U.S. Nuclear Regulatory Commission

Center for Construction Inspection

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US NRC

- Mission to protect people and the environment
- Licensing and Regulatory Functions
- Combined License Review
- Inspection Part of Regulatory Function

Presentation Overview

- Mission statement for the Center for Construction Inspection (CCI)
- CCI organizational structure
- Inspection program structure
- Vogtle Construction Related Inspection Activities
- CCI Staffing

Mission Statement

- To provide assurance in the safety of future operations at new nuclear facilities by ensuring that licensees and applicants construct the facilities according to approved design criteria, using appropriate practices and quality materials

Organization Structure

- Two divisions…
  - Division of Construction Projects (DCP)
    - Project management for each construction site
    - Oversees completion of inspection program
    - Manages the resident inspector program
  - Division of Construction Inspection (DCI)
    - Regional resources for conducting inspections
    - Specialists in various engineering fields
    - Contacts for technical issues

Inspection Program Structure

- ITAAC inspections (IMC 2503)
  - Verifies that sampled design commitments associated with the license and their acceptance criteria are met prior to fuel load
- Non-ITAAC inspections (IMC 2504)
  - Verifies that programs associated with construction and operation are effective and meet the regulations

What are ITAAC?

- Inspections, tests, analyses and acceptance criteria (ITAAC)
- ITAAC are design commitments that are defined during the NRC combined license application review and/or reactor design certifications
  - ITAAC define the method the license holder will use to verify the design commitment has been met
    - And it defines the methods acceptance criteria
- After the start of construction and prior to fuel load the license holder shall verify all ITAAC have been met

Non-ITAAC Inspections (examples)

- Construction programs
  - Quality assurance
  - Reporting defects and non-compliance
  - Fitness for duty
- Pre-operational Testing
- Operational programs
  - In-service inspection
  - Reactor operator training
  - Operational readiness

Limited Work Authorization

- LWA approved in August 2009
- Allows placement of engineered backfill, retaining walls, lean concrete, mudmats, and a waterproof membrane
- Additional LWA request (Oct. 2009) under review to allow rebar, concrete and buried items for nuclear island basemat
- Combined License Review scheduled for completion in 2011

Milestones

- Bottom of Unit 3 Excavation
- Bottom of Unit 4 Excavation
- Back fill Beginning
- Unit 3 Lower Mud Mat Installation
- Unit 4 Lower Mud Mat Installation
- Unit 3 Water Proof Membrane
- Unit 4 Water Proof Membrane

Upcoming ITAAC Activities

- Soil Compaction
- Water Proof Membrane Coefficient Test
- Shear Wave Testing
- Water Proof Membrane

Planned 2010 Program Inspections

- QA Program Inspection
- ITAAC Management/Closure Process
- Periodic Civil Engineering Inspections
- Assessment Period Begins

Module Fabrication

- Module Fabrication Start Lake Charles
- Mock-up Shipped to Vogtle
- Erection of Mock-up
- Testing of Assembled Mock-up at Vogtle
- First Module Subassembly Arrival at Vogtle
- Module Assembly Start at Vogtle

Recently Completed Activities

- Lake Charles Site Visit – Mock-up Module
- Fitness For Duty Inspection

Inspection Staffing

- Regional
  - Started CCI in 2006, steadily increased staff levels since then based on projected number of reactor projects
- Resident
  - Posted first senior resident position application in anticipation of construction at the Vogtle Project
    - Plan to fill position sometime in 2010

Closing Remarks

- Inspection Program started in November 2009
- Inspection Program for 2010 is planned
- Staffing will increase as the workload increases
- Continue to protect the public's health and safety by overseeing construction of new nuclear reactors