



# RIC 2011 Construction Inspection Program Session

Speakers:

John Tappert, NRC/NRO  
Chuck Casto, NRC/RII  
Russ Bell, NEI  
Jim Davis, Southern Company

---

---

---

---

---

---

---

---



# Construction Inspection Program

John Tappert  
Deputy Director  
Division of Construction  
Inspection and Operational Programs  
March 9, 2011

---

---

---

---

---

---

---

---



# Topics

- New Reactor Construction Program Status
- Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)
- Future Initiatives

---

---

---

---

---

---

---

---



# Construction Oversight and Preparation for Operation

- Construction Inspection Program
- Inspection Planning




---

---

---

---

---

---

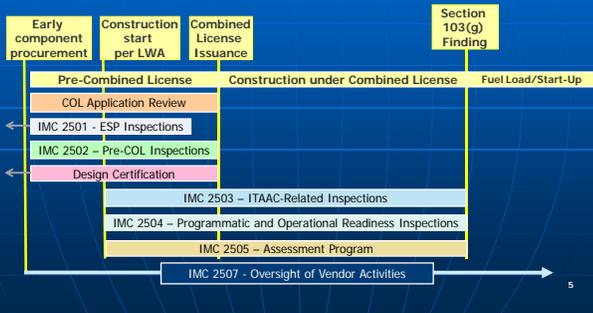
---

---



# New Reactors Construction Oversight Program

*Oversight will assure plants are constructed as designed.*




---

---

---

---

---

---

---

---



# Roles and Responsibility

## Headquarters:

- Develop and establish overall construction inspection program
- Manages ITAAC Verification Closure Process
- Conduct Vendors Inspections
- Conduct Aircraft Impact Assessment Inspections
- Conduct Engineering Design Verification Inspections

## Region II/CCI:

- Conduct ITAAC-Related Inspections
- Conduct most Programmatic and Operational Readiness Inspections before transition to Reactor Oversight Program

## Host Regions:

- Conduct some Programmatic and Operational Readiness Inspections
- Conduct Startup Testing and Operational Program Inspections following transition to Reactor Oversight Program

---

---

---

---

---

---

---

---

**USNRC** Current Inspections Related to New Reactors

- Vendor Inspections
- Modular Construction Facility
- Limited Work Authorization Inspections at Vogtle

7

---

---

---

---

---

---

---

---

**USNRC** Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

- 10 CFR §52.103(g) – requires a Commission finding that all ITAAC are met before fuel load and operations
- Regulatory Guide 1.215, “Guidance for ITAAC Closure Under 10 CFR Part 52,” was issued December 2009 to endorse NEI 08-01

8

---

---

---

---

---

---

---

---

**USNRC** Vogtle ITAAC Closure Verification Timeline

Year	Unit 3 ITAAC Closures	Unit 4 ITAAC Closures	Combined 3 & 4 Closures
2010	0	0	0
2011	0	0	0
2012	10	0	10
2013	100	50	150
2014	250	150	400
2015	400	300	700
2016	0	400	400
2017	0	0	0

9

---

---

---

---

---

---

---

---



## ITAAC Closure and Verification Demonstration

### Purpose:

- Gain insights into the readiness of industry's closure process and NRC inspection and closure verification processes
- Test aspects of the construction assessment and enforcement programs
- Evaluate the surge in ITAAC closure submittals expected during the last year of construction

10

---

---

---

---

---

---

---

---



## ITAAC Closure and Verification Demonstration

### Lessons Learned:

- IT infrastructure for ITAAC closure
- Contents of ITAAC closure letters and packages
- Level of details in Technical Reports and their availability for NRC inspection
- Refinement of Regulatory Guide 1.215

11

---

---

---

---

---

---

---

---



## ITAAC Closure and Verification Demonstration

### Next steps:

- Lessons Learned report
- Actions for resolutions of Lessons Learned
- Future phases of the exercise (other participants)

12

---

---

---

---

---

---

---

---



## Future Initiatives

- Construction Reactor Oversight Process
- Pre-COL Inspection Program
- Advance Reactor Oversight Program
- Counterfeit, Fraudulent, and Suspect Items

13

---

---

---

---

---

---

---

---



## Construction Reactor Oversight Process

- Manual Chapter 2505 / SECY 08-155
- Commission guidance to reconsider elements and propose policy options
  - Significance Determination Process
  - Performance Indicators
- An NRC multi-office Construction Reactor Oversight Process Working Group (cROP WG) was formed in December 2009 to develop construction assessment program options
- Provided the staff's recommendation on cROP to the Commission on October 26, 2010

14

---

---

---

---

---

---

---

---



## Pre-COL Inspection Program

- Pre-COL inspections originally limited to QA and engineering inspections to support COLA review
- Program modified (December 2010) to include inspection of ITAAC related pre-construction activities prior to the COL
  - Activities that would be considered ITAAC related if it were performed Post-COL
- Results used to support the NRC's future closure verification of ITAAC

15

---

---

---

---

---

---

---

---



## Advanced Reactor Inspection Program Development

- Staff is in early stages of identifying possible changes to the Inspection Program
- Some Designs (Small Modular Reactors) Could Require Greater Emphasis on Inspections at Vendor Facilities
  - Significant fabrication at a vendor facility may require modification of the inspection methodology
  - Possible Vendor Resident Inspectors

16

---

---

---

---

---

---

---

---



## Counterfeit, Fraudulent and Suspect Items

- Internal working group established
  - Assess regulatory requirements and guidance
  - Develop an agency-wide communication network
  - Assess industry procedures and practices for identifying counterfeit, fraudulent or suspect items
- Licensees remain accountable for the quality of parts used in the construction of new reactors

17

---

---

---

---

---

---

---

---