



Vogtle 3 & 4 COL

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

Mandatory Hearing

Safety – Panel 1

September 27, 2011

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Selected Topics – Chapters 1, 2 & 3

- ◆ **10 CFR Parts 30, 40 and 70**

- ◆ **Site Characteristics**
 - ◆ **Early Site Permit IBR**

- ◆ **Waterproof Membrane Departure**

- ◆ **AP1000 DCD Key Safety Information IBR**
 - ◆ **Shield Building**
 - ◆ **Containment Pressurization Relief System**



10 CFR Parts 30, 40 and 70

- ◆ Information needs generally provided in COLA, including:
 - ◆ Final Safety Analysis Report
 - ◆ Physical Security Program
- ◆ Applicant responses provided additional NRC reviewer requested information
 - ◆ SNM MC&A Program description to address control of and accounting for SNM (Part 74)
 - ◆ SNMPPP description to address new fuel receipt/storage prior to an operational Protected Area (§ 73.67)
 - ◆ New Fuel Shipping Plan to address transfer of control of new fuel to a qualified shipper for return to mfg. [73.67(g)]
 - ◆ Established controls on types, form, and quantities of byproduct, source, and special nuclear material



10 CFR Parts 30, 40 and 70 (cont'd)

- ◆ Requested exemption to requirements in Parts 70 & 74 to apply similar exceptions from Part 50 requirements to Part 52 licensees
- ◆ Draft guidance developed in 2011 to bridge the gap between Part 52 and Parts 30, 40 and 70
- ◆ License Conditions will address implementation of key nuclear material programs and controls on nuclear material

Site Characteristics in the ESP

COLA FSAR Table 2.0-201 includes comparison of site characteristics to DCD site parameters (most were resolved in the Early Site Permit)

- ◆ Meteorological
 - ◆ Maximum and minimum air temperatures – bounded *ESP
 - ◆ Wind speeds – gusts and tornado – bounded *ESP
 - ◆ Precipitation – bounded *ESP
 - ◆ Dispersion values – bounded *ESP
 - ◆ Exclusion area – bounded *ESP

- ◆ Flooding
 - ◆ Water level – bounded *ESP
 - ◆ Groundwater level – bounded *ESP

Site Characteristics in the ESP (cont'd)

- ◆ Soil related
 - ◆ Static bearing capacity – bounded *ESP
 - ◆ Dynamic bearing capacity – bounded *ESP
 - ◆ Shear wave velocity – bounded *ESP
 - ◆ Lateral variability – bounded *ESP
 - ◆ Settlement evaluation – bounded *ESP
 - ◆ Liquefaction potential – none identified *ESP
 - ◆ Soil angle of internal friction – bounded *ESP

- ◆ Seismic
 - ◆ Site specific analysis shows acceptable response *ESP
 - ◆ Fault displacement potential – none identified *ESP

Waterproofing Membrane Departure

- ◆ DCD Subsection 3.4.1.1.1.1
 - ◆ Sprayed-on waterproofing membrane system
 - ◆ Solids material based on polymer-modified asphalt or polyurea

- ◆ VEGP materials
 - ◆ elastomeric membrane based on methyl methacrylate resins
 - ◆ approved at ESP stage
 - ◆ architectural aid to limit infiltration of subsurface water
 - ◆ consistent with that provided by DCD design
 - ◆ provide for adequate transfer of horizontal seismic shear

- ◆ Verified by site-specific ITAAC to confirm conservative coefficient of friction

DCD Key Safety Information

- ◆ Nuclear Island Structures
 - ◆ e.g., Shield Building redesign
 - ◆ Section 3.7 – Seismic Design (methodology)
 - ◆ Section 3.8 – Structural Design (description)
 - ◆ DCD describes the shield building and its functions
 - ◆ Surrounds and protects the containment vessel
 - ◆ Surrounds and protects safety systems
 - ◆ Shields from radioactivity inside the containment vessel
 - ◆ Integral to passive containment cooling function
- ◆ These sections incorporated by reference into the COLA at FSAR Sections 3.7 and 3.8

DCD Key Safety Information (cont'd)

- ◆ Nuclear Island Structures (cont'd)
 - ◆ Numerous related ITAAC in DCD Tier 1 Section 3.3
 - ◆ See related DCD Tier 1 Figures 3.3-1 to 3.3-10

- ◆ Safety Systems
 - ◆ e.g., Vacuum Relief System incorporated by reference at COLA FSAR Section 9.4
 - ◆ e.g., Containment Pressure Evaluation incorporated by reference at COLA FSAR Section 6.2

Abbreviations and Acronyms

- ◆ CFR Code of Federal Regulations
- ◆ COL Combined License
- ◆ COLA Combined License Application
- ◆ CSDRS Certified Seismic Design Response Spectra
- ◆ DCD Design Control Document
- ◆ ESP Early Site Permit
- ◆ FSAR Final Safety Analysis Report
- ◆ ITAAC Inspections, Tests, Analyses, and Acceptance Criteria
- ◆ MC&A Material Control and Accounting

Abbreviations and Acronyms (cont'd)

- ◆ PPP Physical Protection Program
- ◆ RAI Request for Additional Information
- ◆ SNC Southern Nuclear Operating Company
- ◆ SNM Special Nuclear Material

**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 SNC000006 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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