



Nuclear Regulatory Commission  
Exhibit # - SNC000009-MA-CM01  
Docket # - 05200025 | 05200026  
Identified: 09/27/2011

Admitted: 09/27/2011  
Rejected:

Withdrawn:  
Stricken:

SNC000009



# Vogtle 3 & 4 COL

Southern Nuclear Operating Company  
VEGP Units 3 & 4  
Combined Licenses and  
Limited Work Authorization

Mandatory Hearing

Safety – Panel 4

September 27, 2011

Ted Amundson – SNC  
Jerry Sims – SNC  
Wes Sparkman – SNC  
Eddie Grant – NuStart



## **Selected Topics – Chapters 9, 12, 13, 14**

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- ◆ Emergency Planning (addressed in ESP)
- ◆ Technical Support Center (TSC)
- ◆ Cyber Security
- ◆ Spent Fuel Pool Redesign
- ◆ ALARA
- ◆ Minimization of Contamination
- ◆ First (three) plant(s) testing



# Emergency Planning

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- ◆ Complete and integrated emergency plan with site specific ITAAC approved as part of the Early Site Permit (ESP) with seven Permit Conditions
  - ◆ Six permit conditions (three for each unit) related to emergency actions levels (EALs) – converted to single license condition for each unit
  - ◆ One permit condition related to approval of the Technical Support Center (TSC) – closed in the Combined License (COL) Final Safety Evaluation Report (FSER)



# Emergency Planning (continued)

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## ◆ Emergency Action Levels

- ◆ Because certain design details are not complete, some EAL setpoints have not yet been established
- ◆ A COL license condition was proposed that a complete set of EALS be submitted for NRC review at least 180 days before fuel load
  - ◆ The EALs will be in accordance with Nuclear Energy Institute (NEI) 07-01, Rev. 0, with no deviations
  - ◆ The EALs will have agreement of State and local officials



# Technical Support Center

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- ◆ The ESP referenced AP1000 DCD Rev. 15.
  - ◆ Rev. 15 did not include the same material regarding the location of the TSC as AP1000 DCD Rev. 19
- ◆ NRC Staff deferred regulatory action on the location of the TSC to the COL phase
  - ◆ Location of the TSC addressed in Departure 18-1
    - ◆ Radiological and non-radiological habitability issues addressed
    - ◆ ITAAC adjusted to address habitability issues



## Technical Support Center (continued)

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- ◆ Designed to handle an accident that affects one or all four of the units at Vogtle
  - ◆ Designed to accommodate the emergency plan provisions for all four units to be located at the VEGP site
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# Cyber Security

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- ◆ Cyber Security Plan (CSP) provides programmatic details for meeting the new requirements of 10 CFR 73.54
  - ◆ Based on RG 5.71 Rev. 0 template, with deviations
  - ◆ Deviations are provided to:
    - ◆ Clarify RG 5.71 intent,
    - ◆ Provide flexibility, and
    - ◆ Address alternative approaches to meeting Rule requirements
  - ◆ CSP summarizes how each deviation meets RG intent or does not reduce plant protection
- ◆ Cyber Security Program is an operational program, as per SECY-05-0197, and will be implemented by License Condition



# Spent Fuel Pool Redesign

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- ◆ DCD addresses spent fuel pool design and evaluations
  - ◆ Section 9.1.2 – Spent Fuel Storage
  - ◆ Design Descriptions
  - ◆ Criticality and Seismic Evaluations
  - ◆ This information incorporated by reference into COLA at FSAR Section 9.1.
  
- ◆ COLA FSAR addresses site-specific considerations
  - ◆ COL 3.7-2 addresses procedures for verification of spent fuel pool rack-to-wall gap dimensions following a seismic event
  - ◆ SUP 9.1-3 addresses safe load paths for heavy loads near the spent fuel pool
  - ◆ COL 9.1-7 addresses the metallic coupon monitoring to check for swelling and boron depletion



# Raw Water System

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- ◆ Site specific RWS addressed in COLA FSAR 9.2.11
- ◆ No safety related functions
- ◆ RWS sources include river water and well water
- ◆ Provides makeup to circulating water and other systems
- ◆ Provides makeup to cooling tower basins
- ◆ Provides dilution for radwaste discharge



# ALARA and Minimization of Contamination

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- ◆ COLA Incorporates DCD Section 12.4 by Reference and Supplements DCD Section 12.4
  - ◆ Addresses Radiation Exposure to Construction Workers
  - ◆ Construction worker doses were conservatively estimated
  - ◆ COLA FSAR Table 12.4-201 shows estimated maximum annual dose for each pathway as well as the total dose
- ◆ COLA Incorporates DCD Section 12.5 by Reference
  - ◆ Supplements DCD Section 12.5 with Appendix 12AA, "Radiation Protection Program Description"
  - ◆ adopts NEI 08-08A for a description of the operational and programmatic elements and controls that minimize contamination



# First (Three) Plant Only Testing

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- ◆ Pre-operational Testing
  - ◆ In-Containment Refueling Water Storage Tank (IRWST) Heatup Test
    - ◆ first plant only test
    - ◆ DCD Subsection 14.2.9.1.3 Item (h)
  - ◆ Pressurizer Surge Line Stratification Evaluation
    - ◆ first plant only test
    - ◆ DCD Subsection 14.2.9.1.7 Item (d)
  - ◆ Reactor Vessel Internals Vibration Testing
    - ◆ first plant only test
    - ◆ DCD Subsection 14.2.9.1.9



# First (Three) Plant Only Testing

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- ◆ Pre-operational Testing (cont'd)
  - ◆ Core Makeup Tank Heated Recirculation Tests
    - ◆ first three plants only tests
    - ◆ DCD Subsection 14.2.9.1.3 Item (k)
    - ◆ DCD Subsection 14.2.9.1.3 Item (w)
  - ◆ Automatic Depressurization System Blowdown Test
    - ◆ first three plants only test
    - ◆ DCD Subsection 14.2.9.1.3 Item (s)

# First (Three) Plant Only Testing

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- ◆ Initial Criticality and Low-Power Testing
  - ◆ Natural Circulation
    - ◆ first plant only test
    - ◆ DCD Subsection 14.2.10.3.6
  - ◆ Passive Residual Heat Removal Heat Exchanger
    - ◆ first plant only test
    - ◆ DCD Subsection 14.2.10.3.7



# First (Three) Plant Only Testing

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- ◆ Power Ascension Testing
  - ◆ Rod Cluster Control Assembly Out of Bank Measurements
    - ◆ first plant only test
    - ◆ DCD Subsection 14.2.10.4.6
- ◆ Load Follow Demonstration
  - ◆ first plant only test
  - ◆ DCD Subsection 14.2.10.4.22

# Abbreviations and Acronyms

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◆ ACRS	Advisory Committee on Reactor Safeguards
◆ CFR	Code of Federal Regulations
◆ COL	Combined License
◆ CSP	Cyber Security Plan
◆ ESP	Early Site Permit
◆ FSER	Final Safety Evaluation Report
◆ ITAAC	Inspections, Tests, Analyses and Acceptance Criteria
◆ RG	Regulatory Guide
◆ STD COL	Standard Combined License information
◆ STD SUP	Standard supplemental information
◆ TSC	Technical Support Center

**UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION**

**BEFORE THE COMMISSION**

**In the Matter of**

**Southern Nuclear Operating Company**

**(Vogtle Electric Generating Plant,  
Units 3 and 4)**

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**Docket Nos. 52-025-COL and 52-026-COL**

**September 20, 2011**

**CERTIFICATE OF SERVICE**

I hereby certify that copies of EXHIBIT SNC000009 for the Vogtle Units 3 & 4 COL Mandatory Hearing in the above-captioned proceeding have been served by electronic mail as shown below, this 20th day of September, 2011, and/or by e-submittal.

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(Original signed by M. Stanford Blanton)

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