

Dominion's I&C and HFE Expectations

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Dominion Fleet

- Dominion is a Nuclear Plant Operator
 - Owns and safely operates 7 units at 4 sites
 - Seeking an ESP for North Anna
 - Currently developing a COLA as part of DOE NP-2010 initiative
 - Does not currently have a commitment to build



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Dominion Timeline Assumptions

- Hypothetical Timeline
 - Third quarter 2007 submit COLA
 - NRC issue COL 2010
 - Start construction 2010
 - Unit operation 2014 or 2015

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Dominion I&C Strategy

- Application and Construction Process
 - Three Phases
 - COL Application and Approval
 - Begin detailed COL design
 - (DOE NP-2010 funded)
 - Construction, ITAAC and Deployment
 - Plant Operations

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COL Phase Expectations

- COL Phase
 - Dominion as an operator will rely on its vendors to address I&C and HFE issues
 - Dominion will support and provide guidance
 - Work with other utilities
 - Unified approach
 - Supply personnel as needed
 - Work with the industry in support of initiatives
 - NRC rules development
 - Review and licensing of MCR design and I&C systems

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COL Phase Expectations

- COL Phase Continued
 - Validation & Verification (V&V) Testing
 - Critically important
 - Used to validate/support ITAAC requirements
 - Operator training
 - Simulator fidelity

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COL Phase Expectations

- COL Phase Design
 - New technologies expected to be leveraged
 - Exceptions may be SR and critical NSR
 - Wireless, Fieldbus, RFID
 - Reduced installation and testing time
 - Minimize Operations and Maintenance manpower requirements

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COL Phase Expectations

- NRC Regulations
 - Rules defined to support timely reviews
 - Needs to be platform neutral
 - Quantifiable in order to support ITAAC
 - Minimizes risk
 - Licensing of MCR

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COL Phase Expectations

- Digital PRA Modeling
 - Used to support NRC Regulations compliance
 - Support ongoing plant operations
 - Maintenance Rule (a-1)
 - System out of service (a-4)
 - NRC Performance Cornerstones
- Defining Operability
 - Operability determination
 - Use digital system PRA

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COL Phase Expectations

- Control Room HFE Graded Approach
 - Benefits
 - Rules and Regulations can be more focused
 - Minimize SR equipment and interfaces
 - Configuration management is easier
 - Licensing can be more easily accomplished

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Construction and Deployment

- **Cyber Security**
 - Management and Engineering remote access
 - Intrusion is unacceptable at all levels
 - Includes internal and external threats
 - Emergency Operations Facilities data transmission is mandatory
 - NRC links
 - Corporate Emergency Operations Facilities

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Construction and Deployment

- **Construction**
 - Integrate plant personnel
 - Manage ITAAC
- **Maintaining I&C Configuration Management**
 - Leveraged from vendor programs
 - Configuration Management process development
 - Not traditional I&C technician function
 - Focus will be more software centered

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Plant Operations

- Future Considerations
 - NRC Rules and Regulations
 - Needed to support plant operations
 - Minimize impact on replacements/upgrades
 - Continue I&C Configuration Management

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Summary

- Summary
 - Dominion will support, but COLA is main focus
 - Rules must be known and realistic.
 - Needed for timely reviews and to support COL
 - Graded approach solution
 - V&V testing will reduce startup risk and ITAAC
 - Applicable to future plant operations
 - Configuration management
 - Provide assurance of compliance
 - Minimize unplanned or unintended consequences

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subject to change

