Power Plant Simulators – OL Program Changes

Bernard Litkett - Reactor Engineer – Examiner Qualified
NRR/DRO/Operator Licensing and Human Performance Branch (IOLB)

January 14, 2020
Agenda

- NRC Transformation
- NRR/NRO merger
- OL program changes
- INPO, “DaVinci” (the change in the accreditation process)
- Status update on RG-1.149, “Nuclear Power Plant Simulators for Use in Operator Training and Examination”
NRC TRANSFORMATION

• Assessing the Future
• Investing in our People
• Modernizing Decision Making
• Fostering a Culture of Change
• Innovating How We Work
• Building Strong Partnerships

For more information https://www.nrc.gov/about-nrc/plans-performance/transforming-nrc.html
On October 13, 2019, the Office of Nuclear Reactor Regulations (NRR) and the Office of New Reactors (NRO) merged into NRR. The division and branch and now called “The Division of Reactor Oversight (DRO)/Operator Licensing and Human Factors Branch (IOLB)”.
Operator Licensing and Human Factors Branch

New work assignments from the merger now exists in NRR/DRO/IOLB.
Operator Licensing and Human Factors Branch

The HF staff reviews licensing actions for both new and operating reactors related to human factors.
Operator Licensing and Human Factors Branch

Regarding 10CFR Part 52, the HF staff is involved with the reviews and rulemaking for NuScale and US APWR.
Advanced reactor developer Oklo, Inc has submitted a pre-application and is developing a compact fast reactor.
Okla conceptual design of the Aurora
SHINE Medical technologies has proposed to construct and operate a facility in Janesville, Wisconsin for the production of molybdenum-99 (Mo-99) through the irradiation and processing of a uranyl sulfate solution.
Operator Licensing Program Changes

• For revision 12 of NUREG-1021, the Staff does not intend this revision to be a major change to how the NRC conducts examinations.

• Initiated the Generic Fundamental Examination (GFE) re-integration validation/pilot plan. Seven GFE questions were placed on the Limerick, Grand Gulf, McGuire and Palo Verde audit exams.
Operator Licensing Program Changes

• Revision 12 NUREG-1021, “Streamline Project”, is in progress, to consolidate information, improve usability, and make the document easier to maintain and revise.

• Simplify the approach to eligibility. The National Academy for Nuclear Training (NANT) guidelines should be used by facility licensees with an accredited systems approach to training program.
Operator Licensing Program Changes

- Created placeholders, to include the operator licensing program for Advance Reactors, such as Small Modular Reactors.
- Adjust written exam instructions in support of the GFE re-integration project.
- Consolidate information, improve usability, and make the document easier to maintain and revise.
Operator Licensing Program Changes

• Consider moving guidance out of NUREG-1021 that is better suited for operator license manual chapters or for the NRC public website (i.e., the reference section and historical information about operator licensing).

• Added the Performance Deficiency definition and guidance.
Operator Licensing Program Changes

- Added new guidance for critical tasks on operating tests in order to improve consistency while grading operating tests.
- The staff currently plans to publish a draft NUREG-1021 for public comment in the third quarter of calendar year 2020.
Positive Performance Example

- Two unit site.
- Modification installed on Unit 2, but not yet on Unit 1.
- Unit 1 is reference unit.
- Installed modification in simulator.
- Training needs assessment performed.
NuScale Update

• The creation of NuScale K&A catalog is to align with a new section of NUREG-1021 for Small Modular Reactors.

• Next step is with the Advisor Committee on Reactor Safeguards, no date has been selected.

• Finalized TVA’s Clinch River early site permit for a SMR in Oak Ridge, Tennessee.
Vogtle Update

• Collaborated with RII to address OL proficiency requirements for operators at VEGP 3 prior to fuel load.

• Approved OL exemption for 12 former VC summer SRO licensed operators who passed the NRC ILOT but now work at Vogtle.

• Unit 3 scheduled fuel load in 11/2020 and Unit 4 in 11/2021.

• On December 16, 2019, the MCR for Plant Vogtle Unit 3 is now operational and testing systems.
INPO “DaVinci”

• New initiative to simplify and improve efficiency of INPO’s oversight of nuclear training.
  – Will use the 6 year accreditation process.
  – Continue to meet requirements of 10CFR part 50.120 “Training and Qualifications of Nuclear Power Plant Personnel” and the Memorandum of Agreement with the NRC.
  – Will review all 12 training programs in a week.

• NRC staff is observing these activities.
INPO “DaVinci”

• Diablo Canyon sequester was the week of November 11 and reviewed Objective 1 and 3.

• The on site week of November 18 reviewed Objective 2.

• Diablo Canon remote Nuclear National Accreditation Board is scheduled in February.

• INPO is assessing lessons learned from the Diablo Canyon pilot.
INPO “DaVinci”

• An E-submittal would replace the ASER and the Nuclear National Accreditation Board (NNAB) will be done remotely.
• An electronic reading room will be used the NRC observer to read the e-submittal.
• Video conference will be used to conduct the remote NNAB. Zoom is INPO current video conference choice.
• Travel to Atlanta is not required.
Regulatory Guide 1.149 Status

The staff will review ANSI/ANS-3.5 -2018, “Nuclear Power Plant Simulators for Use in Operator Training and Examination” and may issue a revision of Regulatory Guide 1.149, “Nuclear Power Plant Simulation Facilities for Use in Operator Training, License Examination, and Applicant Experience Requirements”.
Questions??

Bernard Litkett
Bernard.Litkett@nrc.gov
301-415-3657