Section 5.3.7(2) [5.4.7(3)] of ANSI/ANS-3.4-1983 [1996] indicates that a history of disturbance of consciousness within the past five [two] years **without a satisfactory medical explanation of the cause** (emphasis added) shall be considered a disqualifying condition for operation without restriction. Moreover, Section 5.3 [5.4], "Disqualifying Conditions," states that a history or other indication of any disqualifying condition shall be considered disqualifying **unless adequate supplemental findings demonstrate that no disqualifying condition [now] exists** (emphasis added). Accordingly, the facility should remove the operator from licensed duties until their physician can evaluate the episode to determine its underlying cause. If a satisfactory medical explanation cannot be identified, then the operator should be considered permanently disqualified and the facility licensee should report the incident and request a license restriction (most likely no-solo).

However, the "simple faint" or vasovagal syncope with blood draw is quite common and **is considered a satisfactory explanation of the reason for loss of consciousness and does not require a no-solo license**. It can usually be prevented by having the donor lie flat during the draw and for some short time afterward.

**Gen.39**

**The format and organization of [NRC Form 396](#) is confusing when reporting new or changed medical conditions and recommending appropriate license amendments when the existing license already has other, unrelated restrictions.**

NRC Form 396 is generally revised every three years when the associated OMB clearance is renewed and the public is given the opportunity to comment on the form and the information collection burden that it imposes on the industry. The Operator Licensing Program Office will take this recommendation into consideration the next time the form is revised.

**Gen.52**

**I've noticed that the 1996 version of ANSI/ANS-3.4, Section 3.3, states that a physician may temporarily restrict an individual's duties as a licensed operator for a period as long as 30 days, without formal NRC notification. Does this imply a requirement to report temporary conditions lasting longer than 30 days to the NRC if a facility has committed to use the 1996 standard?**

Please refer to Question **Error! Reference source not found.** in the main OLPF document for a discussion of "permanent disability."

The only related regulatory requirement, as stated in [10 CFR 55.25](#), is to report permanent physical or mental conditions within 30 days of learning of the diagnosis. As discussed in Question Gen.20, there is no strict time limit on when a condition must be considered permanent, and it is largely left to the licensee physician's judgment as to whether the operator will be capable of meeting the applicable medical standards in the foreseeable future. The NRC expects the facility licensee to administratively restrict the operator's activities, as appropriate, during the term of the temporary condition. However, the NRC does not require formal notification for temporary conditions that exceed 30 days. The NRC only requires notification, within 30 days, when a developed physical or mental condition is determined to be permanent and causes a licensee to fail to meet the applicable ANSI/ANS-3.4 requirements/standards or could adversely affect performance of assigned operator job duties or cause operational errors endangering public health and safety. The provision for reporting temporary duty restrictions as stated in Section 3.3 of ANSI/ANS-3.4, 1996, is more restrictive and is not required to comply with the regulations.

**Gen.53**

**Must detailed medical evidence be submitted with [NRC Form 396](#) (associated with either an initial or license renewal application) for minor medical conditions related to corrective lenses or hearing aids?**

Update: The NRC clarified in the form instructions that medical evidence does not need to be submitted for hearing aids or corrective lenses.

The short answer is “no.” During the [10 CFR Part 55](#) rule change in 1987, the NRC received public comments that detailed medical evidence should not be required to be submitted for common conditions, such as corrective lenses and hearing aids. The staff agreed and modified Form 396 to require medical evidence only for restrictions other than corrective lenses or hearing aids. As NRC Form 396 was again modified in later years to accommodate new restrictions (such as “no solo,” “shall take medication,” and “shall submit medical status report”), the requirement to “attach supporting medical evidence for NRC review” was moved to the section header for simplicity, rather than include it with each applicable license restriction in the list. This change was not meant to undo the 1987 change which excluded corrective lenses and hearing aids from the medical evidence requirement. The NRC will consider clarifying Form 396 during the next revision to remove any confusion.