SOUTHERN COMPANY

Preparations for ITAAC - Vogtle 3&4 Experience

Chuck Pierce

Southern Nuclear Operating Company

Nuclear Development Licensing Manager

August 30, 2011

Preparations for ITAAC Closure

- Constructive public interactions with NRC (SECY-11-0111)
  - NRC Construction Inspection Program
  - NRC Region II
  - Simulated ITAAC Closure and Verification Demonstration sponsored by DOE
- ITAAC closure process development and oversight
  - Contractor interactions and oversight
  - Ongoing development of process

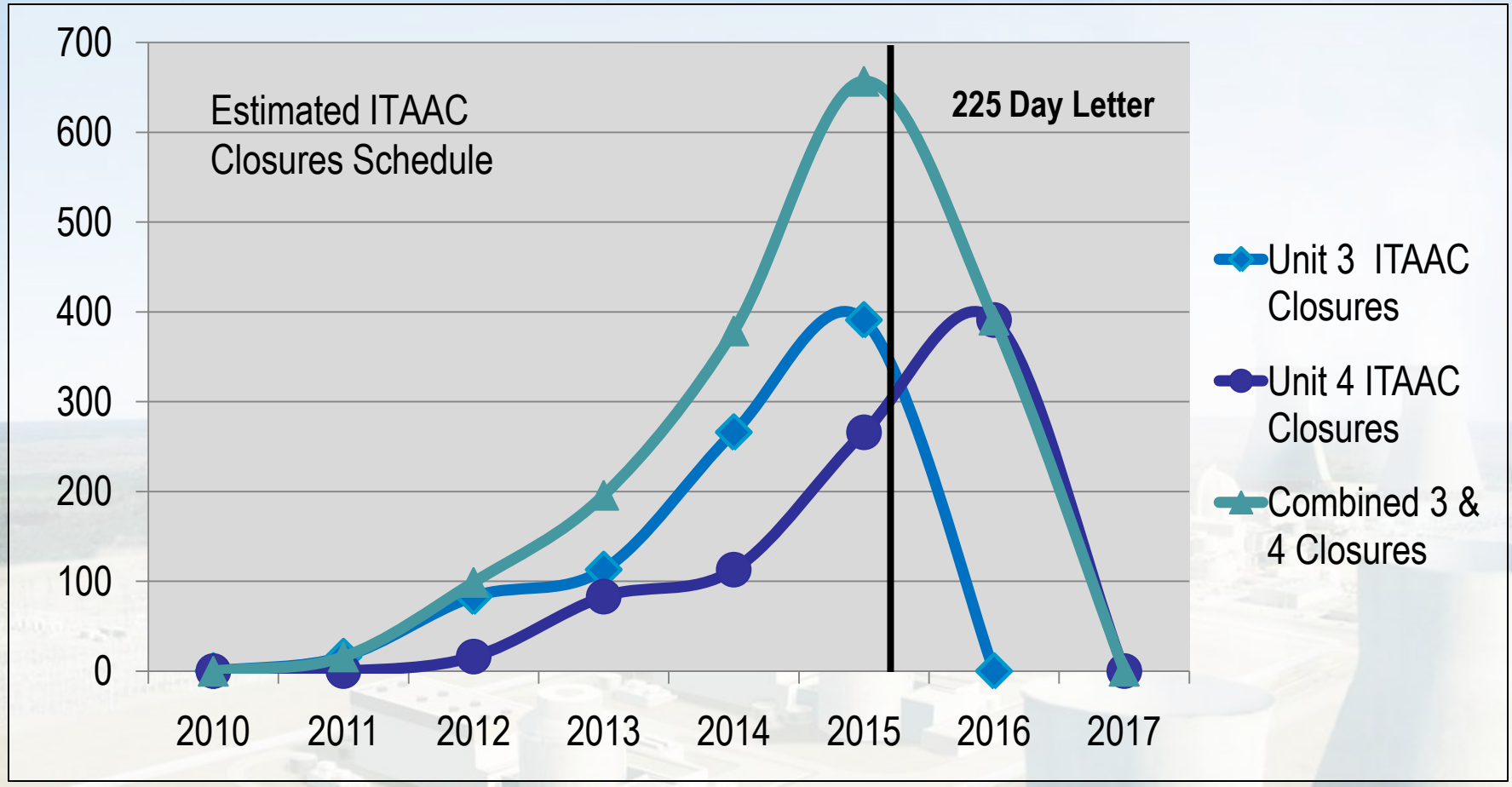
Early Construction Experience

- LWA value
  - Limited scope construction program development
  - Early exercise of ITAAC process
- Contractual alignment – Licensee is Responsible
  - Licensee oversight

Vogtle 3 and 4 Status

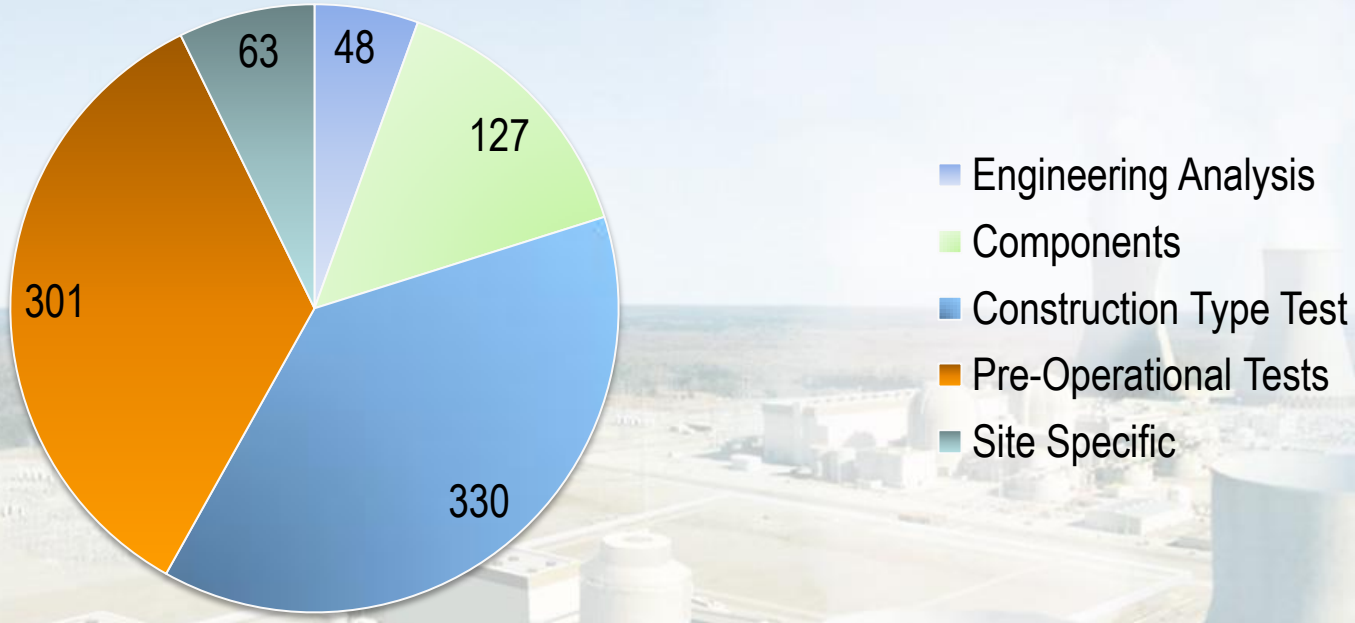
- ITAAC Underway
  - RPV charpy
  - Type tests
  - Backfill shear wave velocity
  - Waterproof membrane
- First ITAAC Closure Notification submittal soon

ITAAC Process – The Challenge Ahead



ITAAC Process – The Challenge Ahead

~806 AP1000 ITAAC
~63 Site Specific ITAAC



ITAAC Process – The Challenge Ahead

- 20% of ITAAC have higher levels of complexity

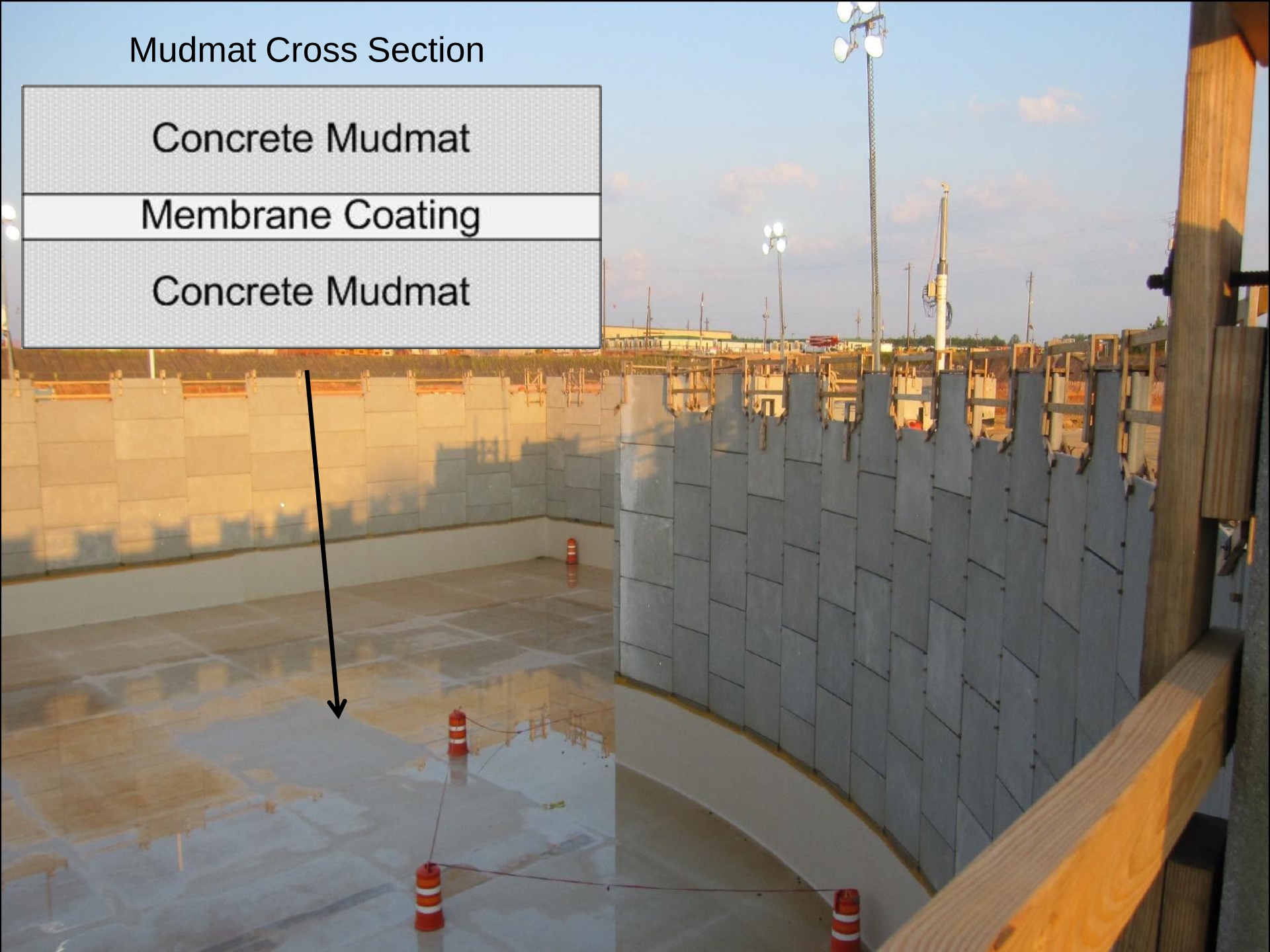
Design Commitment	Inspections, Tests, or Analyses	Acceptance Criteria
The Class 1E equipment identified in Table 2.1.2-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident ….	Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	A report exists and concludes that the Class 1E equipment identified in Table 2.1.2-1 as being qualified for a harsh environment ….

ITAAC Process –Recent Lessons Learned

- Waterproof membrane ITAAC

Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
The friction coefficient to resist sliding is 0.7 or higher	Testing will be performed to confirm that the mudmat-waterproof-mudmat interface beneath the Nuclear Island basemat has a minimum coefficient of friction to resist sliding of 0.7	A report exists and documents that the as-built waterproof system (mudmat-waterproofing-mudmat interface) has a minimum coefficient of friction of 0.7 as demonstrated through material qualification testing.

Mudmat Cross Section



Moving Forward

- Major area of focus between industry and NRC
- Progress continues to be made
  - Closure process maturing
  - Maintenance process developing
- Future demonstration projects may be appropriate to obtain greater clarity
- ITAAC lead plant approach for standard plant inspections