Digital System Classification and Inventory and Review of Operating Experience

Meeting of the Risk TWG
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BACKGROUND

- **In their letter to the Commission on May 18, 2007, the ACRS recommended that**
  - **The staff should develop an inventory and classification (e.g., by function or other characteristics) of the various types of digital and software systems that are being used and are likely to be used in nuclear power plants**
  - **The staff should evaluate the operating experience with digital systems in the nuclear and other industries to obtain insights regarding potential failure modes**
- **Additionally the ACRS recommended that information obtained through performing these activities should be used in the development of regulatory guidance on D3.**

BACKGROUND

- **In an SRM, dated June 22, 2007 the Commission directed the staff to include this work in the Digital I&C Project Plan**

- **Dates should be appropriate to support development of final regulatory guidance on D3**

- **The most recent version of the project plan (July 10, 2007) includes these efforts as part of the D3 TWG**
  - **Short term deliverables**
    - **Draft Inventory and Classification (Sept, 2007)**
    - **Provide results of Inventory and Classification (Dec, 2007)**
    - **Draft review of operational experience (Sept, 2007)**
    - **Provide results of operational experience review and recommendation on impact on staff guidance (Dec, 2007)**

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- **Short-term activities (operating experience)**
  - **Review past operating experience evaluations**
  - **Update past operating experience evaluations (LER and other databases)**
  - **Capture information available from other sources**
  - **Work with industry to gather additional information**
  - **Assess what major issues or common themes**

PROJECT PLAN

- **Short-term activities (inventory and classification)**
  - Develop a preliminary classifications/ categorization scheme
  - Complete an inventory of current and potential digital systems
  - Provide input to operating experience work
- **The inventory and classification work and the operating experience review will be integrated and used to support development of the final D3 guidance**

- **Long-term activities**
  - **The operating experience review will be an on-going effort. The NRC already has an on-going process to review operational experience in a number of areas. This work will build on that effort**
- **Inventory and classification scheme will be updated as part of longer term work**