

Digital Instrument & Controls Industry View

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Topics

- **Objective**
- **Goals**
- **Overview**
- **Status**
- **Conclusions**

Objective

- **Safety-focused application of digital technology**
 - **Current operating plants**
 - **Design certification**
 - **New plants**
 - **New fuel facilities**
- **Stable, predictable, and timely licensing process with realistic guidance**
- **Enhance plant safety, availability, and reliability**

Goals (1 of 2)

- **Short term - Interim Staff Guidance (ISG)**
 - Technically sound
 - Practical to apply
 - Appropriate detail of regulatory evaluations/reviews

- **Long term - Final staff guidance**
 - Incorporate ISG content into final regulatory guidance
 - Assure consistency with applicable industry codes and standards
 - Endorse related, detailed industry guidance

Goals (2 of 2)

■ Overall

- **Assure continued safe operations through each nuclear facility's digital application**
- **Change regulatory guidance to keep pace with technology developments**
- **Ensure changes to current positions are made in accordance with appropriate regulatory process and well communicated to stakeholders**

Overview

- **Project Management**
 - **Project Plan (responsibilities, deliverables, due dates)**
 - **Pilot Project (validating ISGs, resolving issues, sharing lessons learned, revising guidance)**
 - **NRC – Industry collaboration**
- **Steering Committee oversight**
 - **On-going**
 - **Industry involvement and support**

Status (1 of 4)

- **Continued Attention**

- **Manual Operator Actions**

- Fixed (30-minute) time period**

- versus**

- Method for determining acceptable time period**

- **Documents requested**

- **What should be submitted and when**
 - **Available vs. Reviewed vs. Docketed**

Status (2 of 4)

- **Continued Attention (cont)**

- **Review level-of-detail**

- Independent design review/re-verification**
versus

- Reasonable assurance determination**

- **Diverse Actuation System**

- **Avoid expanding the scope to situations that do not result in a significant safety benefit**

Status (3 of 4)

Project Schedule

- NRC & Industry actively supporting into 2009
 - Oversight / Steering Committee
 - Resources / accountability / Task Working Groups
- Project deliverables in use now
 - ISG-04 “Communications” used in staff review
 - ISG-06-draft “Licensing Process” used in listing documents for LAR
- Rollover to permanent guidance started
 - ISG-01 “Cyber Security” is being used in draft rulemaking and Regulatory Guide

Status (4 of 4)

Project Progress

- Topical areas (TWGs) 7
- Problem Statements 25
- Acceptably completed 3

Conclusions

Project Plan

- Continue management oversight / coordination

Pilot Project

- Validate Licensing Process ISGs
 - Highest importance and significance
- Demonstrate effective and timely regulatory process for licensing digital upgrades

Guidance

- Continue to refine and enhance regulatory guidance, as necessary
- Develop a stable, predictable, and timely licensing process with realistic guidance

Acronyms

- **ATWS** **Anticipated Transient Without Scram**
- **BTP** **Branch Technical Position**
- **D-3** **Diversity & Defense-in-Depth**
- **DAS** **Diverse Actuation System**
- **DI&C** **Digital Instrumentation and Control**
- **ESPS** **Engineered Safeguards Protective System**
- **ISG** **Interim Staff Guidance**
- **ITAAC** **Inspections, Test, Analyses, and Acceptance Criteria**
- **LAR** **License Amendment Request**
- **NEI** **Nuclear Energy Institute**
- **RPS** **Reactor Protective System**
- **TWG** **Task Working Group**