



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

- ◆ 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

- ◆ 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)

- ◆ 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

- ◆ 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)

- ◆ 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

- ◆ 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

- ◆ 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 metamorphic coupon monitoring to check for swelling and boron depletion

Raw Water System

- ◆ 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

- ◆ 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

- ◆ 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

- ◆ 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

- ◆ 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

- ◆ 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

- ◆ 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)	Docket Nos. 52-025-COL and 52-026-COL
)	
(Vogtle Electric Generating Plant, Units 3 and 4))	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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