

DI&C-ISG-06 Revision 2 Table Top

Lessons Learned from Pilot Project Experiences



Introduction

- Captured Key Insights from Pilot Experiences
- Show How Key Lessons Learned were Incorporated into New DI&C-ISG-06 Revision 2 Guidance
- Identify Additional Lessons Learned to be Addressed in Industry Guidance for DI&C-ISG-06 Revision 2

Key Insights from Pilot Experiences (1/2)

- Diablo Canyon had key insights for lessons learned:
 - Role of architecture decisions affecting system test requirements
 - Allocation of system functional requirements to vendor subsystems
 - Treatment of maintenance needs in system functional requirements
 - Vendor understanding of system functional requirements by design and V&V personnel

(Reference ADAMS Accession No. ML15181A063)

Key Insights from Pilot Experiences (2/2)

- Oconee project had key insights for lessons learned:
 - Role of architecture decisions affecting combination of echelons, use of inter-channel communication, and service unit connections
 - Expectations for licensee oversight of vendor activities
(Reference ADAMS Accession No. ML060060427)
- NRC key insights for lessons learned:
 - There is no direct correlation between the information licensees are required to provide and the evaluations NRC performs
(Reference ADAMS Accession No. ML15183A284)

Key Lessons Learned Incorporated into New DI&C-ISG-06 Revision 2 Guidance (1/2)

- There is an expanded discussion of expectations for licensee oversight of vendors in DI&C-ISG-06 Revision 2 Sections C.2.1, C.2.2, and D.5.1.2
- There is an expanded discussion of expectations for technical information to be provided related to system architecture features, system interfaces, and fundamental design principles in DI&C-ISG-06 Revision 2 Sections D.2.2, D.2.3, D.2.5, and D.2.6

Key Lessons Learned Incorporated into New DI&C-ISG-06 Revision 2 Guidance (2/2)

- There is an expanded discussion of expectations for technical information to be provided related to system requirements function allocation in DI&C-ISG-06 Revision 2 Section D.2.4
- There is an expanded discussion of expectations for technical information to be provided related to maintenance activities in DI&C-ISG-06 Revision 2 Sections D.2.2, D.2.3.3.1, and D.2.5.1

Key Lessons Learned to be Addressed in DI&C-ISG-06 Revision 2 Industry Guidance (1/2)

- There will be expanded guidance to address DI&C-ISG-06 Revision 2 Section D.4 for range of cases:
 - Vendor Software Program Manual Available
 - Vendor Application Methodology Reviewed with Plant Specific Follow-up Actions
 - Application-Specific Approach
- There will be expanded guidance to address vendor oversight plans

Key Lessons Learned to be Addressed in DI&C-ISG-06 Revision 2 Industry Guidance (2/2)

- There will be expanded guidance to address Sections D.2.3 and D.4.2.1.1 for plant and I&C system safety analysis to provide summary information to support vendor design, V&V, oversight, and regulatory reviews verification
- There will be guidance for a new Safety Function Summary Table to define design basis and to highlight changes

- FSAR Event (AOO/PA)
- Credited Trip/Actuation Signals
- Variable(s)
- Range
- Nominal (100% RTP) Analytical Limit
- Number of Channels
- Logic

- Automated Protection Function
- Interlock / Permissive / Override
- Condition for Interlock / Permissive / Override Function
- Response Time Assumed in FSAR Event Analysis

Conclusions

- New DI&C-ISG-06 Revision 2 Guidance Addresses Key Lessons Learned from Pilot Experiences
- New Guidance Has Direct Correlation between information to be Provided and NRC Regulatory Evaluations
- Industry Guidance for DI&C-ISG-06 Revision 2 will Capture Additional Insights from Table Top Exercise

Closing

- Questions?