



Briefing on Design Acceptance Criteria

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November 5, 2010



Design Acceptance Criteria

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November 5, 2010

Agenda

- ***Recent developments***
- ***Background on design acceptance criteria (DAC)***
- ***DAC and digital instrumentation and controls (I&C)***
- ***DAC closure process***
- ***Conclusions***

ACRS Letter August 9, 2010

- ***Underlying concerns with DAC***
 - ***Leaving DAC open until post-Combined License (COL)***
 - ***Relationship between level of design detail and safety***
 - ***DAC lack specificity and over-used***
 - ***Digital I&C systems have changed since DAC conceived***
 - ***Require expertise and judgment to close***

ACRS Letter (cont'd)

- ***Recommendation 1***
 - ***Expertise required for DAC inspections***
 - ***Independent assessment by ACRS***
- ***Recommendation 2***
 - ***Limit DAC resolved post-COL issuance***
 - ***Consistent scope and depth of evaluation regardless of when DAC closed***

Staff Response - October 7, 2010

- ***Recommendation 1***
 - ***Agree technical expertise required***
 - ***Propose role for ACRS in DAC closure consistent with past practice***
- ***Recommendation 2***
 - ***Agree preferable to close DAC early***
 - ***Agree to consistent scope and depth of evaluation***

Staff Response (cont'd)

- ***Assessment of other issues:***
 - ***Safety finding made on entire application, not just DAC***
 - ***Continue to allow use of DAC where appropriate***
 - ***Use technical expertise and sound procedures to verify DAC implementation***

DAC Policy

- ***Consistent over past 20 years***
 - ***DAC should be objective***
 - ***Design certification, including one that relies on DAC, is final safety determination***
 - ***Additional design detail developed to satisfy DAC will not alter safety conclusion***
 - ***Limited to a few areas***
- ***DAC policy periodically reaffirmed***

Use of DAC for Digital I&C

- ***Used in all four certified designs***
- ***Used in all but one design certification under review***
- ***Design flexibility is desirable***
- ***Use appears to be declining***
- ***Newer designs may not be amenable to DAC***

DAC Closure Verification Process

- ***Verify completion of the licensee's activities to meet DAC***
- ***Resultant design must meet both:***
 - ***Acceptance criteria in DAC***
 - ***Licensing basis***

DAC Inspections

- ***All DAC are inspected***
- ***Use inspection procedures developed specifically for DAC***
- ***Use subject matter experts for DAC inspections***
- ***Digital I&C inspection procedures being tested with South Texas Project (STP) applicant***

Staff Proposal to ACRS

- ***ACRS involvement in inspection program for DAC***
 - ***Similar to approach for Reactor Oversight Process (ROP)***
 - ***Discuss strategy for program***
 - ***Review inspection procedures***
 - ***Review first implementation of STP***

Conclusion

- ***Safety finding made on entire application, not just DAC***
- ***Continue to allow use of DAC where appropriate***
- ***Use technical expertise and sound procedures to verify DAC implementation***

Acronyms

- ***ACRS – Advisory Committee on Reactor Safeguards***
- ***COL – Combined License***
- ***DAC – Design Acceptance Criteria***
- ***I&C – Digital Instrumentations and Controls***
- ***ROP – Reactor Oversight Process***
- ***STP – South Texas Project***