



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

March 3, 2021

**MEMORANDUM TO:** Theresa Buchanan, Acting Branch Chief  
Operator Licensing and Human Factors Branch  
Division of Reactor Oversight  
Office of Nuclear Reactor Regulation

**FROM:** Travis D. Iskierka-Boggs **/RA/**  
Operator Licensing and Human Factors Branch  
Division of Reactor Oversight  
Office of Nuclear Reactor Regulation

**SUBJECT:** SUMMARY OF JANUARY 21, 2021, PUBLIC MEETING WITH  
INDUSTRY OPERATOR LICENSING REPRESENTATIVES

On January 21, 2021, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting with the Nuclear Energy Institute's (NEI) Licensed Operator Focus Group (LOFG) and other industry operator licensing representatives.

This was the latest in a series of meetings intended to promote efficiency, effectiveness, and open communications for NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," draft Revision 12, which is available for comment until February 16th. The meeting was well-attended by representatives from many licensee training organizations. The NRC staff is considering the feedback received during this meeting to finalize the NUREG revision.

The NRC staff presented a summary of all changes made to NUREG-1021 from Revision 11 to Revision 12 using a slide show ([ML21015A431](#)). Industry asked questions about specific changes during the presentation. Some questions that were asked during the public meeting were not answered due to time constraints are addressed further in Enclosure 3.

Following the NRC staff's presentation, representatives from the NEI LOFG presented information ([ML21021A122](#)) which reflected their feedback on the proposed changes to NUREG-1021, Revision 12. Questions that were asked during the meeting and responses provided are included in Enclosure 3. The LOFG acknowledged that the overall changes to the NUREG improve efficiency and clarity within the examination process. The LOFG expressed concerns regarding the development of critical tasks and the grading of critical and significant performance deficiencies. The NRC staff reinforced that the changes provide risk-informed and objective grading criteria. The NRC staff emphasized that the net increase in failure rates under the proposed grading is expected to be very low, based on a regrade study that predicted a 2-3% increase in failure rate.

The NRC staff encouraged the meeting attendees to provide comments on NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," draft Revision 12, for the NRC staff to evaluate. Comments, questions, and concerns can be made via the Federal

Rulemaking Web Site. Go to <https://www.regulations.gov> and search for Docket ID NRC-2020-0227.

Representatives of the NRC and the nuclear industry agreed that this meeting was useful for the exchange of information and agreed to continue periodic meetings.

Enclosures:

1. List of Attendees
2. Agenda
3. Questions Asked During the Meeting

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SUBJECT: SUMMARY OF JANUARY 21, 2021, PUBLIC MEETING WITH INDUSTRY  
OPERATOR LICENSING REPRESENTATIVES Dated: March 3, 2021

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**ADAMS Accession No.: ML21061A321      NRR-106**

OFFICE	NRR/DRO/IOLB	NRR/DRO/IOLB
NAME	TIskierka-Boggs	TBuchanan
DATE	3/3/2021	3/3/2021

**OFFICIAL RECORD COPY**

List of Attendees – Public Meeting with Industry Operator Licensing Representatives  
January 21, 2021

Name	Organization (via Microsoft Teams/Phone)
Baker, Randy Bartlett, Bruce Buchanan, Theresa Caballero, Bruno Capehart, Phillip Clayton, Kelly Cowdrey, Christian Cushing, Skylar DeSouza, Michelle Guthrie, Eugene Hoang, Dan Iskierka-Boggs, Travis Jackson, Donald Krsek, Robert Lacy, Newton Lanyi, David Litkett, Bernard Miller, Chris McCoy, Gerald Nance, Jim Nguyen, John Nist, Lauren Pelke, Patricia Reeser, David Roach, Greg Robbins, John Ryan, William Scheetz, Maurin Schmidt, Colleen Seymour, Jesse Tindell, Brian Werner, Greg Zoia, Chuck	NRC
Bosso, Tom Dovas, Kostas (Exelon) Ludlam, Gregg (Entergy) Riti, Tim	Nuclear Energy Institute (NEI)
Nicholson, Larry	Certec Corporation
Prost, Craig Robertson, Kelly Robinson, Zac	Columbia Generating Station
Gionnone, Frank	Duke Energy
McClain, Christopher	Dominion

Conroy, William North, Tracy	DTE Energy
Ellithorpe, Gwen Norgaard, Phil	Energy Harbor
Kellen, Ashander Martin, Randal Murray, Rick	Entergy
Dean, Thomas	Exelon
Ouret, Travis	Florida Power and Light
McHugh, Dan Williams Jr, Paul	Hope Creek / Salem
Harper, Kristen	Indiana/Michigan Power Company
Edgington, Clyde Florence, Jim Olberding, Jodie Vaughn, Andrew Yongquist, Kody	Nebraska Public Power District
Baird, Richard Hinze, Jeffrey Moore, Adam Walter, Mark	NextEra Energy
Jorgensen, Nadja Keppen, Hayley Leary, Patrick Morrell, Sean Smith, Matt	NuScale
Kadir, Abdul Richardson, Michael Skov, Jeffrey Tolley, Shannan	Pacific Gas and Electricity
Melendez, Enrique	Spain's Nuclear Safety Council (CSN)
Bertagnolli, Oliver Jenkins, Ken Ohmstede, Gary	Southern Nuclear Company
Fortner, Mike Fulton, Walter	South Texas Project
Tripoli, John	Talen Energy
Joplin, Russell	Tennessee Valley Authority
Petersen, Michael	Xen Nuclear

Alex, Gerald Cook, Daniel Edmund, Charlie Ford, Walter Irwin, Skip Kogelmann, Timothy Leone, Angelo Stanley, Alexander Williams, John Zacher, Chason	Company Information not provided
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AGENDA FOR THE U.S. NUCLEAR REGULATORY COMMISSION CATEGORY 2  
PUBLIC MEETING WITH INDUSTRY OPERATOR LICENSING REPRESENTATIVES

Thursday, January 21, 2021, 10:00 AM to 11:30 AM. Eastern Standard Time

Teleconference

<u>TOPIC</u>	<u>PRESENTER</u>
Introductions	NRC
Draft NUREG-1021, Revision 12	NRC/Industry
Public Comment	Public
Closing	NRC/Industry

## Questions Asked During the Meeting

Q: Regarding Tier 4 generic fundamental questions, are they required to come from the generic fundamental examination bank maintained on the NRC exam bank/website or can they be plant specific fundamental questions?

A: Tier 4 generic fundamental questions do NOT need to come from the GFE bank, and the goal is for them to be plant specific.

Q: For rejected K/As is there a specific methodology that must be used for K/A re-selection? Previously the methodology was specified and approved by the NRC chief examiner.

A: For K/A re-selection, the selection needs to be random down to the K/A level, and the justification for K/A rejection must be documented. The NRC chief examiner does not need to approve the method for randomly re-selecting a K/A.

Q: The NUREG 1021 glossary defines a bank question as: "A written examination question taken from any facility licensee collection of questions that have previously appeared on any operator training-related examination at the facility. This definition includes NRC examination questions used at other facility licensee sites." Does this mean that if a question is in an open bank but has not been used on an exam it can be counted as NEW?

A: An examination question that is in an open bank at any facility and has been verified as not having been used on an operator training-related examination should be counted as a bank question and is not a new question.

Q: The NUREG-1021 glossary defines low power as: "In accordance with NUREG-1449, "Shutdown and Low-Power Operation at Commercial Nuclear Power Plants in the United States," issued September 1993, the range of reactor power from criticality to 5 percent." Does this prevent use of a scenario that starts below criticality and uses going critical as the reactivity manipulation? Is it acceptable for a low power scenario to start below the range and move into listed specified range?

A: NUREG-1021, ES 3.3, draft Revision 12, defines reactivity manipulations for simulator scenarios as:

Reactivity manipulations include activities that produce a clearly observable plant response, such as bringing the reactor critical from a substantially subcritical state, raising power to the point at which reactivity feedback from nuclear heat addition is noticeable and a heatup rate is established, changing reactor power manually with control rods or recirculation flow, or borating or diluting the reactor coolant.

Therefore, starting the scenario subcritical, and requiring the applicants to take the reactor critical would meet the criteria for a reactivity manipulation. The quoted definition of low power is not intended to define reactivity manipulations.



Q: Can it be clarified that for Administrative JPMs that the grading is matching the answer key not a specific number of critical steps?

A: Applicant performance during Administrative JPMs will be graded using the criteria on the Form 3.2-3, "Job Performance Measure Template," or equivalent and using the instructions in ES-3.6, Section B, step 2 which includes that the applicant must complete the critical steps, which are the steps necessary to accomplish the JPM task standard to achieve a satisfactory grade on the JPM.

Q: What considerations are there for examination waivers for identical plants licensed under part 52 particularly for meeting extensive operating experience requirements

A: Refer to the ES 2.2 section on Multi-unit examination waivers. The NRC staff considers 520 hours of operating experience as one way to meet the requirement for extensive operating experience.

Q: The new Examination Security Agreement has removed the wording; (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Was this intentional?

A: This example was deleted from Form 1.3-1, Examination Security Agreement," to make more room on the form for signatures and because it was redundant to information in the main body of the examination standard. This specific example of an acceptable activity remains in ES-1.3 Section C, "Instructions and Restrictions for Facility Licensee Personnel."

Q: There appears to be no allowance for cold licenses to perform control manipulations on a commission-approved simulator. Was that intentional? (ES 2.2)

A: This particular change to operator licensing requirements for new reactors is being considered in rulemaking activities. Refer to the Regulatory Basis for Public Comment titled, "Alignment of Licensing Processes and Lessons Learned from New Reactor Licensing" (ADAMS Accession No. ML20149K680), which is available for public review and comment until April 14, 2021. Appendix E of this regulatory basis discusses alternatives for improving the efficiency and effectiveness of the operator licensing program at cold plants based on lessons learned from this experience. The lessons learned are related to criteria for simulation facilities used to administer the operating test and meet experience requirements, the plant walkthrough portion of the operating test, and continuing training of operator license applicants following their completion of the NRC's initial operator licensing examination.

Q: ES-3.3 page 13 4th bullet

Applicants must avoid unnecessarily creating situations that would result in emergency action level entry or escalation on the loss or potential loss of more than one fission product barrier in accordance with the facility's emergency action levels.

What exactly does this mean?

Is it meant only for those items in the loss or potential loss of more than one fission product barrier area of the EALs or is it meant to be for any EAL entry or escalation? For example; if a crew takes greater than 15 minutes to restore a DG during a loss of all ac scenario, an upgrade in classification is required.

Does this fit this wording as a CT?

A: The CT related to EAL criteria is based on causing a loss/potential loss of multiple fission product barriers; it only pertains to fission product barrier as defined in the EALs. In contrast, all other EAL issues are treated as Significant Performance Deficiencies (i.e., the DG example mentioned is only a 2-point deduction unless it would also cause a loss/potential loss of multiple fission product barriers). The deduction for multiple fission product barrier EAL entry or escalation is considered critical because the loss of the barriers in the plant could lead to an emergency radioactive release.