Nuclear Regulatory Commission
Exhibit # - SCE000013-MA-CM01
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Exhibit SCE000013

South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station Units 2 and 3
Combined Licenses

Mandatory Hearing

October 12-13, 2011

Safety – Panel 1

Amy Monroe (SCE&G)

Stephen Summer (SCANA Services)

Topics

- Chapter 1 - Introduction and Interfaces
- Chapter 2 - Site Characteristics
  - Maximum Safety Wet Bulb (Noncoincident) Air Temperature
  - Geography and Demography
  - Nearby Industrial, Transportation, and Military Facilities

Chapter 1 - Introduction and Interfaces

- Includes information that is both standard and site-specific
- Utilizes the guidance of Regulatory Guide 1.206 to inform format and content
- Identifies how COL Items are addressed within the application
- Identifies departures
- Details compliance with Regulatory Guides

Chapter 2 - Site Characteristics

- NRC regulations (10 CFR 52.79(d)(1); 10 CFR Part 52, Appendix D, Section IV.A.2.d) require an applicant to provide information to demonstrate that the site characteristics fall within the site parameters specified in the design certification
  - "Site Characteristics" are the actual physical, environmental and demographic features of a site
  - "Site Parameters" are the postulated physical, environmental and demographic features of an assumed site, and are specified in a standard design certification

Chapter 2 - Site Characteristics

- Site Characteristics are addressed in Final Safety Analysis Report (FSAR) Chapter 2
  - Section 2.0 (Site Characteristics)
  - Section 2.1 (Geography and Demography)
  - Section 2.2 (Nearby Industrial, Transportation, and Military Facilities)
  - Section 2.3 (Meteorology)
  - Section 2.4 (Hydrologic Engineering)
  - Section 2.5 (Geology, Seismology, and Geotechnical Engineering)

Chapter 2 - Site Characteristics

- Site Parameters are provided in the AP1000 Design Control Document (DCD), Tier 1, Chapter 5 and Table 5.0-1, and Tier 2, Table 2-1
- FSAR Table 2.0-201 provides a comparison of the AP1000 DCD Site Parameters with the V.C. Summer Site Characteristics
  - Air Temperature
  - Wind Speed
  - Seismic
  - Soil
  - Missiles
  - Flood Level
  - Groundwater Level
  - Plant Grade Elevation
  - Precipitation
  - Atmospheric Dispersion Values
  - Population Distribution

Chapter 2 - Site Characteristics

- With one exception, the V.C. Summer Site Characteristics fall within the AP1000 Site Parameters
  - The one exception is for the maximum safety wet bulb (noncoincident) air temperature

Maximum Safety Wet Bulb (Noncoincident) Air Temperature

- DCD Site Parameter Value is 86.1°F
  - DCD, Tier 1, Table 5.0-1
  - DCD, Tier 2, Table 2-1
- V.C. Summer Site Characteristic Value is 87.3°F
  - 100-year return value derived through linear regression (FSAR Section 2.3.1.5)
  - Greater than DCD Site Parameter by 1.2°F

Maximum Safety Wet Bulb (Noncoincident) Air Temperature

- Departure – VCS DEP 2.0-1
  - Evaluated in COLA Part 7, Section A
- Exemption from 10 CFR Part 52, Appendix D, Section IV.A.2.d
  - Evaluated in COLA Part 7, Section B

Maximum Safety Wet Bulb (Noncoincident) Air Temperature

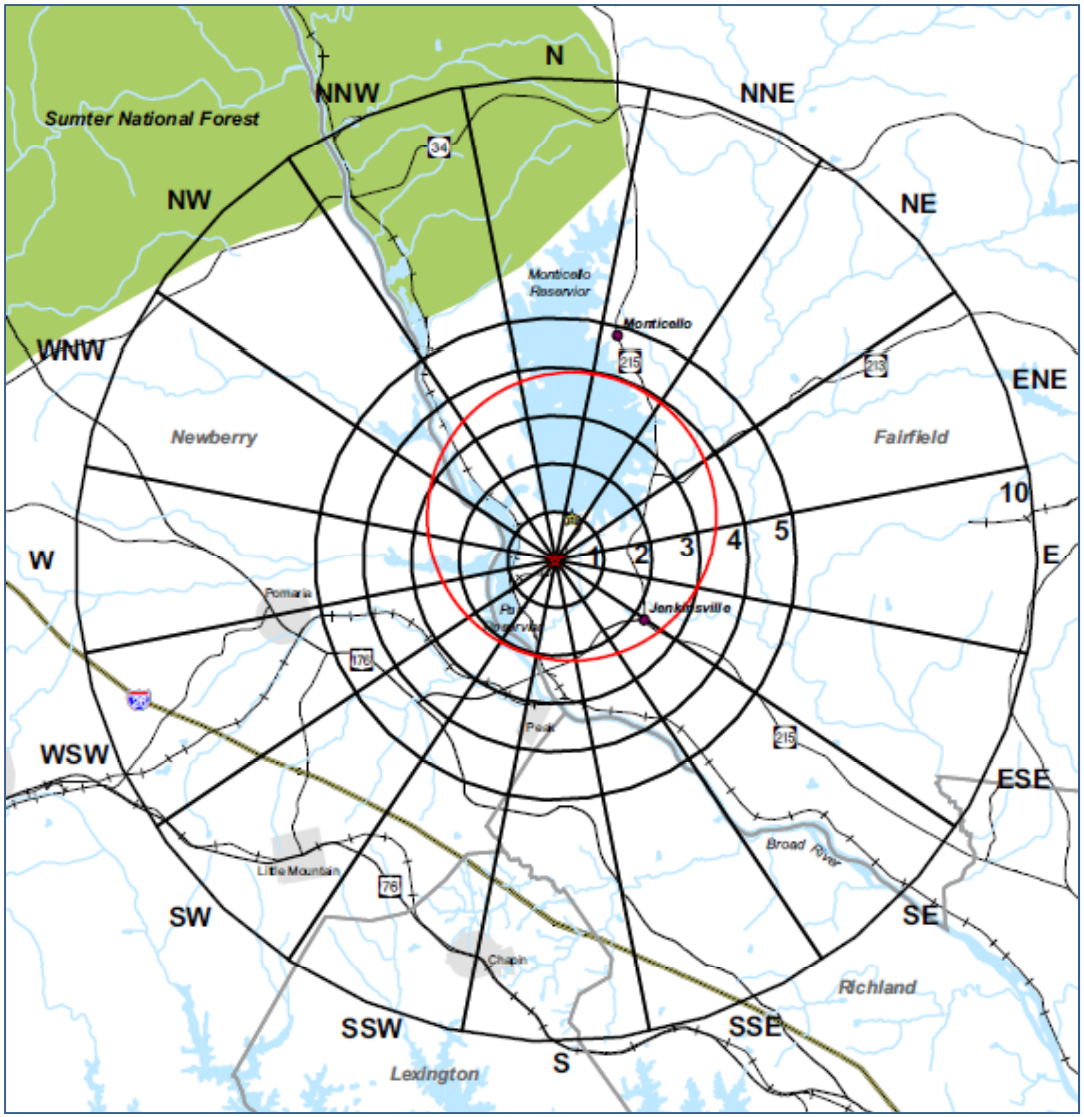
- Analyzed the maximum safety wet bulb (noncoincident) air temperature
- Evaluations to support departure and exemption requests:
  - Containment Pressure Design Limit Evaluation
  - In-Containment Refueling Water Storage Tank (IRWST) Temperature Control with Normal Residual Heat Removal System
  - Component Cooling Water System Maximum Temperature <100°F During Power Operation
  - Nuclear Island Nonradioactive Ventilation System Capability

Maximum Safety Wet Bulb (Noncoincident) Air Temperature

- Concluded that the higher maximum safety wet bulb (noncoincident) air temperature will not adversely affect any safety-related structures, systems, or components, their functional capabilities or analysis methods as presented in the DCD

Geography and Demography

- Site and Location Description (FSAR Figure 2.1-204)



Geography and Demography

- Population Distribution
  - 50-mile 2010 Distribution (Figure 2.1-214)

Radius (Miles)	Ring Population	Cumulative Population
0 to 10	13,311	13,311
10 to 20	156, 323	169,634
20 to 30	436,397	606,031
30 to 40	200,158	806,189
40 to 50	344,991	1,151,180

Nearby Industrial, Transportation, and Military Facilities

- SCE&G Facilities (VCSNS Unit 1, Fairfield Pumped Storage Facility, Parr Hydroelectric Plant, Parr Combustion Turbines)
- Pipeline (SCE&G natural gas)
- Railway (Norfolk Southern)
- Marine, military, aeronautical, and additional industrial hazards are either not applicable or probabilistically insignificant