



RIC 2011 Construction Inspection Program Session

Speakers:

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

1



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

3



Construction Oversight and Preparation for Operation

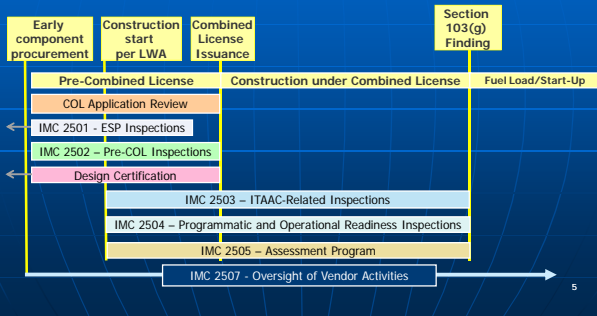
- Construction Inspection Program
- Inspection Planning





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	0	0	0
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
