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James W. Davis  
DIRECTOR, OPERATIONS  
NUCLEAR GENERATION DIVISION

2/3/03

68 FR 5312

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December 19, 2003

Secretary,  
Rules and Directives Branch, Division of Administrative Services, Office of  
Administration  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

ATTENTION: Rulemaking and Adjudication Staff

**SUBJECT:** Comments on Draft Revision 9 of NUREG-1021, "Operator Licensing  
Standards for Power Reactors (68 Federal Register 5312, February 3,  
2003)

The Nuclear Energy Institute<sup>1</sup> offers the following comments on the subject *Federal Register* notice, soliciting public comments on the Draft Revision 9 to NUREG-1021. This proposed change to the NUREG was made available, over a protracted period, for public comment and voluntary use. The stated goal of the proposed change is to reduce regulatory burden on facility licensees and improve efficiency, while maintaining operational safety and public confidence.

The industry recognizes the NRC staff's substantial effort in developing the proposed changes, and in interacting with industry representatives during the comment period. A significant number of nuclear utilities representing the four regional training organizations chose to pilot the proposed changes, in order to more fully evaluate their implications. A number of comments were provided by individual utility training departments and from the STARS consortium. In addition, the NEI Licensed Operator Task Force comprised of operator training professionals from the industry and INPO extensively reviewed the draft changes.

<sup>1</sup> NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including regulatory aspects of generic operational and technical issues. NEI members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

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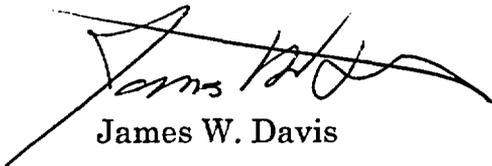
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G. Toenther (SKG)

Secretary  
December 19, 2003  
Page 2

The industry appreciates the opportunity to have commented on the proposed draft, as well as the protracted comment and voluntary use period afforded by the NRC.

If there are any questions on the attached comments please contact Bob Evans of the NEI staff (202-739-8101, [rce@nei.org](mailto:rce@nei.org)), or me.

Sincerely,

A handwritten signature in black ink, appearing to read "James W. Davis", with a long, sweeping horizontal stroke extending to the left.

James W. Davis

Attachment

# Industry Comments on Draft NUREG-1021 Revision 9

## Industry Comments by Examiner Standard (ES) Number

### ES-201

1. ES-201, Form 3 from 201.d.2.b: Add exception criteria for simulator booth operation and booth communications to the form that allows an instructor with examination knowledge to operate the simulator and perform as the communicator.
2. ES-201 C.1.f: The forms identified at the top of page 4 of 25 should reference ES-401-6 vice ES-401-7.

### ES-202

Paragraph C.1.e refers to “facility licensee’s senior management representative on site.” The use of this rather subjective description has led to various, sometimes contradictory, interpretation and inconsistent application. Note that Forms 396 and 398 also use the same terminology. A definition in terms of the intent, along with some appropriate examples, is suggested for the Glossary in Appendix F.

ES-202 Section D and Form 398: Education and experience guidelines established by NANT are clearly referenced on Form 398, however ES-202 section D still details additional education and experience requirements for RO and SRO candidates. The industry recommends removal of all education and experience requirements in ES-202 and the referencing of NANT guidelines as the single-source document for licensed operator candidate education and experience criteria.

### ES-204

D.1.j has been added to allow the regions to waive the RO written examination for SRO-upgrade applicants in good standing. The industry recommends modifying the second and third items of this definition to state (*italics added for emphasis*):

- (2) Passed his or her most recent requalification examination and is up-to date in the facility licensee's requalification training program, *up to the point of entry into the License Initial Program.*
- (3) Held an active license for 1 year or more. Upon entering the initial license class the license candidate must be current (i.e.: up to date in the facility’s requalification program) but is not required to be active.

## Industry Comments by ES Number (cont.)

### ES-205

The “shelf life” of GFE is proposed to be limited to two years. The industry strongly contends that there is no demonstrated need, from the standpoint of degraded knowledge, reduced plant performance or adverse impact to public safety, to place a shelf life on the GFE. The guidance for GFE contained in ES 205 of NUREG 1021 Final Revision 8 has been and should continue to be satisfactory.

### ES-301

1. The body of ES-301 and Form ES-301-3 need to match. The body of the ES should contain all required limits for the types, categories, etc. of the Admin and Walkthrough JPMs as should the form (see comment #4 below). For example, D.2.a states that no more than 80% of the Walkthrough can come from the facility’s bank but the form states that 20% must be new. While both sections say the same thing, it would be helpful to have the wording match, or if it lived in one place, the industry would suggest providing all requirements on the form itself.
2. Form 301-3: Section 2.b specifies no more than 30% repetition from the last exam. The industry recommends that the limits be changed so as not to be referenced as percentages but instead state the actual number for each section of the exam and for each individual, i.e. RO, SRO Instant or SRO Upgrade. For example, if no more than 30% repeat is required for each section of the JPMs this would equate to: 3 System JPMs for SRO Instants and ROs, 1 System JPM for SRO Upgrades, 1 Admin JPM for RO or SROs. For SRO Ugrades, the industry recommends the option to have an overlap of a total of 3 with no overlap of greater than 2 in any one area.
3. The industry continues to maintain that 10 JPMs are sufficient to effectively evaluate an RO candidate. Consider the following examples: in Final Rev. 8 the RO candidate receives 7 simulator, 3 in-plant and 5 admin JPMs while Draft Rev. 9 has the RO receiving 8 simulator, 3 in-plant and 4 admin JPMs. In both revisions, an SRO Instant candidate is administered a total of 15 JPMs to receive a license to both operate the plant and direct operations. An RO license only operates the plant. The industry therefore proposes 6 simulator, 1 or 2 in-plant and 2 or 3 admin JPMs for RO candidates. The simulator portion of an RO candidate’s examination would be adequately evaluated during the 2 simulator scenarios (minimum of 12 events) and the 6 simulator JPMs. Given RO eligibility requirements and a review of RO candidate performance history on the in-plant JPMs, 1 to 2 in plant JPMs with at least one inside the RCA would be sufficient to evaluate the RO candidate’s in-plant knowledge and abilities. The Admin portion of the RO candidate’s examination would be adequately evaluated in concert with Tier 3 of the written examination by using 2 or 3 Admin JPMs with at least one each in Conduct of Operations and Equipment Control.
4. Form ES-301-3, section 2 (Walk-through Criteria): The industry recommends that the form include all required limits for Admin and Walkthrough JPMs. Examples of limits missing are: the number of JPMs that must be alternate path; requirement for a least one JPM targeting a low power condition; one JPM requiring RCA entry and the performance of local actions for an EOP or AOP; and no repetition of safety functions.

## **Industry Comments by ES Number (cont.)**

### **ES-301 (cont.)**

5. The industry requests that an all-inclusive list of forms be added so that it is understood what forms must be sent with each phase of an examination submittal. Examples of these phases are: final outline submittal; draft exam submittal; final exam submittal; and post exam submittal.
6. D.5.a & Form ES-301-5 no longer require simulator scenarios to include normal and reactivity evolutions. However, these must be replaced by component and instrument malfunctions on a one-for-one basis. SRO Instants do not necessarily have to be evaluated in the primary RO position. The industry therefore recommends that these sections be revised to state that the SRO Instant candidate does not have to be placed on the control panels in a particular positions. In addition, Form ES-301-5 should be revised to be useable for the SRO Instant as well as the SRO Upgrade. Currently the columns are only for RO and BOP positions.
7. The industry requests that the position evaluation requirements be stated for the RO candidate in the Simulator. For example, which of the following are acceptable: RO-BOP, RO-RO, and BOP-BOP?
8. In the interest of reducing unnecessary exam administration, remove Competencies Checklist form ES-301-6.

### **ES-303**

1. C.2 allows examiners to deviate from prescribed grading criteria in Section D for either a case where an error has "serious safety consequences" (may fail an applicant that would have passed otherwise) or where non-consequential errors were made (may pass an applicant that would have failed otherwise). The definition of "non-critical errors" for simulator exams in Draft Rev. 9 appears to be more subjective (open to interpretation) than the guidance found in Final Rev. 8. The industry contends that Final Rev. 8 ES-303 guidance is sufficient and provides the needed flexibility for examiners to apply their well-honed professional judgment when grading simulator competencies. It is also recommended that the behavioral anchor guidance for what constitutes a 3, 2, or a 1 integral rating value be continued in Rev. 9 as well. The industry also recommends removal of the criteria for any non-critical errors leading to a score of "1" in an area, unless the non-critical errors cause a significant degradation in plant or public safety or mitigation strategy.
2. ES-303 does not adequately support analyzing all areas. An example of this is the area of Technical Specifications. The industry recommends that the guidance in Final Rev. 8 be continued since it adequately addressed all required competencies using the existing structure.
3. Should the NRC maintain the new guidance in ES-303, the industry recommends that the section on simulator grading be revised to provide better guidance for what constitutes a non-critical error.

## Industry Comments by ES Number (cont.)

### ES-303 (cont.)

4. Form ES-303-3, competency #4, and form ES-303-4, competency #3: The nominal weighting factors totals do not add up to 1.

### ES-401

1. D.1.d: Final Rev. 8 allowed examination authors to propose 10 site-specific priority K/As. This flexibility has been deleted in Draft Rev. 9. The industry recommends that this option be left in the NUREG. For example, PWR K/A catalog contains no items for the Integrated Control System used at B&W plants. Given this example, the exam author should be permitted to identify up to ten additional K/As based on the facility licensee's site specific task list or other plant-specific, high-priority topics (e.g.: operating events or problems, PRA-identified risk-important systems and operator actions, and recent technological developments) that are appropriate for testing on the written examination. The industry recommends up to 7 RO K/As and 3 SRO K/As that can be site-specific priority items.
2. D.2.f and Form ES-401-6, Item 6: For clarification, the industry recommends stating no more than 75% from the bank, at least 10% new and the remaining questions either new or modified.
3. E.2.d and Form ES-401-9: Psychometric flaw criteria do not agree in these two sections. Form ES-401-9 states that if one distracter is not plausible then the question is unacceptable, while E.2.d that states "Other flaws of a minor nature (e.g., editorial clarifications or enhancements, single implausible distracters) should, as time permits, be corrected before the examination is administered". The industry agrees with the criteria stated in E.2.d and recommends adopting the same wording for use on form ES-401-9.
4. The industry recommends adding guidance to explain the use of the "#" sign on forms ES-401-1, 2, and 3.
5. Section D.1.c states: "Special attention is required to ensure that the SRO examination tests at the appropriate license level. The SRO outline (refer to the right-hand portion of Forms ES-401-1 or -2, as applicable) shall include 25 K/A statements that relate to the topics in 10 CFR 55.43(b)." It goes on to state "K/A statements that are linked to 55.41 topics but not to 55.43 may also be appropriate for developing SRO-level questions if they evaluate knowledge and abilities at a level that is unique to the SRO job position as determined by the facility licensee's learning objectives." Also:

Forms ES-401-1 ES-401-2 in Item #6 state "The SRO K/As must also be linked to 10 CFR 55.43 or an SRO-level learning objective."

ES-401 Attachment 2 Item #3 states "The fact that a K/A does not have a corresponding facility learning objective, was not covered in training, is not specifically cross-referenced to 10 CFR 55.41 or 55.43, or is subject to selection in multiple Tiers, are not sufficient bases for eliminating the K/A from any Tier of the outline."

## **Industry Comments by ES Number (cont.)**

### **ES-401 (cont.)**

The industry contends that these statements are inconsistent and cause confusion in the area of SRO-only questions. This confusion is exacerbated by an answer on the NRC Operator Licensing FAQ website which reads "When the NRC revised NUREGs-1122 and -1123 to incorporate cross-references to specific items in 10 CFR 55, the primary purpose was to establish at least one regulatory connection for every K/A. The fact that a particular K/A does not reference 55.41 or 55.43 does not, in and of itself, disqualify the K/A from testing on the RO or SRO written examination. The guidance in the three sections needs to be consistent. Per 10CFR55.43, an SRO-only question must be tied to a topic in 10CFR55.43 or a facility developed SRO-level learning objective. K/As that are not tied to 10CFR55.43 should be eliminated from random selection UNLESS an SRO-level learning objective exists at the facility. Therefore, ES-401 Attachment 2 should be changed to read in parallel fashion with the body of ES 401.

### **ES-501**

C.2.c. (2<sup>nd</sup> & 3<sup>rd</sup> paragraph): The industry recommends changing the criteria from 5% to an actual number. It is suggested that the criteria be greater than 5 questions for the RO exam portion and greater than 2 for the SRO Only portion. The industry also recommends that the third paragraph criteria be greater than 5 questions for the RO exam portion and greater than 2 for the SRO-Only portion. The industry finds this approach to be reasonable and yet still more restrictive than the Final Rev. 8 criteria.

### **ES-601**

1. C. (2<sup>nd</sup> paragraph): The industry recommends adding wording that clearly states that the facility licensee's existing SAT-based requalification program examination structure shall be utilized for NRC-administered examinations unless the NRC has deemed the licensee's training program to not be in compliance with 10 CFR 55. This approach ensures that facilities who do not utilize two-part written examinations (i.e.: static simulator exams) will not be forced into developing and administering them outside of their existing SAT program.
2. The industry recommends that Form ES-601-1 "Examination Security Agreement", be updated to parallel the request that Form ES-201-1 be updated to provide an exemption to simulator booth operators/communicators.

## Industry Comments by ES Number (cont.)

### ES-701

[NOTE] The industry appreciates the regulatory effort in making ES-701 a more useable stand alone document that supports the Limited SRO scope of training and responsibility. However, the industry suggests that the following issue requires additional attention and subsequent revision:

Form ES-701-5, Operating Test Outline Quality Checklist (Draft Rev. 9 Clarification): The test outline checklist requires that no more than 30% of the material on any part of the test be repeated from the last NRC licensing examination and no tasks are duplicated from the applicants' audit tests. Under these guidelines the criteria can not be met due to the limited number of AOPs/EOPs and Admin procedures that are utilized directly by the LSRO. The Draft Rev. 9 criteria require 3 E/APE JPMs (Previously called CAT B) be selected from tier 1 group 1 (one involving a refueling accident) and 2 E/APE JPMs from tier 1 group 2. Tier 1 group 2 for the LSRO PWR does not contain any AOPs at the CE site that the LSRO is directly accountable for (i.e. there are no abilities for which a JPM could be written). The clarification criterion also increases the total number of JPMs/scenarios from the original 12 (10 JPMs and 2 scenarios) to 15 JPMs. We believe this constitutes over sampling in the 3 areas. Industry consensus is to reduce the total number of JPMs to 10; 4 Admin JPMs, 4 Systems JPMs, and 2 AOP/EOP JPMs. This is a more realistic number that will still allow proper evaluation of the intended areas, while providing flexibility ensuring that they will not be repeating JPM content from the same year's audit or previous years' NRC exams.

The "Clarification Document" provided a different examination outline than that found in Draft Rev. 9 ES-701. A preliminary review of this outline reveals an inability to generate a random exam because the limited KAs available for selection. An example of this would be in the Tier 1 Group 2 listing where there are few, if any KAs that would be relevant to the LSRO job function. This would require most, if not all, of the KA topics to be covered in the Tier 1 Group 1 areas. This is not the intent of the random sample process. It would lead to KAs being repeated on every exam and, therefore, predictability would exist. We suggest keeping the existing percentage layout for the written and possibly combining the HP and GFES portions. The Draft 9 clarification Written Exam Outline Structure could be modified to meet this intent by having just Tiers with all the associated Evolutions or Systems underneath with no "Group" designations on Forms ES-701-1 & 2 for BWR/PWR LSRO Written Outline. This would allow flexibility to include more Evolutions in Tier 1 and Systems in Tier 2 to fulfill the "Tier Totals" criteria. We suggest making the written portion of the exam 35 points overall with Tier 1 worth 5 points, Tier 2 - 20 points, and Tier 3 - 5 points.