



NUCLEAR ENERGY INSTITUTE

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**MP4a :  
Draft ISG-06 Rev. 2  
NRC Inspection  
Workshop**

**Industry  
Expectations on  
Alternate Review  
Process Inspections**

# Agenda

- Licensee Activities Related to Vendor Oversight
- Industry's Draft DI&C-ISG-06 Rev. 2 Alternate Review (AR) Process Inspection Expectations



# Licensee Activities Related to Vendor Oversight



# Vendor Oversight Critical Part of Industry Design Process

- Draft ISG-06 Rev. 2 sets the expectation that the License Amendment Request (LAR) will address Vendor Oversight planning
- Vendor Oversight is a critical part of industry's design process
  - IP-ENG-001: Standard Design Process (SDP)
  - NISP-EN-04: Standard Digital Engineering Process
  - EPRI 3002011816: Digital Engineering Guide
  - Licensee processes and procedures for design and procurement
- Industry's design process requires Vendor Oversight planning long before formal design and LAR preparation begin



# Vendor Oversight in Standard Design Process (IP-ENG-001)

- The SDP is an industry standard process for plant design changes adopted by all US nuclear plant operators
- The SDP Vendor Oversight planning:
  - Is in the procurement and design phases, and
  - Points to plant specific procedures and processes for plan development and implementation
- Vendor Oversight is baked into the SDP and is not just done for the LAR submittal



# Vendor Oversight in Standard Digital Design Process (NISP-EN-04)

- NISP-EN-04, Standard Digital Design Process, provides digital specific instructions for the standard design process
- NISP-EN-04 re-enforces that the Vendor Oversight Plan (VOP) will be developed early in the design as part of the development of Design Inputs / Requirements for procurement
- NISP-EN-04 provides specific guidance on creation of the VOP as a planning activity associated with the Procurement planning. NISP-EN-04 also defines EPRI 3002011816, Digital Engineering Guide (DEG), as the digital process basis
- EPRI has discussed the DEG with NRC Research division and provided training to NRC
  - Industry would welcome NRC technical feedback and interaction on the DEG



# Vendor Oversight in Industry Standard Guidance (EPRI 3002011816)

- EPRI has developed the Digital Engineering Guide (DEG), which is the guidance behind the nuclear industry standard digital procedure for Standard Digital Engineering Process
- The DEG addresses Vendor Oversight planning in the Procurement chapter and directs the user to develop a project-specific VOP based on risk and performance measures
- The DEG includes reference documents for industry-accepted practices for vendor oversight implementation, primarily the guidance in EPRI 1025283, *Commercial-Grade Digital Equipment for High-Integrity Applications: Oversight and Review of Evaluation and Acceptance Activities*



# Vendor Oversight at Southern Nuclear Company (SNC)

- Vendor Oversight planning is started before a purchase order is issued
  - Vendor Oversight planning and implementation is handled by plant procedure
  - VOP and inspection activities are part of the Purchasing Plans and Agreements at SNC
- VOP is implemented by the Vendor Oversight group, which is part of Quality Assurance (QA), and is supplemented by subject matter experts to conduct the planned oversight activities and maintain all outputs
- VOP and outputs are maintained as QA records
- VOP is part of the procurement process and supports the design process by ensuring quality of procured components



# Industry's Alternate Review (AR) Process Inspection Expectations



# New Industry Paradigm

- Draft ISG-06 Revision 2 creates a new Alternate Review (AR) process that:
  - Has the NRC completing the DI&C LAR review before detailed design, implementation, and test activities
  - Licensee still responsible for oversight of whole vendor lifecycle
  - Places greater expectation on the licensee to oversee the detailed design, implementation, and test activities
- Industry has created standard design processes
  - IP-ENG-001: Standard Design Process
  - NISP-EN-04: Standard Digital Engineering Process
  - EPRI 3002011816: Digital Engineering Guide



# New Inspection Paradigm

- New NRC Review and Industry Paradigm
  - With the new Draft ISG-06 Rev. 2 AR process, during the LAR review, NRC reviews the licensee vendor oversight plan summary to assure vendor compliance to LAR commitments
  - As described earlier in this presentation, industry is standardizing the process for vendor oversight of DI&C plant modifications
  - NRC audit's new focus is on the system, plant interfaces, human interfaces, and plant safety impacts
- NRC inspections of DI&C license amendments need to adjust to the new NRC and industry paradigm



# What Is The New NRC Inspection Paradigm?

- Any NRC inspections relative to the AR process license amendment should start with the licensee
- Inspections should focus on the licensee's fulfillment of its VOP
  - NRC inspections should first focus on the licensee's vendor oversight reports documenting vendor audits/inspections of the detailed design, implementation, and test processes
  - Only if the NRC identifies gaps in the vendor oversight process, would it be appropriate for the NRC to augment licensee inspections at the vendor's site
- The Draft ISG-06 Rev. 2 AR process should not be more burdensome to the vendor by doubling the number of project inspections



# Conclusion



# **New NRC/Industry Paradigm Requires A New Paradigm For Inspections**

- Industry presented an industry standard design process that includes vendor oversight
- NRC, as part of the AR process, will review the vendor oversight summary for the modification as part of the LAR review
- NRC inspections should focus on licensee vendor oversight by inspecting licensee vendor oversight reports versus duplicating project vendor inspections already performed by the licensee



# QUESTIONS?

