

# Power Plant Simulators – OL Program Changes

Bernard Litkett- Reactor Engineer –  
Examiner Qualified

NRR/DRO/Operator Licensing and  
Human Performance Branch (IOLB)

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# 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”**



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# 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>

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# Operator Licensing and Human Factors Branch

- **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)”.**

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# Operator Licensing and Human Factors Branch

**New work assignments from the merger now  
exists in NRR/DRO/IOLB.**

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# Operator Licensing and Human Factors Branch

**The HF staff reviews licensing actions for both new and operating reactors related to human factors.**

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# 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.**

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# Operator Licensing and Human Factors Branch

**Advanced reactor developer Oklo, Inc has submitted a pre-application and is developing a compact fast reactor.**



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# Okla conceptual design of the Aurora



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# Operator Licensing and Human Factors Branch

**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.**

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# 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.**

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# 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.**
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# 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.**

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# 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.**

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# 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.**

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# 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.**



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# 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.**

# NuScale Overview



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# 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.**

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## 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.**

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## 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 Canyon remote Nuclear National Accreditation Board is scheduled in February.**
- **INPO is assessing lessons learned from the Diablo Canyon pilot.**

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## 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.**

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# **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](mailto:Bernard.Litkett@nrc.gov)

301-415-3657