

**NRC Reactor Operator  
Initial Process Proposed Enhancements  
NEI Independent Review Panel  
NRC Discussion  
November 15, 2010**

**DATED November 22, 2010**

# **NRC Reactor Operator Initial Licensing Process**

## **Proposed Enhancements**

NEI Independent Review Panel

NRC Discussion

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# Meeting Purpose

- Review Independent Review Panel Conclusions
- Discuss Independent Review Panel Recommendations
- Gain NRC Insights

# Goals of License Process

**The Primary Purpose of the Operator Licensing Process is to assure that personnel granted licenses by the Nuclear Regulatory Commission are competent to fulfill their role in assuring safe, reliable nuclear plant operations.**

In addition, it is desirable that the process be:

- Reliable – consistently training and evaluating license candidates such that those with the knowledge, ability and motivation to be good operators will be successful.
- Efficient – allowing the application of NRC and utility resources to the highest priorities for reactor safety.

# **Why Review the License Process?**

**NRC license examination process has been effective but may not reflect technological & educational advances**

- Enhanced control room simulators
- Improved training programs – SAT based
- Improved “performance” testing techniques

**Improve business effectiveness**

- Extensive NRC & utility resources devoted to written exam
- License candidate throughput is low

# **IRP Review Process**

- Review of NRC guidance documents
- Meet with utility executives & training personnel
- Meet with NRC leadership & exam writers
- Meet with INPO personnel
- Conduct utility survey
- Attend NRC exam writers conference
- Gain insights from outside organizations conducting performance evaluations

# **IRP Conclusions**

- **The current three part exam process is effective and has the potential to be “state-of-the-art”.**
- **The written examination is viewed as the most critical portion due to perceived weaknesses in the “performance” portions:**
  - Limited scope of performance portions
  - Narrowly defined failure criteria
  - Team interaction may affect evaluation of individual performance

# **IRP Conclusions**

- **There are weaknesses in the implementation of utility training programs, evaluations and preparation for the operator licensing process at some stations:**
  - Training & evaluations based on utility training programs that may not reflect NRC K/A importance
  - Training program written exams are too focused
  - Weaknesses in audit & NRC written exam validation



# IRP Conclusions

- **NRC K/A catalog, initially developed in the 1980's, needs to be up-dated:**
  - K/A approach has stood the test of time
  - Has not benefited from the current understanding of RO/SRO job functions & requirements
  - Not linked to the current accredited training programs developed in response to the training rule
  - Utilities attempt to link selected K/A to training program objectives during written exam development

# **IRP Conclusions**

- **There is not an “integrated” examination plan to guide overall license examination.**
- **There is limited use of “Exam Bank” questions for NRC written exams:**
  - Exam Bank Questions not linked to NRC K/A’s
  - Exam Bank Questions may not meet current NRC standards
  - Limited number of questions and no process for establishing “acceptable” questions
  - Concern with examination security & validity

# **IRP Recommendations**

- **Retain current 3-part exam process with key enhancements.**
- **Complete the utility actions outlined in the 2009 INPO “Call to Action”**
- **Update the foundation of the NRC examination process:**
  - Update the RO/SRO job & task analysis
  - Update the K/A Catalog
  - Link the utility license training program learning objectives to the updated K/A Catalog

# **IRP Recommendations**

- **Develop & implement an integrated plan for incorporating process improvements**
  - Strengthen the acceptance criteria for the simulator & JPM examinations
  - Establish a process for developing an approved bank of written exam questions
  - Establish more specific guidance for using approved exam bank questions
  - Define & implement an “Integrated” examination plan using the updated K/A approach

# What Remains

- Incorporate comments from this meeting
- Consider meeting with other stakeholders to gain their insights
- Provide recommendations to NEI & utility executives
- Provide insights on implementation of IRP recommendations