



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

July 25, 2019

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SUBJECT: VALIDATION OF PROPOSED REVISION TO OPERATOR INITIAL LICENSING  
EXAMINATION PROCESS

The purpose of this letter is to request industry participation in validating a proposed revision to the operator initial licensing examination process.

The Nuclear Regulatory Commission (staff) is evaluating incorporation of current Generic Fundamentals Examination topics in the initial licensing site-specific written examination and removal of the requirement for individuals to pass a separate, generic examination developed and administered in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Examination Standard (ES) 205, "Procedure for Administering the Generic Fundamentals Examination Program."

The staff is considering incorporation of these topics into one examination to be administered after completion of the facility's accredited systems approach to training program. This will improve flexibility for facility licensees in scheduling the training programs and will better support a level examination schedule within and between the regions. A level examination schedule will improve efficiency and reduce resource burden for both the industry and the staff. Additionally, incorporation of the test item topics for reactor theory, thermodynamics, and components into one final site-specific examination will ensure that these test items are operationally valid and applicable to the facility at which the individual is requesting a license, while maintaining alignment with regulatory requirements.

A validation of this proposed approach is warranted to evaluate the effectiveness of the proposed sample plan, the development of fundamental topic test items, impact on applicant performance, and any effect on the current accredited training program. Therefore, the staff is requesting assistance in validation of this proposal.

Enclosures:

1. Proposed Replacement Pages for NUREG-1021 ES-401
2. Proposed Sample Plan for Option 1
3. Proposed Sample Plan for Option 2

The staff has enclosed proposed change pages for NUREG-1021, ES-401, "Preparing Initial Site-Specific Written Examinations," for use in developing these pilot test items. The proposed changes include formation of a Tier 4, "Theory," for testing the topics of reactor theory and thermodynamics and addition of knowledge and abilities (K/A) catalog Section 5, "Components," to the list of testable K/As for reactor operator Tier 2 generic K/A questions. Two options have been considered for changes to the sample plan question distribution; both options have been enclosed with this letter.

The staff does not intend to use the proposed approach to affect any operator licensing decisions during this validation effort. Therefore, the staff recommends that these test items be developed, validated, and reviewed in accordance with NUREG-1021 using the attached change pages. The staff further recommends that these test items be administered to individuals at the same or similar timeframe as the facility's audit examination. Although these test items should not be used to determine an individual's ability to sit for the staff-administered written examination, the staff is interested in the impact of these test items on test performance. For this validation effort, the staff requests that an overall score for each individual be determined based on the attached sample plan, replacing audit examination test items with the proposed test items. Additionally, the proposed test items should be selected from the applicable K/A catalog using a random and systematic process, as described in NUREG-1021, ES-401. The proposed test items should include three questions testing different topics in reactor theory, three questions testing different topics in thermodynamics, and one to two questions testing component topics in the Tier 2 generic K/As. If requested, the staff can provide K/A statements for proposed test items per the attached sample plan, under examination security requirements. If requested, the staff will also provide the review of the proposed test items to ensure the test items meet the requirements of NUREG-1021 and provide feedback related to test item development for these topics. The proposed completion date for administering these test items is December 31, 2019.

The staff requests that this validation effort be performed at one boiling water reactor and one pressurized water reactor facility for each option provided. Therefore, the staff is requesting facility volunteers for at least two boiling water reactor validation efforts and two pressurized water reactor validation efforts across the industry, to best evaluate the two sample plan options provided.

The staff requests that these facility volunteers provide data and feedback on the outcomes of the proposed Generic Fundamentals Examination integration, including, but not limited to the following:

1. Proposed sample plan feedback – for options 1 and 2
2. Feedback on proposed changes to NUREG-1021 ES-401, enclosed with this letter
3. Pass rates – individual proposed Tier 4 and RO Tier 2 test items
4. Pass rates – overall if the individual was taking the audit examination based on the proposed changes and sample plans
5. Validator feedback – including discussion of operational validity of proposed test items
6. Test taker feedback – including discussion of operational validity of proposed test items
7. Any identified training impacts of the proposed changes

The staff requests this feedback, in a format of the facility's choosing, two months after completion of the proposed test item administration.

If you have any questions, please contact Ms. Theresa Buchanan at (301) 415-2789.

Sincerely,

***/RA Gregory T. Bowman for/***

Christopher G. Miller, Director  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation

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