



JOWOG31@ LLNL

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Design for Certification from an SNL Surveillance Perspective

(Just a couple slides to get the conversation going)

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Transforming Surveillance = Transforming Certification

- **Transforming how we design, qualify, surveil, and certify weapons**
- **New Development (LEPs) weapon systems are embracing the idea of building in Design for Surveillance**
 - Testable/modular/disassemble-able design
 - Designed with surveillance and critical data needs in mind
 - Built in instrumentation, self test capability
 - Base line data obtained during production
 - Correlation between development, production, & surv data
 - Surveillance requirements documented in the same way that weapon functional requirements are
 - Perform and document tradeoffs



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Transforming our Certification Strategy

- **Focusing on what we don't know**
 - Critical Performance Parameters (CPPs)
 - Knowledge Gaps (KGs)
 - Focusing on margin via QMU
 - Priority driven by knowledge gaps/inadequate margin
 - Priority = budget decisions
- **Repeating Qualification Testing on Stock Rtns**
- **More emphasis on Component & Material Analysis**
- **Leverage production, qualification, surveillance testing & failure analysis data & lessons learned**
- **Improving test realism & test variation capability**

Focus testing and material analysis on obtaining all of the data that is required to enable us to be able to confidently certify the stockpile.



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