



Construction Reactor Oversight Process

Overview and Pilot Results

Jim Luehman
Office of New Reactors

Briefing for ACRS
February 7, 2013

Construction Reactor Oversight Process

Overview and Pilot Results

- Construction Reactor Oversight Process (cROP) Overview Mr. Timothy Frye
- cROP Pilot Results Mr. Thomas Kozak



Construction Reactor Oversight Process Overview

Timothy Frye

Construction Assessment and Enforcement Branch

Office of New Reactors

Division of Construction Inspection and Operational Programs

301-415-3900

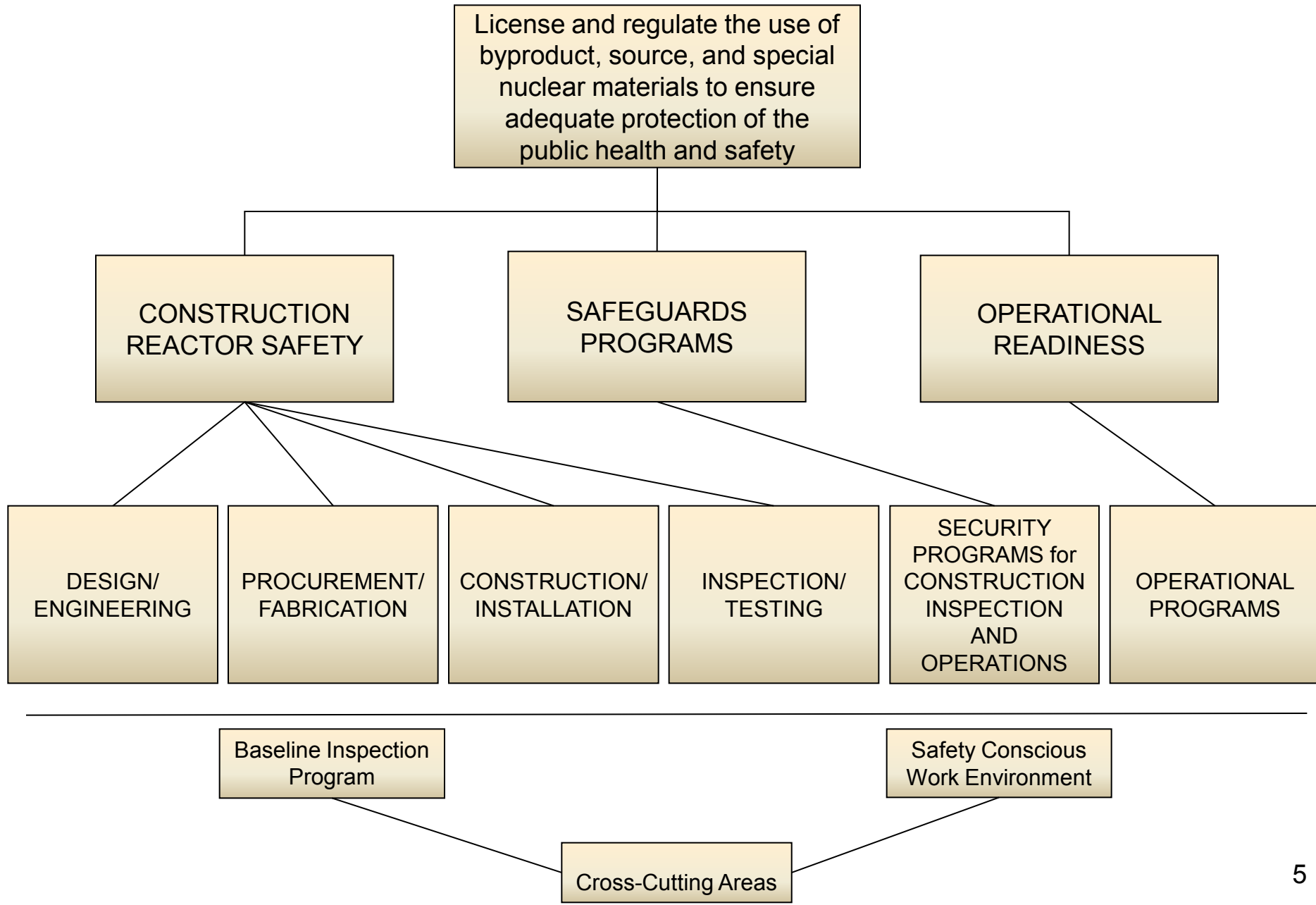
Briefing for ACRS

February 7, 2013

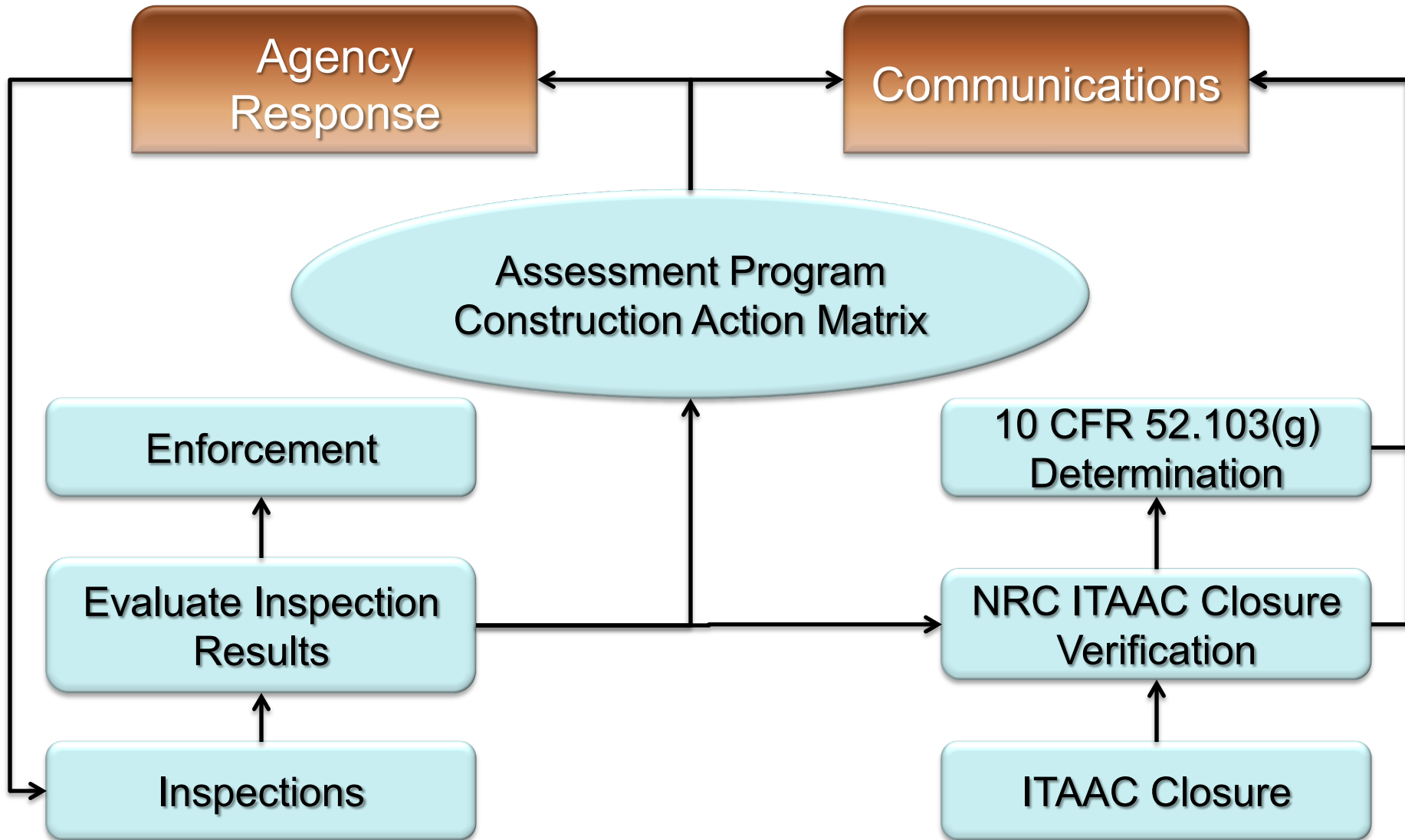
Background

- In Staff Requirements Memorandum SECY-10-0140, the Commission approved the staff's recommendation to develop a construction reactor oversight process that includes the following:
 - Regulatory Framework
 - Construction Significance Determination Process (SDP), and
 - Construction Action Matrix
 - Pilot new program for 1 year
- The Commission directed the staff to provide the pilot results to the ACRS for review.
- Due to the stage of Watts Bar Unit 2 construction, the new process is not applicable to this site.

cROP Regulatory Framework



cROP Overview





Construction Reactor Oversight Process Pilot Results

Thomas Kozak

Construction Assessment and Enforcement Branch

Office of New Reactors

Division of Construction Inspection and Operational Programs

301-415-6892

Briefing for ACRS

February 7, 2013

cROP Pilot

- Issued pilot guidance document including pilot purpose, scope, objectives, and evaluation and acceptance criteria
- Issued pilot versions of IMCs
 - IMC 0613P (Finding screening and report writing)
 - IMC 2505P (Performance Assessment)
 - IMC 2519P (Construction SDP)
- Trained staff in October and November, 2012
- Issued Enforcement Guidance Memorandum 11-06
- Implemented pilot at Vogtle on January 1, 2012; Implemented pilot at Summer upon issuance of combined licenses in March 2012

cROP Pilot

- To date, issued 6 Vogtle and 2 Summer inspection reports
 - 4th quarter inspection reports to be issued soon for Vogtle and Summer
- All findings identified to date were of very low safety significance (green)
 - 6 findings at Vogtle
 - 4 findings at Summer
- Conducted 1st quarter, mid-cycle, and 3rd quarter assessments for each unit

cROP Pilot

- **All units in licensee-response column of construction action matrix**
- **End-of-cycle assessment to be conducted in February and assessment letters to be issued in early March**
- **Public assessment meetings to be conducted in late March/early April near both sites**
- **Solicited stakeholder feedback**
 - **Internal and external surveys conducted through the end of CY 2012**
 - **Public meetings in vicinity of sites in early CY 2013**
- **Conducting a cROP self-assessment with results reported to the Commission via SECY paper in mid-April.**

Initial Lessons-Learned Incorporated Into Guidance Documents

- Modified guidance for corrective action program effectiveness reviews
- Provided additional guidance for assessment letter contents
- Provided additional guidance for ITAAC finding documentation
- Added requirement to track licensee-identified violations that are material to ITAAC acceptance criteria
- Clarified role of vendor inspections in ITAAC verification
- Clarified the difference between vendors/suppliers and contractors working on behalf of licensees

Evaluation of Pilot Program Results

- **The pilot program was evaluated using 11 metrics in 4 different areas**
 - **Risk-informed Baseline Inspection Program**
 - **Assessment**
 - **Enforcement**
 - **Information Management Systems and Staff Training**
- **All metrics were met.**

Has there been sufficient activity during the pilot to end the pilot and fully implement the new construction assessment and enforcement approaches?

- **Consensus both externally and internally is that the pilot was a success and that enough activity occurred to show that the process is sound**
- **The staff should continue to engage stakeholders as lessons are learned and incorporated into the various cROP programs**

ADDITIONAL FEEDBACK

- **Clarify when a performance deficiency can be considered to affect a system/structure design function as used in the SDP**
- **A construction chapter of the enforcement manual should be developed.**
- **Cross-cutting aspects should be revisited for construction**

Additional Feedback

- **There is confusion between the difference between the types of findings (i.e., ITAAC finding, ITAAC-related construction finding, construction finding, programmatic finding, technical finding).**
- **NRC should clarify statements in Vendor inspection reports where it states that if an issue identified is not corrected it might impact the ability for the NRC to meet the applicable ITAAC.**

Key cROP Revisions to Support Full Implementation

- **Develop a construction chapter in the enforcement manual and revise the Enforcement Policy to reflect guidance in EGM 11-06 (will develop in parallel to implementation).**
- **Revisit cross-cutting aspects for construction**
 - **Interactions with stakeholders will be necessary**
 - **Align with ROP actions to address Commission Safety Culture Statement**
- **Eliminate different types of inspection findings**
- **Consider additional guidance as needed to better define roles and responsibilities of vendors/suppliers and contractors**

Pilot Exit Strategy

- New assessment and enforcement approach is sound
- Latest revision of pilot guidance documents will remain in effect into 2013
- Commissioner Assistant's briefing prior to 3/21
- Results reported in cROP self-assessment SECY Paper in mid-April
- Goal is to incorporate feedback and issue final guidance documents by 7/1



Construction Reactor Oversight Process Overview and Pilot Results

Jim Luehman
Office of New Reactors

Briefing for ACRS
February 7, 2013

Backup Slides

Construction SDP

- The staff developed a deterministic construction SDP to evaluate findings associated with licensees' construction and operational programs
- The staff developed a risk-informed construction SDP to evaluate all other findings identified during construction

AP 1000 Construction SDP Matrix

	AP 1000 Construction SDP Matrix				
Quality of Construction	Row 4				
	Row 3				
	Row 2				
	Row 1				
		Very low RAW < 4	Low RAW 4 to 40	Intermediate RAW 40 to 400	High RAW > 400
	System/Structure Risk Importance				

System/Structure Assignment for AP1000 Pilot

SYSTEMS			
VERY LOW	LOW	INTERMEDIATE	HIGH
ALL OTHER SYSTEMS: SFS, SGS, ETC...	PXS (ACC)	PXS (CMT)	PMS
	DAS	PXS (PRHR)	IDS
	ECS	PLS	PXS (IRWST)
	CNS (ISOLATION)	EDS	RCS
	PCS		PXS (Containment sump recirculation)
	RNS		
	CCS		
	SWS		
	VLS		
	PXS (IVR)		
	VBS (FANS)		
STRUCTURES			
VERY LOW	LOW	INTERMEDIATE	HIGH
ALL OTHER STRUCTURES: Turbine Building, EDG Building, Rad Waste Building, Yard, Site Grade, Non 1E Cable Raceways	ANNEX BUILDING	CONTAINMENT	STRUCTURAL SECTIONS LISTED IN AP1000 TIER 1, SECTION 3.3, TABLE 3.3-7 OR WHOSE STRUCTURAL INTEGRITY IS REQUIRED TO ENSURE FUNCTIONALITY OF SYSTEMS IN THE HIGH COLUMN
		SHIELD BUILDING	
		AUXILIARY BUILDING	
		NUCLEAR ISLAND BASEMAT	
		1E CABLE RACEWAYS	