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UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

I&C DAC Inspection Strategies

Overview

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DAC Inspection Objective –

Confirmation that the Design detail (information) meets the established Acceptance Criteria

--*Not a licensing review!*

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Importance of a DAC Strategy

- **Focuses on the inspection objective**
- **Provides basis and structure for new type of inspection activities**
- **Helps align DAC inspection resources**

Note- currently <u>no</u> mechanism for DAC inspection

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DAC Strategies

- **Working Group commenced strategy development in Dec 09**
- **1 strategy document for piping DAC**
- **2 strategies for HFE DAC (ABWR and AP1000)**
- **7 strategies for I&C DAC (priority for STP)**

I&C DAC Strategies

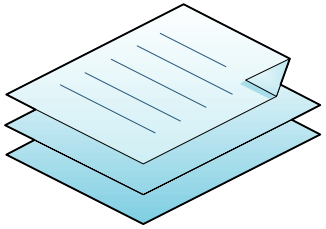
- Generally, strategies mirror the software development lifecycle
  - Planning
  - Requirements
  - Design & Implementation
  - Integration
  - Validation & Testing
  - Installation
  - Miscellaneous (STP-specific)

Concept (Digital I&C DAC)

Sources

Industry Standards
ISGs
Reg Guides/NUREGs
SRP
Audits
Staff Expertise

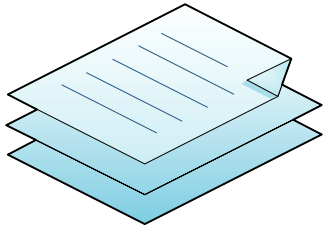
Strategy Docs



Focus Areas:

Digital Design
Software Development
QA Process
Key Attributes
Rationale for Inspection
Techniques & Sampling
Special Considerations

Inspection Guidance



IP 65000.xx

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I&C DAC Inspection Scope

- **Lifecycle Phase-oriented for each digital platform / application project**
- **Sampling of "attributes" within development Phases**
- **Transition between Phases (inspection when all activities within a Phase are complete)**
- **SQA processes across all Phases**

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Strategy Doc Content

- Description
- Key Attributes
- Rationale for Inspection
- Inspection Techniques
- Special Considerations
- Level of Effort
- References

Inspection Procedure

- 65000 Series IP
- One (1) consolidated IP for I&C DAC inspection (with attachments)
- Used in conjunction with IMCs 2503 (ITAAC Inspection) and 0613 (Inspection Documentation)

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Path Forward

- **Finalize Strategy Documents**
- **Select a "target" DAC for pilot inspection**
- **Develop DAC inspection procedure**
- **Tabletop the pilot process**
- **Execute!**

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Questions / Discussion