

NRC Construction Experience

CNRA International Workshop

New Reactor Siting, Licensing and Construction

**Atlanta, GA, USA
October 25, 2012**

**Richard Rasmussen
Chief, Electrical Vendor Inspection Branch**

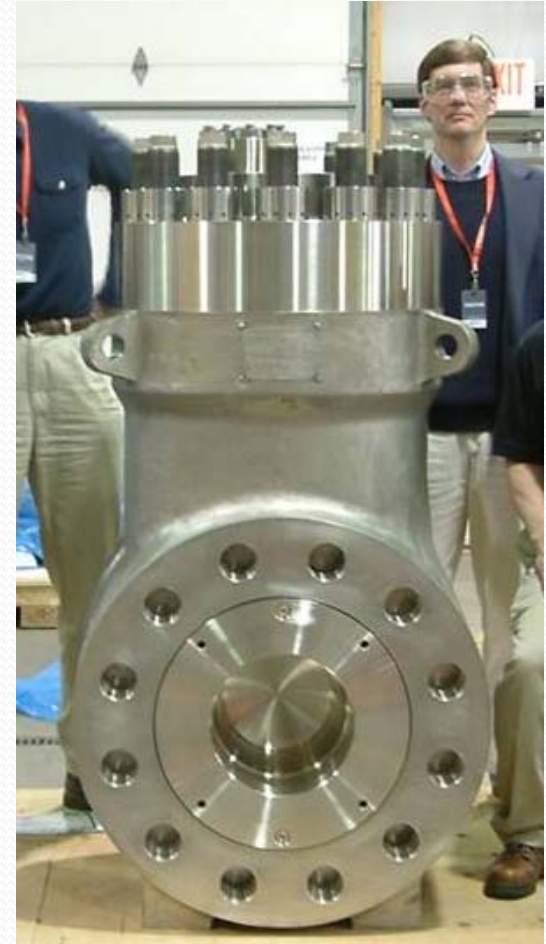


Outline

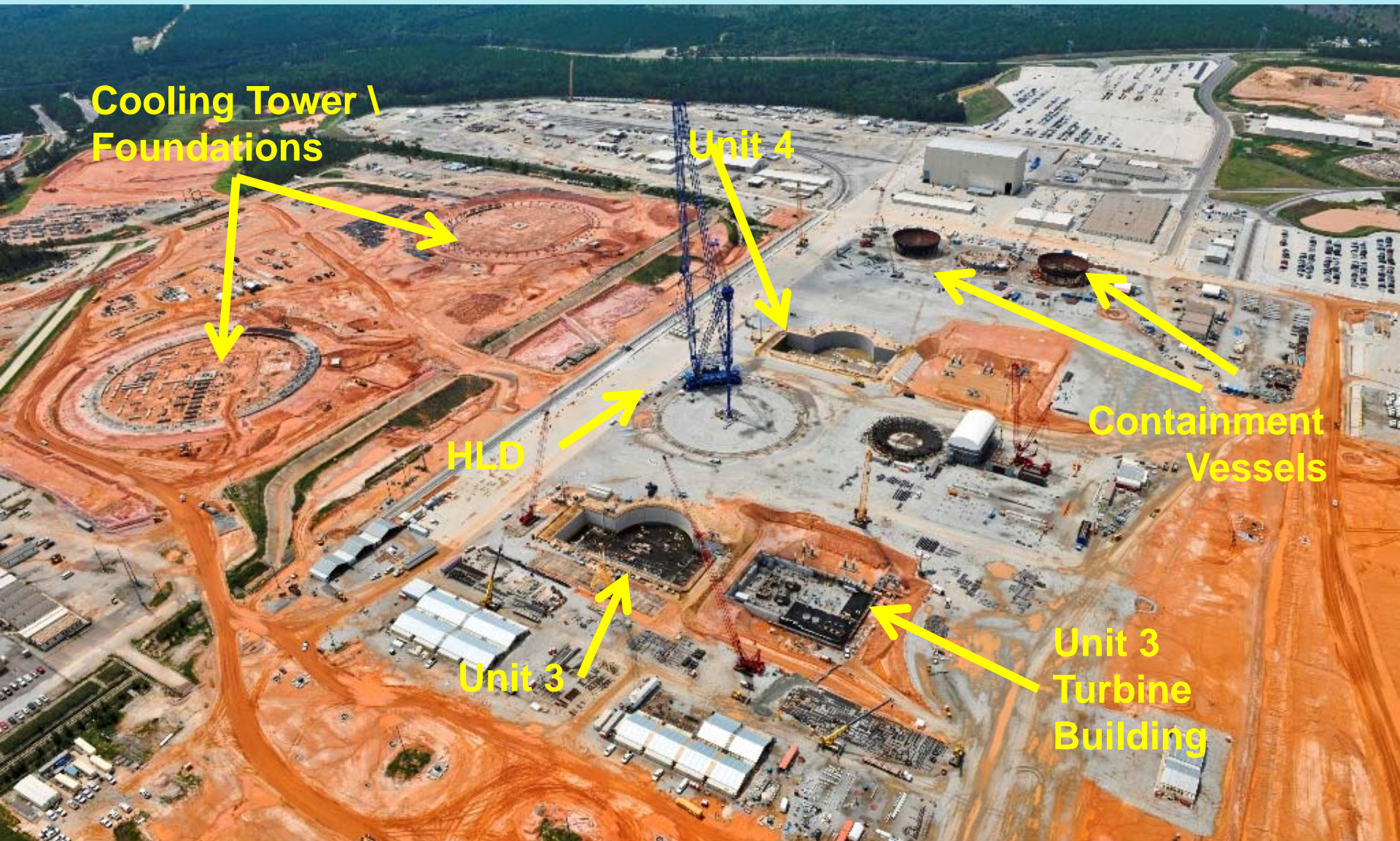
- **New construction in the United States**
- **NRC Construction Experience Program Overview**
- **Information Sources**
- **Recent Construction Experience Issues**

New Construction in the US

- **AP-1000 Construction Underway**
 - Vogtle 3 & 4 received their combined license in January 2012
 - VC Summer 2 & 3 received their combined license in March 2012
- **Additional Construction at**
 - Watts Bar Unit 2
 - Fuel facilities
- **Vendor Activities**



Vogtle October 2012



| VCS 2 & 3 – March 2012



Construction Inspection Program

Inspections

Vendor
Inspections

Baseline
Program
Inspections

Supplemental
and Reactive
Inspections

Construction Experience

- **To Error is Human**



- **but Always make New Mistakes!**
(Esther Dyson)

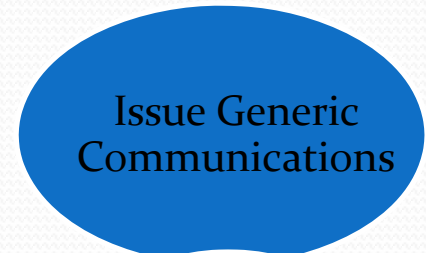
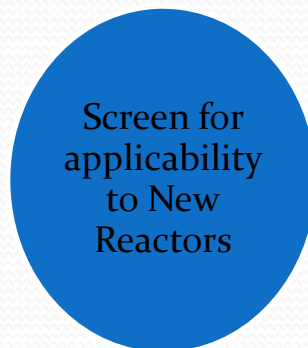
ConE

Collect

Screen

Disposition

Apply



Domestic Construction Experience Sources

- **Event notification reports (10 CFR Part 50.72/73)**
- **Deficiency/non-compliance reports (10 CFR Part 21/10CFR50.55(e))**
- **NRC inspection reports**
- **Other sources**
 - **Department Of Energy**
 - **Conferences (e.g., American Nuclear Society)**

International Construction Experience Sources

- **Incident Reporting System (IRS)**
- **Construction Experience (ConEx)**
- **Nuclear Events Web Based System (NEWS)**
- **Bilateral Agreements**
- **Foreign Visits**
- **MDEP**
- **CNRA/WGRNR**

MDEP: Multi-design Evaluation Program

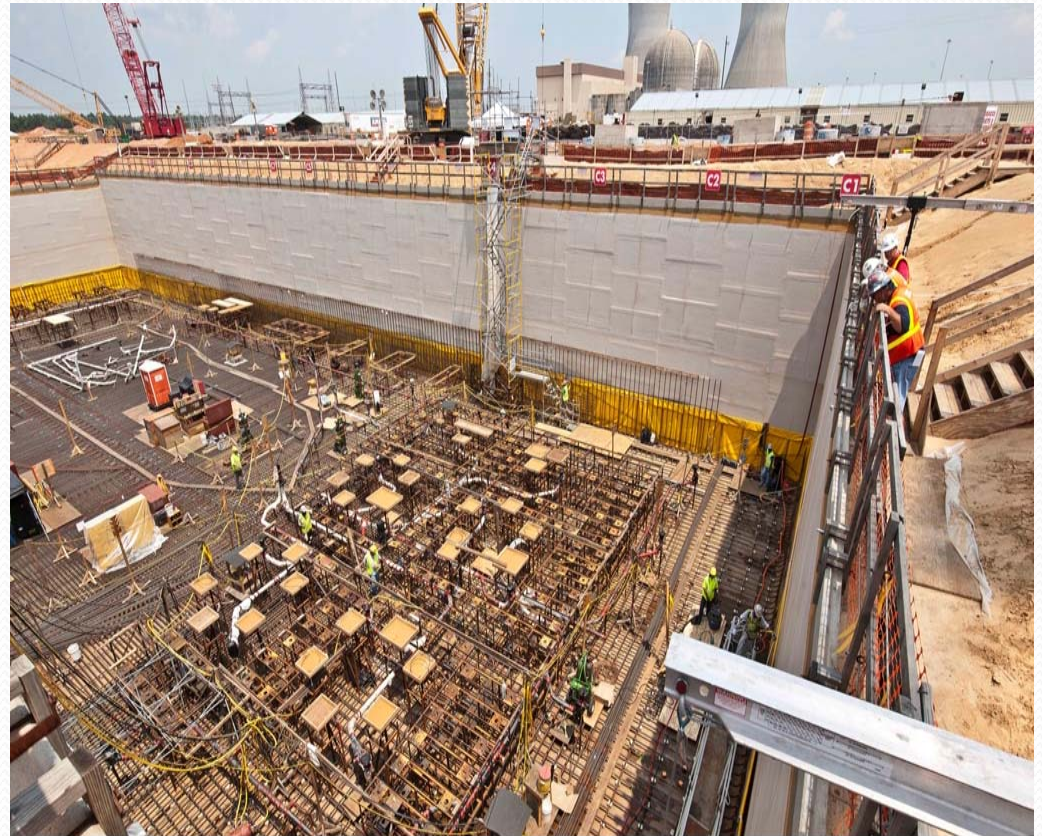
CNRA: Committee on Nuclear Regulatory Activities (within the Nuclear Energy Agency, NEA)

WGRNR: Working Group on Regulation of New Reactors (within the Nuclear Energy Agency, NEA)

Rebar Issues

Vogtle Basemat Issues

MOX Fuel Facility
rebar bending
(IN 2008-17)



Inside view of the Vogtle unit 3 "nuclear island" showing rebar work

August 2012

©2012 Georgia Power Company All rights reserved

Concrete Issues

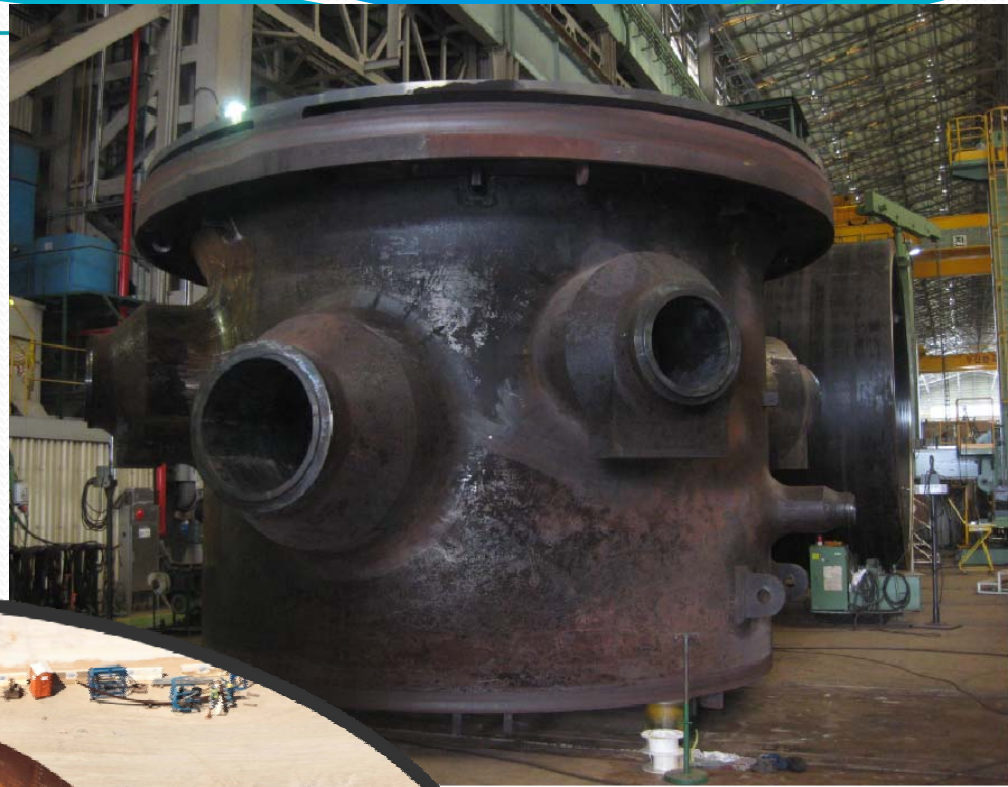
**Seabrook
alkali-silica
reaction
(IN 2011-20)**

**Placement
Issues
(IN 2008-17)**



Fabrication Issues

- Vogtle 3 vessel nozzle welding
- Vogtle 3 containment cracking
- San Onofre steam generator tube failure



Digital Upgrades

Oconee Lessons Learned





Construction Experience Contacts

Al Issa

alfred.issa@nrc.gov

301-415-5342

Tim Frye

Timothy.frye@nrc.gov

301-415-3900

Questions

