



# Design Acceptance Criteria for Digital Instrumentations & Controls

Summer Workshop

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# Background

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- As stated in SECY-92-053
  - The DAC are set of prescribed limits, parameters, procedures, and attributes upon which the NRC relies, in a limited number of technical areas, in making a final safety determination to support a design certification.
  - The concept of DAC would enable the staff to make a final safety determination, subject only to satisfactory design implementation and verification by the combined license (COL) licensee, through appropriate ITAAC.



# Opportunity for Improvement

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- What we hope to gain by having our workshop
  - Provide for effective and efficient Digital I&C DAC and related ITAAC Closure
    - What is considered I&C DAC?
    - How will NRC inspect detail design?
    - How to achieve successful inspection scheduling?
- Quality and Schedule (challenge to improve)
- Establish best practices
  - by Industry
  - by NRC



# Workload

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- There is a tremendous amount of work required to be done in order to provide a quality digital I&C system. The software life cycle requires hundreds of documents, thousands of pages.
- First time resolution of DAC.
- Completion of quality products either through DAC or traditional review will be confirmed by NRC verification or inspection.



# Quality of Work

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- High quality documents are vital to keep schedules - quality of documents directly impact NRC resources and time for completion of review and levels of inspection
- The software life cycle was developed to provide quality software and hardware systems that function as required and future design enhancements
- Question: What if the NRC finds significant and/or numerous findings?



# Schedule

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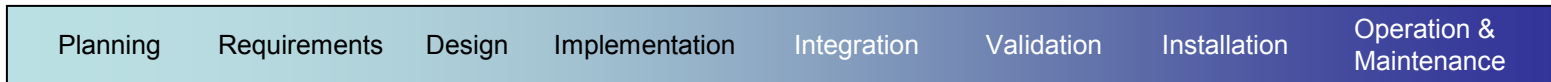
- Detailed early schedule is essential
  - Notification to NRC when products are ready (at regular intervals) and not a one lump sum right before COL, construction, fuel load, etc.
  - Three approaches to scheduling outlined in NEI 08-01
  - Verify DAC and ITAAC completion by using a clear schedule



# Life Cycle Process

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Where is the line drawn between DAC and ITAAC in the software life cycle?





# Path Forward

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- Engage with Industry (NEI)
  - Obtain feedback today
  - Establish Workshop Agenda
  - Establish Speakers
  - Hold workshop this summer