



Briefing on the NRC's Construction Oversight Activities

August 27, 2013

Opening Remarks

**Mark Satorius,
Executive Director for Operations**

Agenda

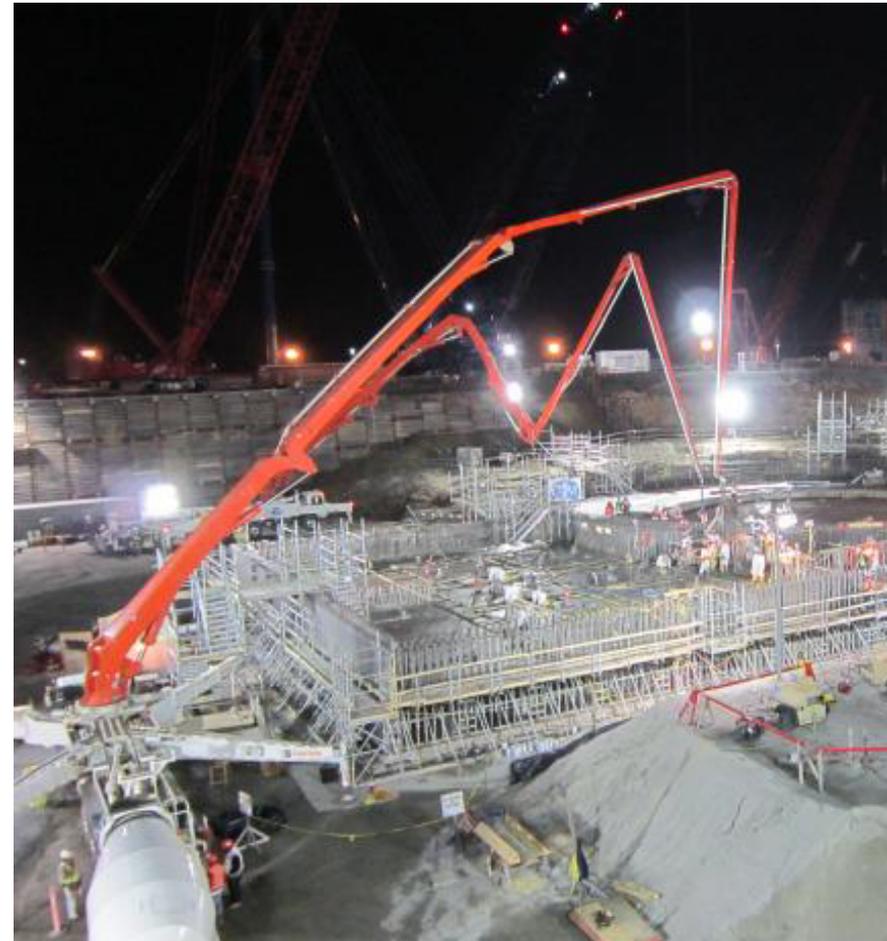
- **Construction Reactor Oversight Program and Vendor Inspection Program**
- **Fuel Facility Construction Oversight**
- **Construction Inspection**

Construction Reactor Oversight Program and Vendor Inspection Program

**Laura Dudes, Director
Division of Construction Inspection and
Operational Programs,
Office of New Reactors**

Discussion Topics

- **Construction Reactor Oversight Process**
- **Vendor Inspection**
- **Lessons Learned Report**



Construction Reactor Oversight Process

- **Inspection Activities**
- **Annual/Pilot Assessments**
- **Program Enhancements**
- **Conclusion: The construction reactor oversight process is effective in ensuring that new reactors are built in accordance with the approved design**

Construction Reactor Oversight Process

- **NRC's Operating/Construction Experience Programs**
- **Bilateral-China**
 - **Pre-operational testing**
 - **Inspector exchange**
- **Multi-National Design Evaluation Program (MDEP)**



Supply Chain Oversight

- **The ultimate responsibility lies with the licensees**
- **NRC verifies licensees meet their supply chain oversight responsibilities through a selected sample of vendor inspections**
- **Inspections focus on quality assurance programs, 10CFR Part 21, and technical implementation aspects (e.g., fabrication)**

Supply Chain Oversight (cont'd)

- **Results inform future inspection activities and communications with licensees (e.g., Information Notices)**
- **Vendor Inspection Program performs annual Self Assessments**

Recent Vendor Inspections

AP1000

- **Accumulators and Core Makeup Tank**
- **Seamless Reactor Coolant Piping**
- **Safety Related Valves and Components (Squib)**
- **Module Fabrication**



Vendor Inspection Insights

- **Inspections of select supply chain activities (e.g., testing, manufacturing) inform the NRC's finding that Acceptance Criteria are met**
- **Provide early identification of issues and valuable inspection insights**
- **Program continues to verify compliance with quality assurance requirements**

Part 52 Post-Combined License Implementation Self Assessment

- **Purpose:**
Assess Part 52 Construction Oversight Implementation (Focus first year of construction activities)
- **Scope:**
Review regulatory processes using a vertical slice approach to identify potential program enhancements

Positive Elements of Program

- **Timely, good quality inspections**
- **Effective training, preparation, and program support of inspectors**
- **Prompt, accurate, and well-documented licensing and technical support of construction inspection effort by program offices and OGC**

Positive Elements of Program (cont.)

- **Well-documented bases for both the 10 CFR Part 52 Construction and Vendor Inspection Programs**
- **Timely processing of license amendment requests**
- **Effective feedback processes within the program guidance that promote self-correction**

Lessons Learned

- **Clarity of design control document (DCD) Tier 2* information (i.e. information for which prior NRC review and approval is needed before changes can be implemented) could be enhanced.**
- **Clear and timely regulatory decision making in the construction environment can be enhanced through better communications.**

Lessons Learned (cont.)

- **NRC staff acceptance of submitted ITAAC closure notifications (ICNs) will require continued, effective interface with licensees.**
- **The vendor oversight program would benefit from further clarification of its objectives and enhanced communications of vendors' performance issues with operating reactor and construction licensees.**
- **NRC staff and the licensees should monitor the implementation of the changes during the construction process to identify if additional process enhancements are warranted.**

Fuel Facility Construction Oversight

Marissa Bailey, Director

**Division of Fuel Cycle Safety and
Safeguards**

**Office of Nuclear Material Safety and
Safeguards**

Discussion Topics

- **URENCO USA Enrichment Facility (UUSA)**
- **Mixed-Oxide Fuel Fabrication Facility (MFFF)**
- **New Fuel Facilities**

UUSA Construction Oversight

- **Developed construction inspection program**
- **Operational readiness reviews verified facility built as licensed**
- **Lessons learned by Industry and NRC**
- **Effort contributed to the current NRC construction oversight programs**

Construction Overview

UUSA Site 2013



Construction Overview MFFF Site 2007



MFFF Construction Oversight

- **Facility has unique regulatory requirements**
- **Requires verification of primary structures, systems and components (PSSCs)**
- **Operational readiness reviews needed before license is issued**
- **Close coordination needed between licensing and inspection for PSSC closure**

Construction Overview

MFFF Site 2013



Other New Fuel Facilities

Facility

- **Lead Cascade**
- **America Centrifuge Plant**
- **AREVA Eagle Rock**
- **GE Laser Enrichment**
- **International Isotopes**

Status

- **Research and Development with DOE**
- **Construction Pending**
- **Construction Pending**
- **Construction Pending**
- **Construction Pending**



Construction Inspection

Joel Munday, Director

Division of Construction Projects, RII

Discussion Topics

- **Reactor Construction Inspection**
- **Fuel Cycle Facility Construction Inspection**
- **Strategic Approach to Inspection Staffing**



Watts Bar Unit 2

- **Construction activities properly implemented**
- **Commercial grade dedication findings**
- **Preparations for preoperational testing**



Vogtle 3 & 4/Summer 2 & 3

- **Construction is meeting all cornerstone objectives**
- **Design control findings**
- **Receipt inspection oversight**
- **Inspection scheduling challenges**



Mixed Oxide Fuel Fabrication Facility (MFFF)

- **Construction program is satisfactory**
- **Inspection activity will keep pace with construction**



URENCO USA (UUSA)

- **Activities continue to be conducted safely and securely**
- **Concerns over commercial grade dedication have been corrected**
- **Inspection levels are consistent with ongoing construction activities**



Conclusion

- **Activities continue to be conducted safely**
- **Inspections are identifying sound issues**
- **Our human resource management strategy is ensuring that appropriate staffing exists in a dynamic construction environment**



Summary

- **The NRC has robust, safety focused construction oversight programs, including oversight of the supply chain.**
- **NRC will continue to be proactive, leveraging construction experience across programs and across the international community.**

Acronyms

CFR	Code of Federal Regulations
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria
MFFF	Mixed Oxide Fuel Fabrication Facility
MOX	Mixed Oxide
OGC	Office of the General Counsel
UUSA	URENCO USA