

January 6, 2012

MEMORANDUM TO: Frederick D. Brown, Director  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation

FROM: John J. McHale, Chief **/RA/**  
Operator Licensing and Training Branch  
Division of Inspection and Regional Support  
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF DECEMBER 8, 2011, MEETING WITH INDUSTRY  
FOCUS GROUP ON OPERATOR LICENSING ISSUES

On December 8, 2011, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting with the Industry Focus Group (FG) on operator licensing to discuss a number of operator licensing issues. Enclosure 1 lists the attendees at the meeting.

This meeting was the latest in a series of meetings intended to promote efficiency, effectiveness, and open communications with regard to initial operator licensing and licensed operator requalification. The discussions addressed a variety of issues, including an Industry FG initiative to examine possible changes to the knowledge and abilities (K/A) catalogs for licensed operators; potential changes to NUREG-1021, "Operator Licensing Examination Standards for Power Reactors;" and changes associated with the NRC's recent revision to its procedure for inspecting licensed operator requalification programs (Inspection Procedure 71111.11). Enclosure 2 is the agenda for the meeting, and the discussion topics are summarized in Enclosure 3. As a part of the discussion associated with possible changes to the K/A catalogs, the Industry FG prepared a slide presentation, which is available in the NRC's Agency Documents and Management System (ADAMS) at accession no. ML113500224.

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

Enclosures: As stated

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(301) 415-1412

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ADAMS Accession No. ML120040069

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DATE	1/6 /2012	1/6 /2012

OFFICIAL RECORD COPY

List of Attendees - NRC / Industry Focus Group Meeting on Operator Licensing  
December 8, 2011

Name	Organization
John (Jack) McHale	NRC / HQ
Mark Lintz	NRC / HQ
John Munro	NRC / HQ
Chris Cowdrey	NRC / HQ
David Muller	NRC / HQ
Tim Kolb	NRC / HQ
Rick Pelton	NRC / HQ
Rick DeVercelly	NRC / TTC
Don Jackson	NRC / RI
Bruno Caballero	NRC / RII
Hironori Peterson	NRC / RIII
Chuck Sizemore	NextEra Energy
Scott Bauer	Nuclear Energy Institute (NEI)
Charles Sawyer	Duke Energy
J.R. Steely	Duke Energy
Mike Llewellyn	INPO
Michael Petersen	XCEL Energy
Patrick Berry	Entergy
Roger Jones	Entergy
Mark VanSicklen	Progress Energy
Jerry Gauding (via telephone)	PSE&G – Salem Nuclear Generating Station
Mark Haire (via telephone)	NRC / RIV
Gregg Ludlam (via telephone)	Exelon

AGENDA FOR THE CATEGORY 2 PUBLIC MEETING WITH THE NEI OPERATOR  
LICENSING FOCUS GROUP REGARDING TRAINING, EXAMINATION, AND INSPECTION  
PROCESSES

Thursday, December 8, 2011  
1:00 p.m. to 5:00 p.m. Eastern Standard Time

Nuclear Energy Institute  
1776 I St. N.W., Suite 400  
Washington, DC 20006

TOPIC

LEAD

Introductions and Opening Remarks	NRC/NEI panel
Public Comments	Public
Integrated examination proposals	NEI
K/A Catalog update	NEI
Potential NUREG-1021 changes	NRC
National Workshop for industry examiners	NEI
IP 71111.11 (Licensed Operator Requalification Program Inspection Procedure) changes	NRC
Public Comments	Public
Summary/Conclusions/Action Items	NRC/NEI

## DISCUSSION SUMMARY

### K/A Catalog Update and Integrated Examination Proposals

Members of the Industry FG presented to the attendees some preliminary recommendations for changes to the current knowledge and abilities (K/A) catalogs (NUREGs-1122 and 1123) and changes to current initial licensing examinations. The Industry FG's presentation included a slide show, available in the NRC's Agency Documents and Management System (ADAMS) at accession no. ML113500224. In summary, the Industry FG recommended:

- Identifying generic K/As more appropriately evaluated on the operating exam, and moving these K/As to a new generic section.
- Removing 10 CFR references from K/A statements.
- Standardizing common systems between the PWR and BWR catalogs and adding systems that may be missing.
- Making the vendor specific emergency plant evolutions and abnormal plant evolutions more specific.
- Re-rating all K/A importance ratings (IRs), and replacing reactor operator/senior reactor operator IRs with a single IR, except for the A2, generic, and fuel handling categories.
- Removing K/As not applicable to licensed operators.
- Removing the list of tasks provided for each plant system.
- Revising the reactor operator written exam sampling methodology.
- Identifying clear and specific criteria for rejecting K/As from the written exam.
- Modifying the written exam topic selection criteria to more appropriately emphasize topics with higher safety significance.
- Providing clear and specific guidance for allowing the use of references on initial licensing written exams.

During the presentation, the NRC staff had several questions and comments, including:

- If some generic K/As were moved to a new section to be more appropriately tested on the operating test, would these K/As not be sampled or tested on written examinations? The Industry FG did not appear to have a definitive answer to this question, in that flexibility may be desirable when testing these K/As, but perhaps these K/As should not be sampled or tested on the written exam.
- If a K/A was sampled for the written exam, but then rejected because it was better tested on an operating test, will it be required then to test this K/A on that exam's operating test? Or could the K/A not be tested at all for that exam? The Industry FG stated that it would depend upon the circumstances, and that a decision could be made not to test a sampled and rejected K/A at all.
- The NRC stated that adequate guidance already exists in NUREG-1021 for rejecting K/As on the written exam, but the NRC also understands that perhaps additional clarification to that guidance may be warranted.
- The NRC cautioned the Industry FG about re-rating all the K/As, in that knowledge and abilities important to a licensed operator (e.g., operating the main turbine) may not always be associated with preventing or mitigating core damage (i.e., safety significance). In re-rating K/As, safety significance should not be the only consideration. The NRC also cautioned the Industry FG about over-emphasizing safety significance in

revising the sampling selection process for K/As. The Industry FG acknowledged the NRC concerns.

- The NRC stated that there were no hard limits on the use of open-reference questions, and that the current guidance provides only “targets” for the number of open reference questions. The NRC further stated that open reference questions have their own unique problems, such as being direct look-ups or not meeting the “application” portion of a K/A statement. The Industry FG acknowledged this information, but stated that examiners are using the “targets” as a perceived limit on the use of open reference questions, and that some types of questions simply cannot be asked without providing a reference (e.g., an examinee is not required to memorize graphs).

### Potential NUREG-1021 Changes

The NRC staff presented to the attendees a list of potential changes to NUREG-1021, “Operator Licensing Examination Standards for Power Reactors,” including:

- Updating section ES-202 of NUREG-1021 to reflect the eligibility requirements contained in National Academy for Nuclear Training (ACAD) 10-001.
- Adding clarifying guidance regarding examination waivers for the generic fundamentals examination and for site-specific re-take examinations.
- Potential revisions stemming from the Fukushima accident.

In response to questions from the attendees, additional possible changes to NUREG-1021 were discussed, including:

- Updating the ES-600 sections to conform with the new revision to Inspection Procedure (IP) 71111.11.
- Incorporating answers from the NRC’s operator licensing website for frequently asked questions.
- Changes associated with new reactors.

### National Workshop for Industry Examiners

The Industry FG proposed conducting a two-day national workshop for industry examiners in September 2012, with both industry and NRC participation. A question was asked by the NRC staff as to what would be the focus of such a workshop, given that regional workshops are routinely conducted with NRC and industry participation. The attendees agreed that the topics of the national workshop should be carefully considered.

### IP 71111.11 (Licensed Operator Regualification Program Inspection Procedure) Changes

The NRC staff presented to the attendees an overview of the revisions to IP 71111.11, “Licensed Operator Regualification Program,” and its associated Significance Determination Process (SDP). In summary:

- The revisions to the IP and SDP were issued December 6, 2011, and become effective January 1, 2012.
- The SDP was rewritten to contain only Green and White findings, and aggregation of findings was eliminated, consistent with current NRC practice.

- The revised SDP contains White findings in three areas at a consistent threshold of greater than 40% of the sample size – exam failure rates, flawed written exam questions, and flawed operating test items. Green findings occur in these areas at a threshold of greater than 20%.
- One additional White finding is possible for simulator performance, if incorrect simulator performance provided negative training which impacted operator performance during a reportable plant event.
- The revised SDP contains no Yellow or Red findings, unlike the previous SDP.
- The revised IP has, for the most part, the same content as the previous IP, with three notable differences: (1) the operating history section has been replaced with a problem identification and resolution section, (2) the training feedback inspection section has been eliminated, and (3) 4 hours per calendar quarter has been added for the Resident Inspectors to observe licensed operator performance in the actual plant/main control room.
- The revised IP maintains a core element - the collection of exam pass/fail rates as an indicator of licensed operator performance. However, exam pass fail rates are only meaningful if the exams are of appropriate quality, properly administered, and if exam security is maintained.

The NRC staff then described in detail how each area in the new IP would be inspected, noting that the assessment tools in most areas have been greatly improved by clarifying the important assessment items and by eliminating some items that were difficult to assess (e.g., going from a 11 item checklist for written exam questions to a concise 6 item checklist). The NRC staff then described issues that would likely result in traditional enforcement consistent with current NRC practices (e.g., licensed operator medical issues, actual exam compromise).

The attendees had a few questions for the NRC staff, which included:

- Are findings for exam failure rates possible for any requalification examination given by a facility? The NRC responded that findings for exam failure rates only apply to requalification examinations required by 10 CFR 55.59, (i.e., an annual operating test and the biennial written exam), and that these exams are the only exams that the NRC will collect exam pass/fail rates. All other exams and evaluations performed by a facility are not subject to exam failure rate findings.
- The new IP is not consistent in some cases with the ES-600 sections of NUREG-1021. Will NUREG-1021 be updated? The NRC responded that changes to the ES-600 series are within the scope of the next revision to NUREG-1021.
- The new IP contains a new requirement for scenario level of difficulty. How should facilities and the NRC determine scenario level of difficulty? The NRC responded that scenario level of difficulty is a subjective measurement, and that the subject matter expertise of industry exam writers and NRC examiners will be relied upon.
- How are the checklists for observing licensed operator performance in the actual plant/main control room to be used by NRC inspectors? Will answering an item “no” on these checklists result in documentation in a report? The NRC stated that the checklists for operator performance did not contain any regulatory requirements and were provided as guidance only. If deficiencies in operator performance were observed, it would be up to the inspector to determine the negative consequences of that deficiency, and if the consequence were of such a magnitude as to warrant documentation.
- What is meant by providing “industry operating experience” to NRC inspectors? In many

cases, industry operating experience is considered proprietary information and cannot be provided to the NRC. The NRC acknowledged this information, stated that the industry should provide this information if possible, but consistent with their rules for proprietary information, and stated that perhaps a correction to the IP was warranted.

#### Summary/Conclusions/Action Items

The Industry FG and the NRC agreed that the meeting was effective and that it was important to continue such interactions and communications of operator licensing issues. Moving forward, two specific action items were discussed:

- Coordinating a National Examiner's Conference, and
- Inviting members of the Industry FG to the NRC's Examiner Conference (May 1-3, 2012, near the Region II office in Atlanta, Georgia).