Construction Reactor Oversight Process Cornerstone Objectives, Attributes and Areas to Measure

Cornerstone	Design / Engineering
Objective	To independently assess the effectiveness of the licensee's methods to (1) effectively translate high-level certified design information into detailed design and construction drawings and procedures; and (2) implement an effective design change process.
Attributes	Design Control; Procedure Quality
Areas to Measure	ITAAC; Site-specific design/Design translation; Design changes; Applicable Criteria from Appendix B
Inspectable Areas	Applicable IMC 2503 ITAAC procedures; Applicable IMC 2504 Construction Program Procedures; Design Acceptance Criteria

Cornerstone	Procurement / Fabrication
Objective	To independently assess the effectiveness of the licensee's methods to (1) procure material, equipment and services in quality manner, and (2) control materials, parts, and components during fabrication.
Attributes	Process Control; Material Control; Procedure Quality
Areas to Measure	ITAAC; Commercial grade dedication (10 CFR 21); Receipt inspection; Supplier evaluation; Applicable Criteria from Appendix B
Inspectable Areas	Applicable IMC 2503 ITAAC procedures; Applicable IMC 2504 Construction Program Procedures;

Cornerstone	Construction / Installation
Objective	To independently assess the effectiveness of the licensee's programs and processes developed and implemented to ensure the construction and installation of plant components in a quality manner.
Attributes	Process Control; Material Control; Procedure Quality
Areas to Measure	ITAAC; Structural; Mechanical; Electrical; Welding; Storage; Applicable Criteria from Appendix B; 10 CFR 50.55e
Inspectable Areas	Applicable IMC 2503 ITAAC procedures; Applicable IMC 2504 Construction Program Procedures

Cornerstone	Inspection / Testing
Objective	To independently assess the effectiveness of the

	licensee's programs and processes developed and implemented to inspect and test programs, facilities and structures, systems, and components.
Attributes	**Process Control; Material Control; Procedure Quality**
Areas to Measure	**ITAAC; ITAAC closure and maintenance; Non-ITAAC testing; Preoperational testing; Preservice inspection & testing; Applicable Criteria from Appendix B**
Inspectable Areas	**Applicable IMC 2503 ITAAC procedures; Applicable IMC 2504 Construction Program Procedures; Applicable IMC 2504 Operational Program Procedures**

Cornerstone	**Operational Programs**
Objective	**To independently assess the licensee's capability to safely operate the facility.**
Attributes/Areas to Measure	**Program effectiveness** Emergency preparedness; Radiation protection; Process and effluent monitoring; Fire protection; Inservice inspection; Inservice testing; Environmental qualification; Reactor vessel material surveillance; Containment leak rate testing; Maintenance rule; Motor-operated valves; Quality assurance (operations) **Training and Qualification** Reactor operator license training and examinations; Reactor operator requalification training; Non-licensed plant staff training **Plant Facilities/Equipment** Simulator; Emergency Response Facilities and Equipment (non-ITAAC)
Inspectable Areas	**Applicable IMC 2504 Operational Program Procedures**

Cornerstone	**Security Programs for Construction and Operation**
Objective	**To provide assurance that (1) construction activities are not adversely impacted due to Fitness for Duty issues; (2) malicious acts during construction could not be used later for radiological sabotage involving special nuclear material; and (3) the licensee's security programs use a defense in depth approach and can protect against the design basis threat of radiological sabotage from external threats, and the theft or loss of radiological materials prior to the transition to the final security operational phase.**

Attributes/Areas to Measure **Note: Additional areas to measure will be added pending future construction security rulemaking**	**<u>Access Authorization</u>** Operational Program: Personnel Screening; Behavior Observations; Fitness for Duty Construction Program: Fitness for Duty **<u>Access Control</u>** Operational Program: Search; Identification **<u>Physical Protection</u>** Operational Program: Protected Areas and Vital Areas (Barriers, Alarms, Assessment) **<u>Contingency Response</u>** Operational Program: Protective Strategy Evaluation **<u>Material Control & Accounting</u>** Operational Program: Records, Reports; Procedures; Inventories **<u>Cyber Security</u>** Protection of Systems & Networks; Cyber Security Program; Plan & Procedures
Inspectable Areas	**Fitness-for duty inspection procedure; safeguards information control; security operational program procedure; security construction program procedure**