

D-RAP ITAAC

Presentation to Construction Inspection Program Workshop

May 13, 2010



Reliability Assurance Program

- RAP assures that systems, structures, and components are as reliable and as available as assumed when the design is certified.
- RAP applies to reliability assurance activities from the time of design certification until decommissioning.
- RAP has two phases

Design phase (D-RAP) prior to fuel load Operational phase (OPRAAs)



Design Reliability Assurance Program

Definition: *All* reliability assurance activities prior to initial fuel load (*Operational-phase programs may not yet be in place*)

Scope: All risk-significant SSCs (SR & NSR)

Purpose: Assure that as-built SSCs will be • as reliable • as available as assumed at licensing

(at fuel load—from that time forward, OPRAAs suffice)



RAP Timeline





RAP Timeline

DCD FSAR Calculations Conceptual design Procurement Specifications DC Application Vendor Acceptance Criteria Pretiminary Design Drawings Design Certification Detailed design AcceptDCA Installation ReviewDCA Certify desig Accept COL Inspection Review COL NRC ♦ Issue COL Accept LWA Review LWA Issue LWA Inspect construction ISPECT D-RAP ITAAC inspect ITAAC 103(g) Finding Prelim siti engra COLA Preliminary engi LWA Reques Site engineeri LWA Site Prop Utility . COL Detailed design activities (initial) Procurement Issued for construction Construction Detailed design (additional) Design changes Modification D-RAP ITAAC clos ITAAC Test progra Load Fuel **D-RAP OPRAAs**



ITAAC Expectations

D-RAP activities ensure that design *as issued* is faithful to the licensed design (D-RAP ITAAC)

Other D-RAP activities *will* ensure that the plant *as built* will be faithful to the design *as issued* for

- Procurement
- Fabrication
- Construction
- Testing
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Interim Staff Guidance DC/COL-ISG-018

Revised guidance for

- D-RAP in DCD
- D-RAP in COLA
- **ITAAC for COL holder**



Model D-RAP ITAAC

Design Commitment	Inspections, Tests, and Analyses	Acceptance Criteria
For structures, systems, and	An analysis will demonstrate	The initial design of
components within the scope	that the initial design of all	all RAP SSCs has
of the reliability assurance	RAP SSCs (for procurement	been subject to the
program (RAP SSCs), the	and installation) has been	applicable reliability
design is consistent with risk	completed in accordance	assurance activities
insights and assumptions.	with the D-RAP.	of the D-RAP.