Vogtle 3&4 COL Application Overview

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April 17, 2008

Agenda

– Opening Remarks	Chuck Pierce
– COLA Parts	Wes Sparkman
– FSAR	Amy Aughtman
– Environmental Report	Tom Moorer
– Integration of ESP with S-COLA	Amy Aughtman
– Closing Remarks	Chuck Pierce

Southern Service Territory

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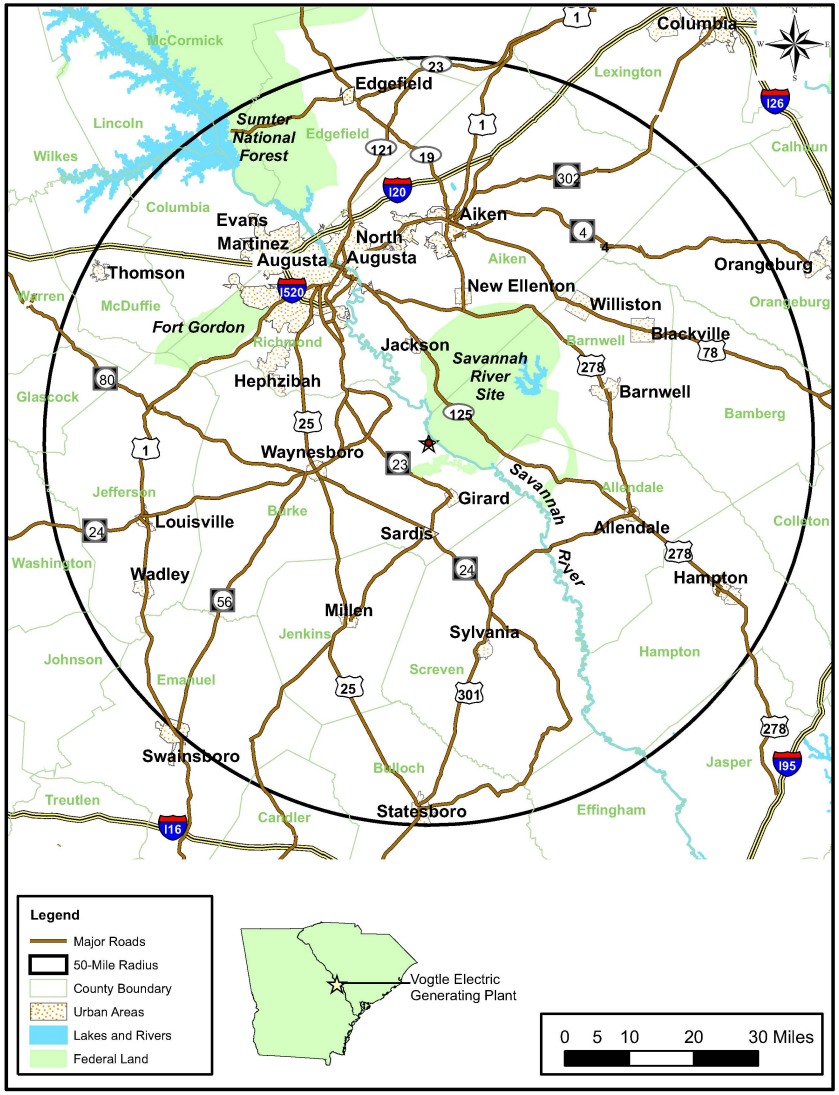
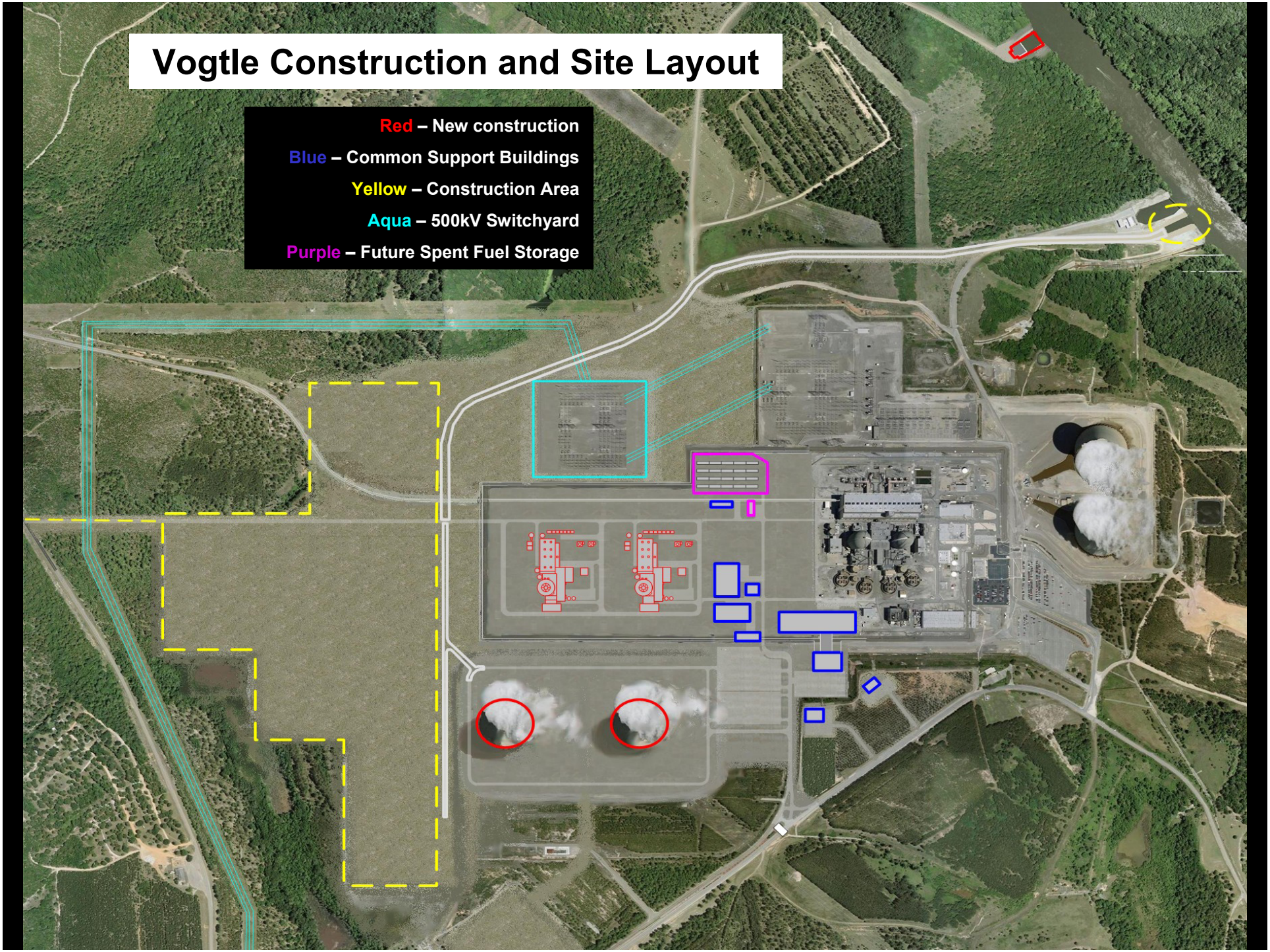


Figure 1-2 50-Mile Vicinity

Vogtle Construction and Site Layout



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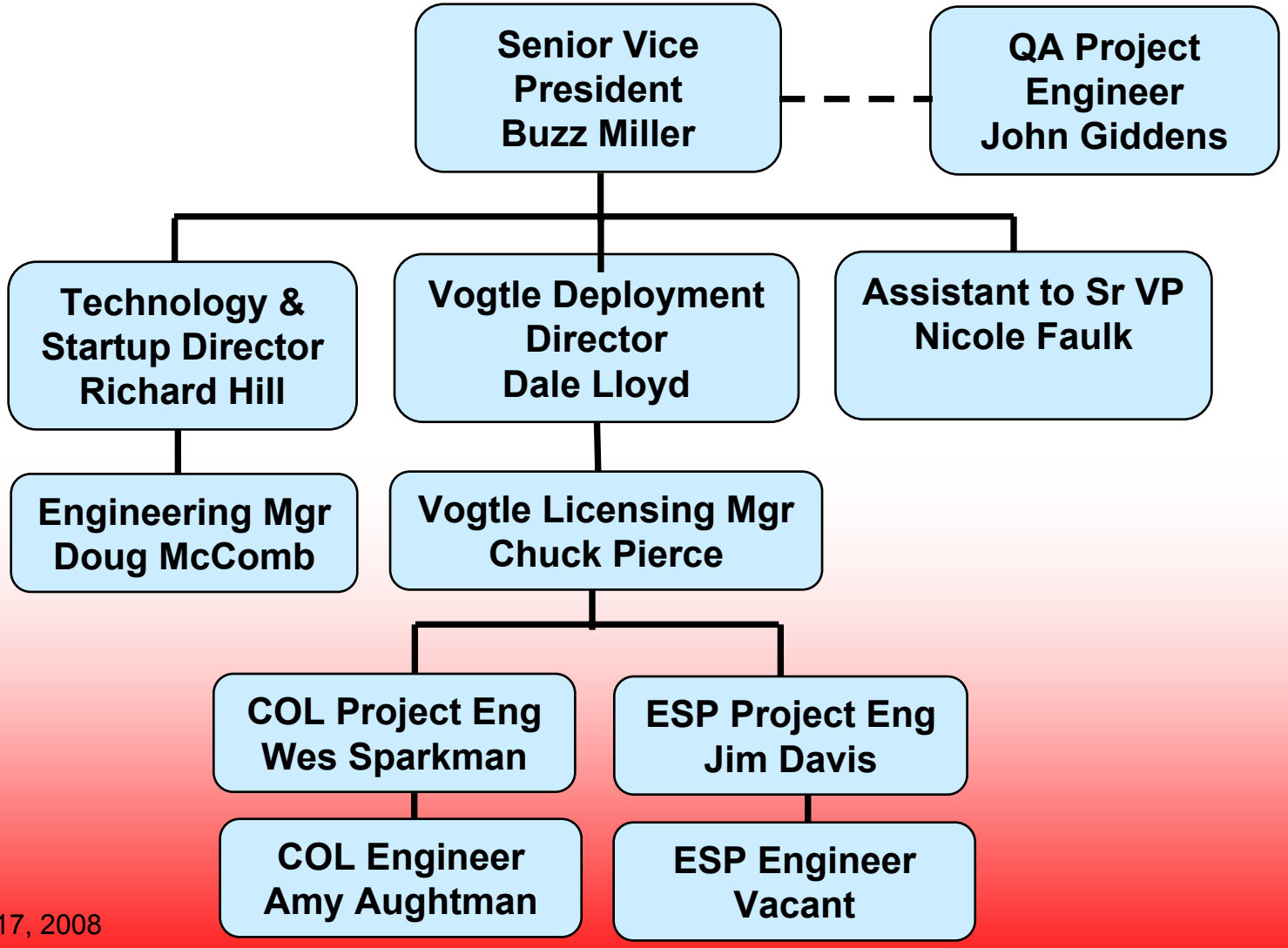
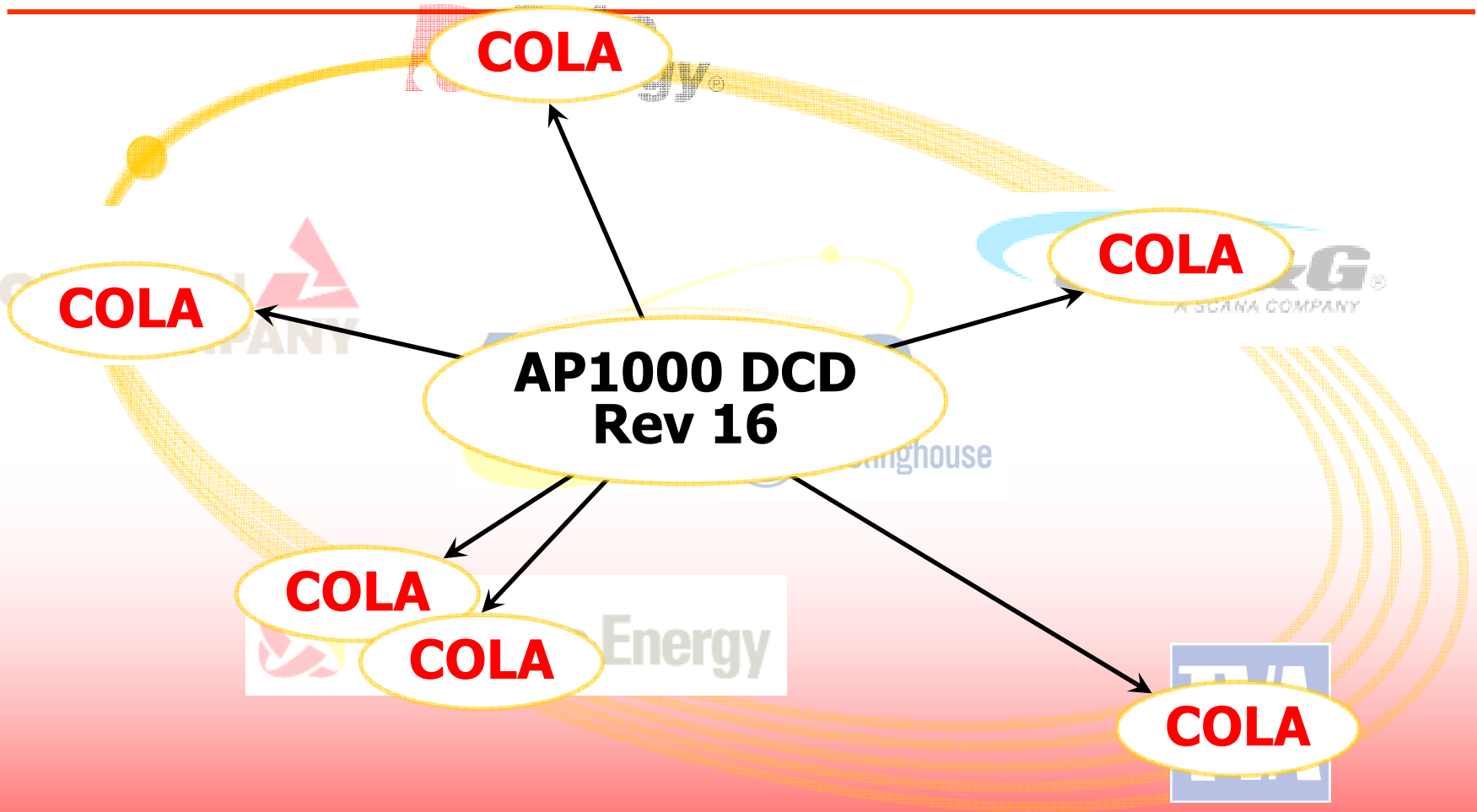
Nuclear Development Licensing



Use of Standard Content



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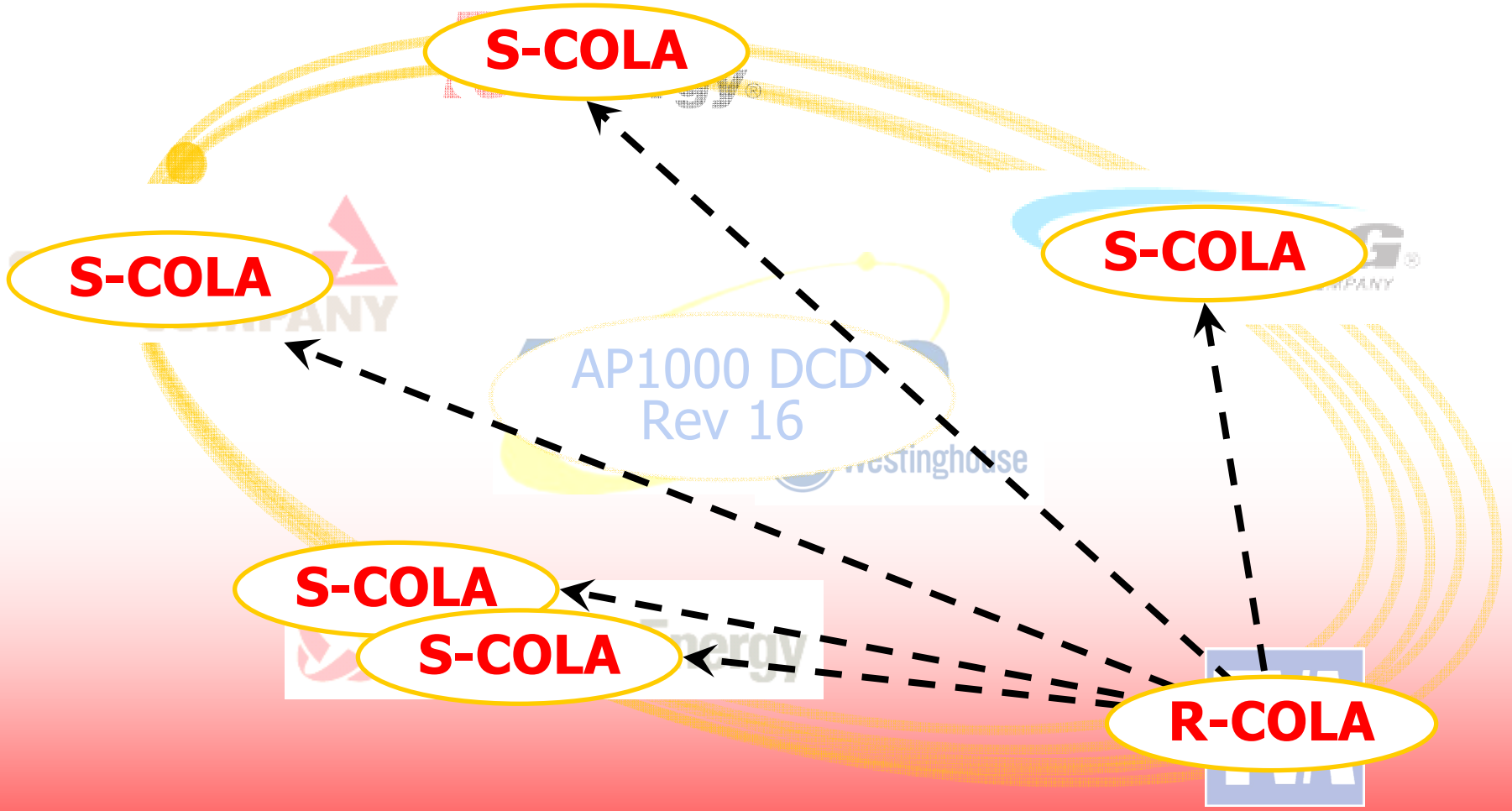

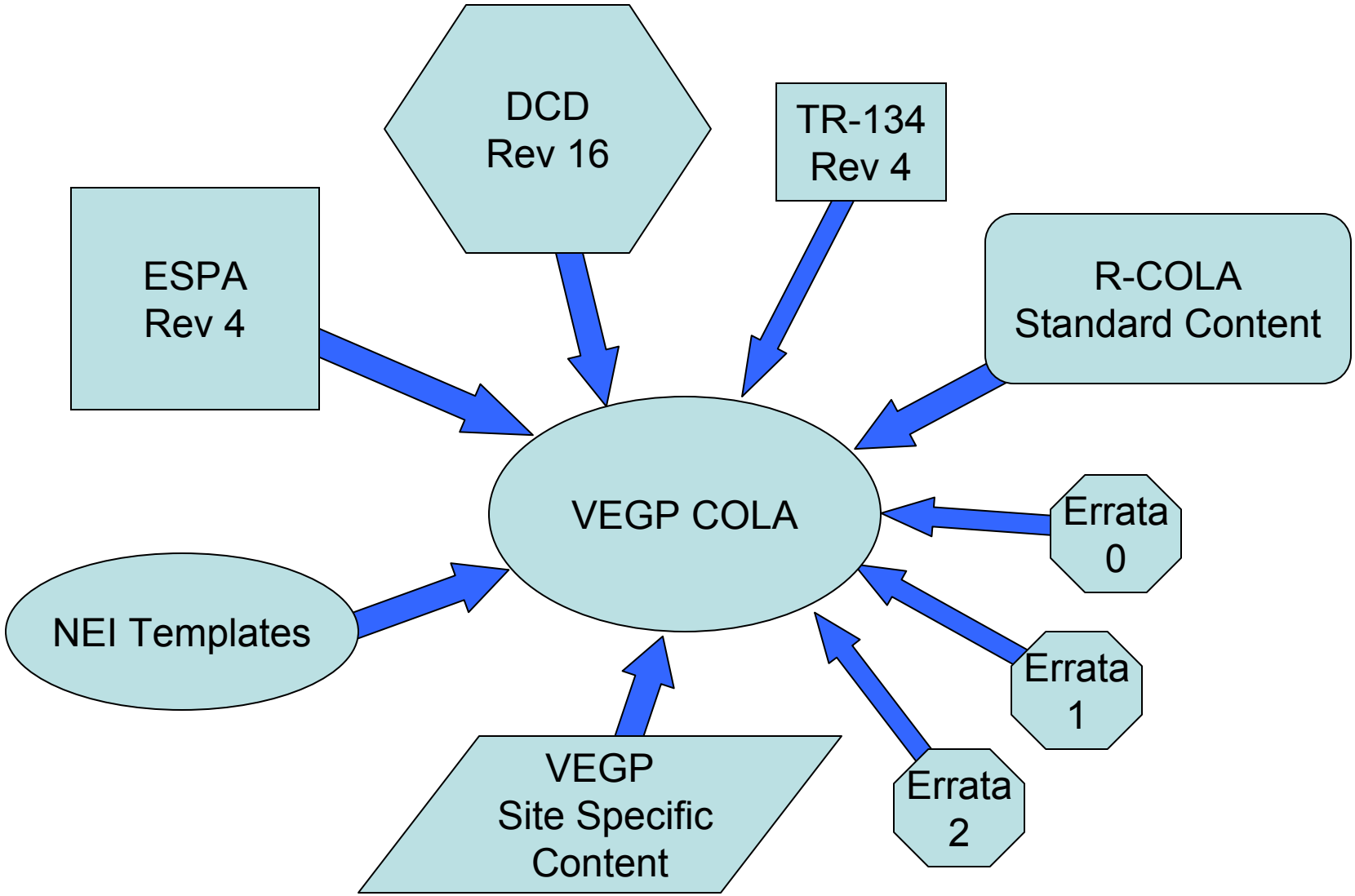
DCD
Rev 16
TR-134
Rev 4
ESPA
Rev 4
R-COLA
Standard Content
VEGP COLA
Errata
0
NEI Templates
Errata
1
VEGP
Site Specific
Content
Errata
2

Vogtle COLA Contents

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- Cover Letter
- Part 1 – General & Financial Info (Construction Costs under separate cover)
- Part 2 – Final Safety Analysis Report
- Part 3 – Environmental Report
- Part 4 – Technical Specifications
- Part 5 – Emergency Plan
- Part 6 – Limited Work Authorization Request
- Part 7 – Departures, Exemptions, and Variances
- Part 8 – Safeguards/Security (under separate cover)
- Part 9 – Withheld Information (SUNSI)
- Part 10 – Proposed License Conditions & ITAAC
- Part 11 – Enclosures, i.e., QAPD

Application Navigation

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- Organization
  - Each part, including FSAR, is a single file
  - File includes tables and figures

- Links and search capability
  - FSAR to IBR DCD and ESPA
  - Cross references to DCD and ESPA
  - Tables and Figures
  - Reference List
  - Navigation page across parts included at beginning of each part

Part 1 Administrative & Financial - Examples

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- General Information (10 CFR 50.33)
- Applicant and Owner Corporate information
  - Business Description and Management
  - Owner/Operator/Constructor relationships
  - Organization and Management
    - Directors and Principal Officers
  - Request for Licenses Types
- Financial Qualifications for Construction
  - Owners' Financial Assets
  - Contains Proprietary / Business Sensitive Info (provided under separate cover)
- Decommissioning funding
  - 10 CFR 50.75
  - Same cost as current Vogtle units

1.0 GENERAL INFORMATION

This part of the Combined License (COL) Application for the Vogtle Electric Generating Plant, Units 3 and 4 (VEGP), addresses the requirements of 10 CFR 50.33, "Content of applications; general information," and provides details of the applicant's corporate identity and location; applicant's ownership organization; the types of licenses being applied for; the applicant's financial qualifications; decommissioning funding assurance; foreign ownership, control, or domination information; and agreement limiting access to classified information.

1.1 APPLICANT'S AND OWNERS' CORPORATE INFORMATION

1.1.1 APPLICANT AND OWNERS

Southern Nuclear Operating Company, Inc. (SNC) has been authorized by VEGP Owner Georgia Power Company (who acts as agent for the other VEGP Owners) to apply for COLs for VEGP Units 3 and 4. SNC submits this application individually, and for the Owner licensees to be named on the VEGP Units 3 and 4 COLs. The names of the Owner licensees are as follows:

- Georgia Power Company;
- Oglethorpe Power Corporation (An Electric Membership Corporation);
- Municipal Electric Authority of Georgia; and
- The City of Dalton, Georgia, an incorporated municipality in the State of Georgia acting by and through its Board of Water, Light and Sinking Fund Commissioners (Dalton Utilities).

SNC is the Applicant for Combined Licenses for VEGP Units 3 and 4, and will construct and operate these new units on behalf of the VEGP Owners. However, SNC will not have any ownership interest in VEGP Units 3 and 4. Georgia Power Company (GPC), as an Owner of VEGP Units 3 and 4, has entered into an agreement with the other Co-owners to decide on the ownership of VEGP Units 3 and 4 by mid-2008. Currently, GPC expects the other Co-owners to participate as well. Thus, the Owners of the existing VEGP units (i.e., Units 1 and 2), listed above, are projected to be the Owners of VEGP Units 3 and 4, and to be licensees of these new units in addition to SNC.

The addresses of SNC and Owner licensees are as follows:

- Southern Nuclear Operating Company, Inc.
  P.O. Box 1295
  Birmingham, AL 35201-1295

APPENDIX 1A

ESTIMATED TOTAL CONSTRUCTION COST FOR VEGP UNITS 3 AND 4

The estimated total construction cost for VEGP Units 3 and 4 is considered proprietary information and is provided under separate cover (Reference SNC letter AR-08-0436, dated March 28, 2008).

Part 2 Final Safety Analysis Report

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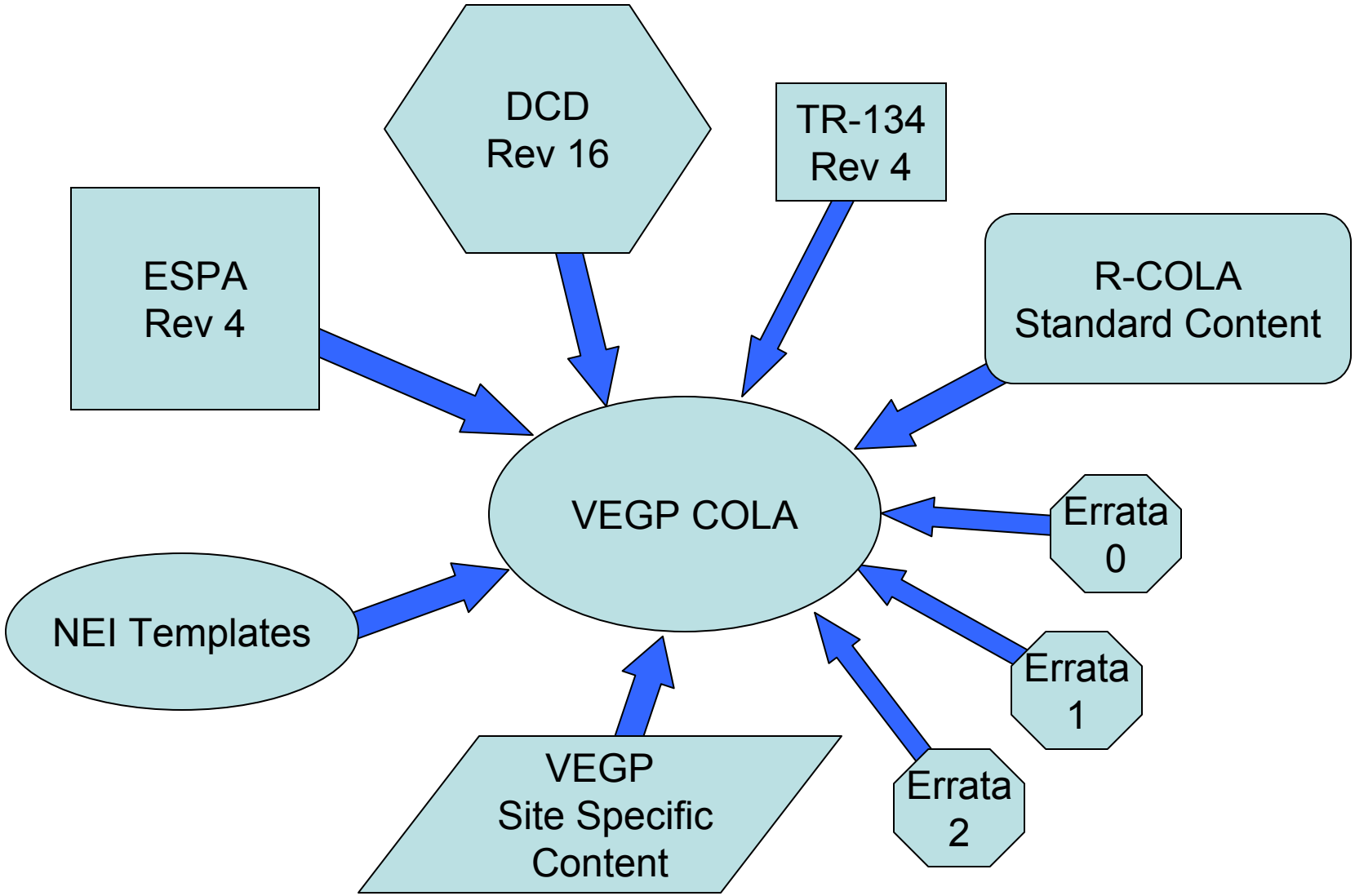
- COL application based on incorporation by reference of DCD Rev 16 plus TR 134 (DCD Rev 16 impacts) and ESPA
- "IBR" = Incorporation By Reference
  - DCD Rev 16
  - TR 134 Rev 4
  - ESPA
  - NEI templates
- FSAR based on R-COLA standard content


DCD
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VEGP COLA
Errata
0
NEI Templates
Errata
1
VEGP
Site Specific
Content
Errata
2

Table 1.1-202 (Sheet 1 of 2)
Left Margin Annotations

	MARGIN NOTATION	DEFINITION AND USE
STD SUP 1.1-3	STD DEP X.Y.Z-#	FSAR information that departs from the generic DCD and is common for parallel applicants. Each Standard Departure is numbered separately at an appropriate level, e.g., STD DEP 9.2-1, or STD DEP 9.2.1-1
	NPP DEP X.Y.Z-#	FSAR information that departs from the generic DCD and is plant specific. NPP is replaced with a plant specific identifier. Each Departure item is numbered separately at an appropriate subsection level, e.g., NPP DEP 9.2-2, or NPP DEP 9.2.1-2
	STD COL X.Y-#	FSAR information that addresses a DCD Combined License Information item and is common to other COL applicants. Each COL item is numbered as identified in DCD Table 1.8-2 and FSAR Table 1.8-202, e.g., STD COL 4.4-1, or STD COL 19.59.10.5-1
	NPP COL X.Y-#	FSAR information that addresses a DCD Combined License Information item and is plant specific. NPP is replaced with a plant specific identifier. Each COL item is numbered as identified in DCD Table 1.8-2 and FSAR Table 1.8-202, e.g., NPP COL 4.4-1, or NPP COL 19.59.10.5-1
	NPP CDI or STD CDI	FSAR information that addresses DCD Conceptual Design Information (CDI). Replacement design information is generally plant specific; however, some may be common to other applicants. NPP is replaced with a plant specific identifier. STD is used if it is common. CDI information replacements are not numbered.

Table 1.1-202 (Sheet 2 of 2)
Left Margin Annotations

STD SUP 1.1-5	STD SUP X.Y-#	FSAR information that supplements the material in the DCD and is common to other COL applicants. Each SUP item is numbered separately at an appropriate subsection level, e.g., STD SUP 1.10-1, or STD SUP 9.5.1-1
	NPP SUP X.Y-#	FSAR information that supplements the material in the DCD and is plant specific. NPP is replaced with a plant specific identifier. Each SUP item is numbered separately at an appropriate subsection level, e.g., NPP SUP 3.10-1, or NPP SUP 9.2.5-1
	DCD	FSAR information that duplicates material in the DCD. Such information from the DCD is repeated in the FSAR only in instances determined necessary to provide contextual clarity.
VEGP SUP 1.1-8	NPP ESP PC#	FSAR information that addresses an ESP Permit Condition. NPP is replaced with a plant specific identifier. An ESP Permit Condition is numbered as identified in the applicable ESP.
	NPP ESP VAR X.Y-#	A request for an ESP Variance. NPP is replaced with a plant specific identifier. Each ESP Variance is numbered based on the applicable section down to the ESP Application X.Y.Z level.
	NPP ESP COL X.Y-#	FSAR information that addresses an ESP COL action item. NPP is replaced with a plant specific identifier. An ESP COL information item is numbered as identified in the applicable ESP down to the X.Y level.

Part 3 Environmental Report

- SNC approach was to resolve all environmental issues in the ESP phase
- Details describing COLA ER to follow FSAR discussion later in this presentation

Part 4 Technical Specifications

- IBR of DCD Generic Technical Specifications (GTS) and Bases – no departures or exemptions
- COL item
  - fill in brackets
  - Brackets completed for known information
- Some brackets remain
  - Proposed License Condition in Part 10
- Section A includes information on GTS brackets and copies of affected pages
- Section B includes a full set of PSTS and Bases

Part 5 Emergency Planning Information

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- IBR a full and integrated Emergency Plan as described in Part 5 of the VEGP 3 and 4 ESP Application
  - Regulations require that new and additional information be addressed
  - As described in FSAR Section 13.3, no new or additional information has been identified
  - ESPA Emergency Plan contains three COL action items which are addressed in FSAR Section 13.3
    - EALs – awaiting NRC approval of NEI 07-01
    - Completion of design details and determination of EAL setpoints – proposed more detailed ITAAC – awaiting NRC staff acceptance
    - Common TSC location – Requires approval of a departure from the DCD – addressed in FSAR Chapter 18

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Part 6 Limited Work Authorization

- LWA was requested in ESPA Part 4
- No additional LWA activities requested as part of this COLA

Part 7 Departures, Variances and Exemptions

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- Two Exemptions
- Exemption - Fitness for Duty Program
  - Program description required to be submitted with application per 10CFR 52.79(a)(44)
  - Requesting schedule exemption to provide FFD program description when revised Part 26 becomes effective in 2008
  - Revised rule affects construction FFD program requirements
  - NEI 06-06 will comply with revised rule
  - VEGP FSAR will commit to NEI 06-06 (when approved by NRC)

Part 7 Departures, Variances and Exemptions

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- Exemption - COLA organization and numbering
  - Organization and numbering required to be the same as the generic DCD per 10CFR52, Appendix D, Section IV.A.2.a
  - FSAR numbering modified (slightly) to accommodate ESP application sections and RG 1.206 sections not addressed in the DCD

Part 7 Departures, Variances and Exemptions

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- Four Departures
- Departure - Organization and Numbering
  - FSAR numbering slightly different than DCD to address ESPA and RG 1.206 sections
  - Similar to organization and numbering exemption request
- Departure - Potable Water Supply
  - DCD states: “Filtered water is supplied from a site-specific water source for the potable water distribution system.”
  - At Vogtle, the PWS is supplied by the well water subsystem of the Raw Water System (RWS). Filtration of the PWS source is not required.

Part 7 – Departures, Variances and Exemptions

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- Departure - TSC & OSC relocations
  - DCD Tier 2 states TSC is located in the control support area (CSA) within the Annex Building
    - TSC will be centralized for all four VEGP units
    - Described in ESPA Part 5 (Emergency Plan)
  - DCD Tier 2 states the OSC is located in the Annex Building
    - OSC will be located in the CSA (location originally established for the TSC)

Part 7 Departures, Variances and Exemptions

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- Departure – Waterproof Membrane
  - Described in FSAR Section 3.4.1.1
  - Design and material of an alternate waterproof membrane is described in ESPA differ from options presented in DCD

Departure Number: VEGP DEP 3.4-1

Affected DCD/FSAR Sections: 3.4.1, DCD Figures 3.4-1, 3.4-2 and 3.4-3

Summary of Departure:

DCD Subsection 3.4.1.1.1 describes protection of seismic Category I structures from external flooding. The DCD indicates that this protection is provided by a waterproofing system that is provided by the introduction of a cementitious crystalline waterproofing additive to the mud mat and to the retention wall. The configuration of this waterproofing is shown in DCD Figure 3.4-3. Alternate waterproofing approaches for mechanically stabilized earth (MSE) and step back configurations using high density polyethylene (HDPE) double-sided textured waterproof membrane are described and presented in DCD Figures 3.4-1 and 3.4-2.

For Vogtle Electric Generating Plant (VEGP) Units 3 and 4 an additional alternate waterproofing system is presented as a departure from the DCD design options. This alternate waterproofing system is discussed in the Early Site Permit Application (ESPA), Site Safety Analysis Report (SSAR), Subsections 2.5.4.5.7 and 3.8.5. The proposed configuration is also shown in ESPA SSAR Figure 2.5.4-17, and a qualification program that includes testing to satisfy the waterproof membrane ITAAC is discussed in ESPA SSAR Subsection 3.8.5.

Scope/Extent of Departure:

This departure is identified in FSAR Subsection 3.4.1.1.1.

Departure Justification:

The proposed membrane will provide a level of waterproofing for the below grade portions of seismic Category I structures that is consistent with the level of waterproofing provided by the DCD design.

The specific material for the waterproof membrane has not been selected. However, as discussed in ESPA SSAR Subsection 3.8.5, the membrane selected will be subject to a qualification program that will address, among other things:

- Physical properties, including surface and texture
- Environmental aging
- Surface finish requirements
- Installation procedures

Part 7 Departures, Variances and Exemptions

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- Variances From ESP
  - Variance from SSAR Section 1.6, Material Incorporated by Reference
  - Variance from SSAR Section 3.8.5, Foundations
  - Variance from SSAR Chapter 15, Accident Analyses

C. VEGP Variances

SNC requests the following variances in the VEGP COLA FSAR from the VEGP ESPA SSAR:

ESP Variance Number	Description
VEGP VAR 1.6-1	Variance from SSAR Section 1.6: Material Incorporated by Reference
VEGP VAR 1.6-2	Variance from SSAR Section 3.8.5: Foundations
VEGP VAR 1.6-3	Variance from SSAR Chapter 15: Accident Analyses

These requested variances are made pursuant to 10 CFR 52.93. A summary and justification for each of these are provided below.

Variance Number: VEGP VAR 1.6-1

Summary of Variance:

ESPA SSAR Section 1.6, Material Incorporated by Reference, is not incorporated by reference into the COLA FSAR.

Justification for Variance:

Section 1.6 of the ESPA SSAR contains a reference to Revision 15 of the AP1000 DCD and additional Westinghouse technical reports. This information has been superseded by Revision 16 of the AP1000 DCD, Section 1.6, which is incorporated by reference into the VEGP COLA FSAR. Revision 16 of the AP1000 DCD contains the most updated information and is currently under review by the NRC. Therefore, a variance is required to not incorporate Section 1.6 of the ESPA SSAR because it contains superseded information. The VEGP COLA incorporates by reference the updated information from Section 1.6 of DCD Revision 16.

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Part 8 Safeguards/Security Plans

- Physical Security Plan (PSP)
  - Separate submittal under different cover letter to coincide with COLA submittal
  - COLA PSP consists of Fleet Plan with the end product to depict operation of Units 1 - 4
    - Site layout (all 4 units) with vehicle barriers and security fencing shown

Part 9 Withheld Information

- Contains COLA information withheld from public disclosure
  - Withheld under the provisions of 10 CFR 2.390(d)
  - Includes security sensitive information from Part 2

Part 10 Proposed License Conditions Including ITAAC

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- Proposed License Conditions consistent with AP1000 R-COLA
- Site specific ITAAC addressed

Appendix B. Inspections, Tests, Analyses and Acceptance Criteria

AP1000 DCD Tier 1 ITAAC

The Tier 1 information (including the ITAAC) of the referenced DCD is incorporated by reference.

Physical Security Hardware ITAAC

The physical security related ITAAC are included in the referenced DCD Tier 1 Subsection 2.6.9 as incorporated by reference above.

Site Specific ITAAC

The following information supplements the information provided in the referenced DCD Tier 1 Section 2.3:

2.3.30 Storm Drain System
No entry for this system.

2.3.31 Raw Water System
No entry for this system.

The following information supplements the information provided in the referenced DCD Tier 1 Section 2.5:

2.5.11 Meteorological and Environmental Monitoring System
No entry for this system.

2.5.12 Closed Circuit TV System
No Entry for this system.

The following information supplements the information provided in the referenced DCD Tier 1 Section 2.6:

2.6.12 Transmission Switchyard and Offsite Power System
No entry for this system.

The following non-system based site specific ITAAC are provided:

Safety-Related Backfill
The ITAAC identified in ESPA SSAR Subsection 2.5.4.5.5 are incorporated by reference.

Waterproof Membrane
The ITAAC identified in ESPA SSAR Subsection 3.8.5 is incorporated by reference.

Emergency Planning ITAAC

The emergency planning ITAAC included in Annex V2 of Part 5, Emergency Planning, of the referenced ESPA is incorporated by reference.

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Part 11 Enclosures

- Quality Assurance Manual
  - Addressed in FSAR Section 17.5
  - Based on NEI-06-14-A (approved by the NRC)
    - Site-specific (bracketed) information completed
  - Application during all phases:
    - Design
    - Limited Work Authorization (LWA)
    - Construction
    - Operation

Part 2 Final Safety Analysis Report

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- Focus on site-specific material for this presentation

Chapter 1 Introduction and General Description of the Plant

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Section	DCD Use	Additional Areas
1.1 Introduction	Essentially IBR of DCD and ESPA	**Provides construction schedule**
1.2 Plant Description		**Provides plant layout**
1.3 Comparison w/other sites		
1.4 Agents and Contractors		Discusses relationship with Westinghouse, Shaw, Bechtel, TetraTech and others
1.5 Add'l Technical Info		
1.6 Material Referenced		Includes ESPA and NEI templates refs
1.7 Drawing & other info		Includes table of site specific drawings
1.8 Standard design interfaces		• Summary of departures & location • Location of COL information items
1.9 Compliance w/ RGs & SRP	Mainly IBR and STD	Shows where exceptions are taken
1.10 Construction Impact on existing units	Mainly STD	Site specific construction info

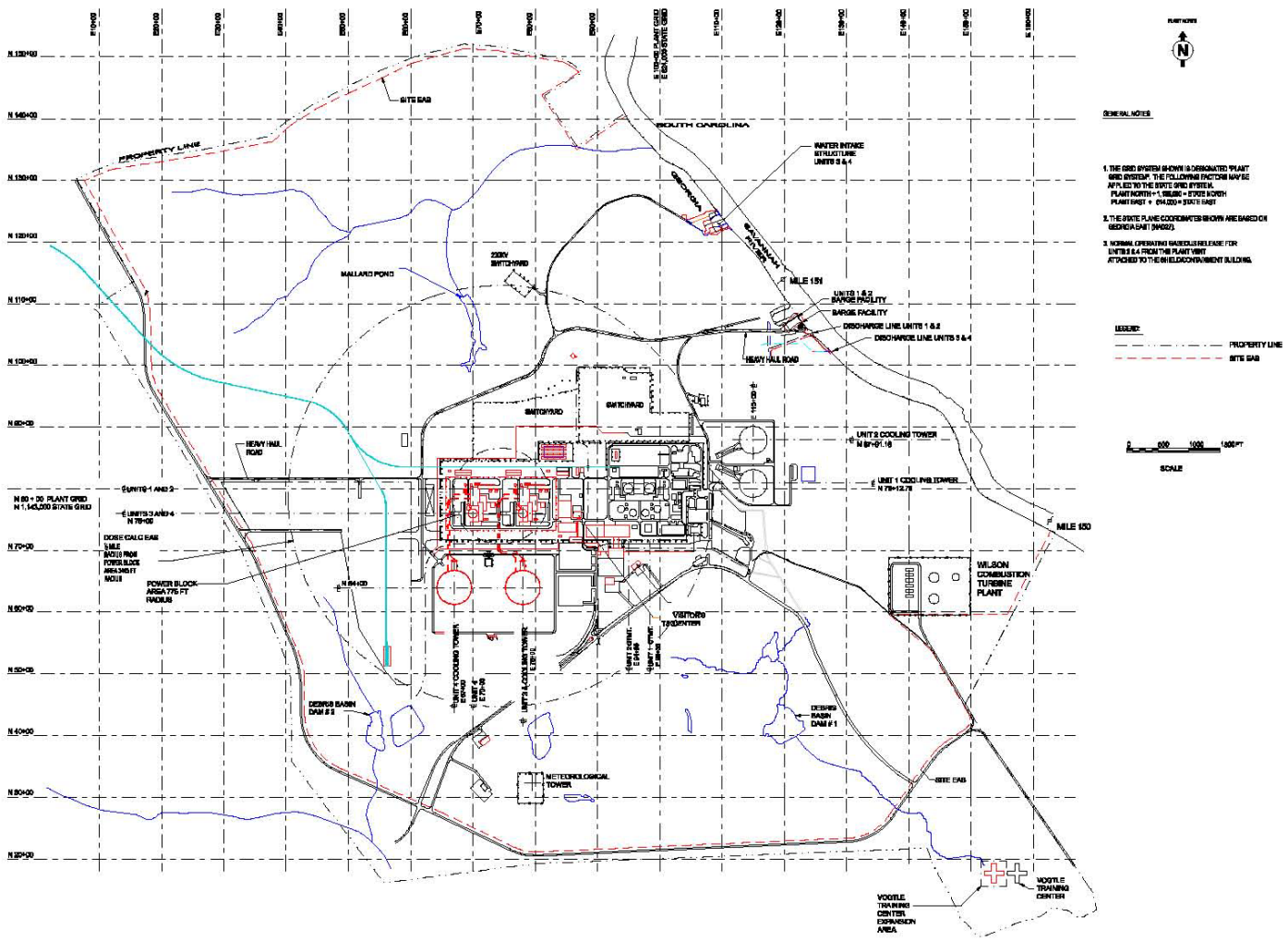
VEGP COL 1.1-1

Table 1.1-203
Anticipated Schedule for Construction and Operation of Two
AP1000 Units at the VEGP Site

Activity	Start(1)	Finish(1)	Duration
	UNIT 3		
Early Procurement Activities	2nd Q 2008	--	--
Site Preparation	3rd Q 2008	3rd Q 2011	36 Months
Commence Construction (Safety-related activities)	4th Q 2009 (LWA)		--
Fuel Load, Commence Start-Up	4th Q 2015	2nd Q 2016	6 Months
Commercial Operation	April 2016		
	UNIT 4		
Early Procurement Activities	2nd Q 2008	--	--
Site Preparation	3rd Q 2008	3rd Q 2012	48 Months
Commence Construction (Safety-related activities)	4th Q 2010 (LWA)		--
Fuel Load, Commence Start-Up	4th Q 2016	2nd Q 2017	6 Months
Commercial Operation	April 2017		

Notes:

(1) Activities that do not indicate a start or finish date are milestones, and represent the anticipated commencement (start) or completion (finish) of the activity.



VEGP COL 2.1-1

Figure 1.1-202
Site Layout

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Chapter 2 Site Characteristics

Section	DCD Use	Additional Areas
2.0 Site Characteristics		**Comparison of VEGP site characteristics to DCD site parameters**
2.1 Geography and Demography	Essentially IBR from VEGP ESPA	No additional information
2.2 Nearby Industrial, Transportation, and Military facilities		• Radiological impact of VEGP 1&2 on 3&4 • VEGP 3 & 4 site specific chemicals • Forest Fires
2.3 Meteorology		Control Room X/Qs, Met program description, Roof snowloads
2.4 Hydrologic Engineering		Design of stormwater mgmt system, Flood protection
2.5 Geology, Seismology, & Geotechnical Info		No additional information

Table 2.0-201 (Sheet 5 of 7)

VEGP SUP 2.0-1

Comparison of AP1000 DCD Site Parameters and Vogtle Electric Generating Plant Units 3 & 4 Site Characteristics

	AP1000 DCD Site Parameter[a]	VEGP Site Characteristic	VEGP Reference	VEGP Within Site Parameter
Liquefaction Potential	Negligible.	None.	ESPA SSAR Table 1-1	Yes
Minimum Soil Angle of Internal Friction	Greater than or equal to 35 degrees below footprint of nuclear island at its excavation depth.	36 degrees	ESPA SSAR Table 1-1	Yes
Missiles				
Tornado	4000-lb automobile at 105 mph horizontal, 74 mph vertical	4000-lb automobile at 105 mph horizontal, 74 mph vertical	Subsection 3.5.1.5 DCD Section 3.5.1.4 APP-GW-GLR-020, "Wind and Tornado Site Interface Criteria," Westinghouse Electric Company LLC.[e]	Yes
	275-lb, 8-in. shell at 105 mph horizontal, 74 mph vertical	275-lb, 8-in. shell at 105 mph horizontal, 74 mph vertical		
	1-inch-diameter steel ball at 105 mph in the most damaging direction	1-inch-diameter steel ball at 105 mph in the most damaging direction		
Flood Level	Less than plant elevation 100 feet	The design basis river flood level is El. 178.10 ft MSL, which is 41.9 feet below plant elevation (220 ft MSL).	ESPA SSAR Table 1-1	Yes
		Maximum local PMP flood elevation is 219.45 ft MSL, which is 0.55 feet below plant elevation (220 ft MSL).	Subsection 2.4.2	
Ground Water Level	Less than plant elevation 98 feet	The maximum groundwater level is 165 ft MSL which is 55 feet below plant elevation (220 ft MSL).	ESPA SSAR Table 1-1	Yes

VEGP SUP 2.0-1

Table 2.0-202
Comparison of Control Room Atmospheric Dispersion Factors for Accident Analysis for AP1000 DCD and VEGP Units 3 & 4 (Sheet 1 of 2)

X/Q (sec/m^3) at HVAC Intake for the Identified Release Points[a]

	Plant Vent or PCS Air Diffuser[b]	Plant Vent	PCS Air Diffuser	**Ground Level Containment Release Points[c]**	Ground Level Containment Release Points	**PORV and Safety Valve Releases[d]**	PORV and Safety Valve Releases	**Condenser Air Removal Stack[g]**	Condenser Air Removal Stack	**Steam Line Break Releases**	Steam Vent	**Fuel Handling Area[e]**	Fuel Handling Area Blowout Panel	Fuel Handling Area Truck Bay Door
Release Time	**DCD**	VEGP	VEGP	**DCD**	VEGP	**DCD**	VEGP	**DCD**	VEGP	**DCD**	VEGP	**DCD**	VEGP	VEGP
0 – 2 hours	**3.0E-3**	2.02E-03	1.68E-03	**6.0E-3**	3.20E-03	**2.0E-2**	1.31E-02	**6.0E-3**	1.54E-03	**2.4E-2**	1.48E-02	**6.0E-3**	1.54E-03	1.15E-03
2 – 8 hours	**2.5E-3**	1.58E-03	1.29E-03	**4.5E-3**	1.82E-03	**1.8E-2**	1.02E-02	**4.0E-3**	1.17E-03	**2.0E-2**	1.20E-02	**4.0E-3**	1.11E-03	8.29E-04
8 – 24 hours	**1.0E-3**	6.37E-04	5.47E-04	**2.0E-3**	8.27E-04	**7.0E-3**	4.62E-03	**2.0E-3**	5.36E-04	**7.5E-3**	5.41E-03	**2.0E-3**	4.42E-04	3.35E-04
1 – 4 days	**8.0E-4**	5.12E-04	4.55E-04	**1.8E-3**	7.22E-04	**5.0E-3**	3.29E-03	**1.5E-3**	3.94E-04	**5.5E-3**	3.93E-03	**1.5E-3**	3.57E-04	2.62E-04
4 – 30 days	**6.0E-4**	3.82E-04	3.34E-04	**1.5E-3**	5.70E-04	**4.5E-3**	2.77E-03	**1.0E-3**	2.78E-04	**5.0E-3**	3.26E-03	**1.0E-3**	2.59E-04	1.86E-04

X/Q (sec/m^3) at Control Room Door for the Identified Release Points[f]

	Plant Vent or PCS Air Diffuser[b]	Plant Vent	PCS Air Diffuser	**Ground Level Containment Release Points[c]**	Ground Level Containment Release Points	**PORV and Safety Valve Releases[d]**	PORV and Safety Valve Releases	**Condenser Air Removal Stack[g]**	Condenser Air Removal Stack	**Steam Line Break Releases**	Steam Vent	**Fuel Handling Area[e]**	Fuel Handling Area Blowout Panel	Fuel Handling Area Truck Bay Door
Release Time	**DCD**	VEGP	VEGP	**DCD**	VEGP	**DCD**	VEGP	**DCD**	VEGP	**DCD**	VEGP	**DCD**	VEGP	VEGP
0 – 2 hours	**1.0E-3**	4.32E-04	4.48E-04	**1.0E-3**	3.93E-04	**4.0E-3**	9.81E-04	**2.0E-2**	4.00E-03	**4.0E-3**	9.23E-04	**6.0E-3**	3.77E-04	3.48E-04
2 – 8 hours	**7.5E-4**	3.52E-04	3.38E-04	**7.5E-4**	3.16E-04	**3.2E-3**	7.69E-04	**1.8E-2**	3.15E-03	**3.2E-3**	7.31E-04	**4.0E-3**	2.84E-04	2.60E-04
8 – 24 hours	**3.5E-4**	1.44E-04	1.44E-04	**3.5E-4**	1.32E-04	**1.2E-3**	3.12E-04	**7.0E-3**	1.35E-03	**1.2E-3**	2.98E-04	**2.0E-3**	1.18E-04	1.09E-04
1 – 4 days	**2.8E-4**	1.15E-04	1.17E-04	**2.8E-4**	1.07E-04	**1.0E-3**	2.49E-04	**5.0E-3**	1.04E-03	**1.0E-3**	2.37E-04	**1.5E-3**	9.50E-05	8.75E-05
4 – 30 days	**2.5E-4**	8.47E-05	8.77E-05	**2.5E-4**	8.14E-05	**8.0E-4**	1.87E-04	**4.5E-3**	8.05E-04	**8.0E-4**	1.75E-04	**1.0E-3**	6.83E-05	6.16E-05

2.4 HYDROLOGIC ENGINEERING

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

This section of the referenced ESPA SSAR is incorporated by reference with the following variances and/or supplements.

VEGP DEP 1.1-1 Subsection 2.4.1 of the DCD is renumbered as Subsection 2.4.15. This is being done to accommodate the incorporation of Regulatory Guide 1.206 numbering conventions for Section 2.4.

2.4.2 FLOODS

2.4.2.3 Effects of Local Intense Precipitation

Add the following to the end of ESPA SSAR Subsection 2.4.2.3.

VEGP COL 2.4-2 Based on work subsequent to the submittal of the referenced ESPA SSAR, the design elements of the VEGP Units 3 and 4 storm water management system pertaining to the local PMP flood event are described below.

As shown in Figure 2.4-201, the VEGP Units 3 and 4 power block is graded to direct runoff east and west to three north-south ditches which will outfall to the concrete-lined main ditch, running east and west for 2,000 feet along the south side of the power block. The trapezoidal ditch cross section has a 10-foot bottom width with 2:1 side slopes, sized to provide adequate conveyance for PMP discharges. At the southwest corner of the power block, the main ditch turns due south, and the bottom width is increased to 14 feet. From the west, it intercepts runoff from the construction laydown area; from the east it intercepts discharge from three ditches draining the cooling tower block.

The main ditch has a mild slope (0.22%) for its first 3,800 feet, at which point the slope increases to over 5% before outfalling about 4,500 feet from its upstream end into Debris Basin No. 2, which drains to an unnamed tributary of Daniels Branch, about 2,500 feet upstream of Telfair Pond.

The main ditch drains runoff from a total area of about 473 acres during the PMP event, including about 80 acres from the VEGP Units 3 and 4 power block, 97 acres from the cooling tower area, 56 acres south of the cooling tower, and 82

2.5 GEOLOGY, SEISMOLOGY, AND GEOTECHNICAL ENGINEERING

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

This section of the referenced ESPA SSAR is incorporated by reference with no variances and/or supplements.

VEGP DEP 1.1-1 This section is numbered in accordance with the referenced ESPA SSAR. The COL Information Items in DCD Subsections 2.5.1 through 2.5.6 are addressed in Subsection 2.5.7.

VEGP DEP 1.1-1 ## 2.5.7 COMBINED LICENSE INFORMATION

2.5.7.1 Basic Geologic and Seismic Information

VEGP COL 2.5-1 This COL item is addressed in ESPA SSAR Subsections 2.5.1, 2.5.2, and 2.5.4.

2.5.7.2 Site Seismic and Tectonic Characteristics Information

VEGP COL 2.5-2 This COL item is addressed in ESPA SSAR Subsections 2.5.2 and 2.5.4.

2.5.7.3 Geoscience Parameters

VEGP COL 2.5-3 This COL item is addressed in ESPA SSAR Subsections 2.5.2 and 2.5.4.

2.5.7.4 Surface Faulting

VEGP COL 2.5-4 This COL item is addressed in ESPA SSAR Subsection 2.5.3.

2.5.7.5 Site and Structures

VEGP COL 2.5-5 This COL item is addressed in ESPA SSAR Subsection 2.5.4.

Chapter 3 Design of Structures, Components, Equipment & Systems

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Section	DCD Use	Additional Areas
3.1 Conformance w/GDC	Essentially IBR of DCD and in some cases ESP	No additional info beyond DCD
3.2 SSC Classification		**Engineering backfill new safety structure**
3.3 Wind & Tornado loadings		Show VEGP site is enveloped by DCD
3.4 Flood Level		Show VEGP site is enveloped by DCD; waterproof membrane departure
3.5 Missile Protection		Units 3&4 will not be impacted by Units 1&2
3.6 Protection from pipe rupture		Commitment to complete pipe hazard analysis prior to fuel load of piping, etc
3.7 Seismic design		**Site specific curves**
3.8 Cat 1 Structure design		References back to ESPA for backfill description
3.9 Mechanical Systems and Components		• Provides various maintenance programs • Reconcile as built to hazards analysis • MOV and snubber IST program descrip
3.10 Seismic Qualification		No additional info beyond DCD
3.11 Environmental Qualification		Maintenance of files in auditable form

Table 3.2-201
Seismic Classification of Building Structures

Structure	Category
Safety-Related Backfill	C-I

C-I: Seismic Category I

3.7 SEISMIC DESIGN

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

Add Subsection 3.7.1.1.1 as follows:

VEGP SUP 3.7-3

3.7.1.1.1 Design Ground Motion Response Spectra

The Vogtle site-specific safe shutdown earthquake (SSE) design response spectra (DRS) are the site-specific ground motion response spectra (GMRS) determined in ESPA SSAR Subsection 2.5.2.6. These response spectra are determined in the free-field on the ground surface.

The Vogtle foundation input response spectra (FIRS) are at an outcrop located at the 40' depth. The development of these FIRS is discussed in ESPA SSAR Subsection 2.5.2.7. These Vogtle response spectra are compared to the AP1000 SSE design response spectra that are also referred to as the AP1000 certified seismic design response spectra (CSDRS). The CSDRS also represents the AP1000 FIRS. This is because: (1) the CSDRS at a hard rock site is essentially the same at grade and at foundation; and (2) the CSDRS envelopes the in-column motions of the other generic soil conditions. The AP1000 CSDRS are applied at the foundation level in the free field at hard rock sites, and at the finished grade for the other soil generic conditions. The comparisons are shown in in Figures 3.7-201 and 3.7-202. As seen from this comparison there are exceedances above the CSDRS; therefore, a plant specific seismic evaluation is performed to demonstrate that the AP1000 plant designed for the CSDRS is acceptable for the Vogtle site. The results from the Vogtle site specific seismic evaluation that demonstrates the acceptability of the Vogtle site is given in ESPA SSAR Appendix 2.5E. Based on this Vogtle site specific seismic evaluation it can also be concluded that the standard AP1000 plant certified design is fully acceptable to a SSE design response spectra level of the CSDRS at Vogtle's plant grade.

The operating basis earthquake ground motion (OBE) spectral values are used as one measure of potential damage to those structures, systems, and components designed to the SSE design ground motion to determine the severity of the seismic event and make a determination of whether the plant must be shut down. For the AP1000 certified design, OBE is not an explicit design load; as such it is therefore defined as one-third the CSDRS. Since it has been demonstrated that the Vogtle site characteristics do not limit the AP1000 design to the CSDRS, the Vogtle OBE for the AP1000 is defined as one-third the AP1000 CSDRS.

The FIRS and the CSDRS in the horizontal direction in the free-field at the foundation of the AP1000 Nuclear Island exceed the minimum spectrum requirements of 10 CFR50 Appendix S.

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Chapter 4 - Reactor

- Entire Chapter IBR
  - Most COL items closed by DCD Revision 16
  - COL Holder Items
    - 4.4-2 Confirm Assumptions for Safety Analyses Departure from Nucleate Boiling Ratio Limits

Chapter 5 Reactor Coolant and Connected Systems

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Section	DCD Use	Additional Areas
5.1 Summary Description	Essentially IBR of DCD and STD	No additional info beyond DCD
5.2 Integrity of Reactor Coolant Pressure Boundary		• Boric acid corrosion control program • ISI/IST program description of Class 1 components
5.3 Reactor Vessel		• Surveillance capsule program • COL items for RV insulation • Holder item for site specific pressure-temp curves for reactor vessel design
5.4 Component and Subsystem Design		Steam generator tube integrity program

Chapter 6 Engineered Safety Features

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Section	DCD Use	Additional Areas
6.0 Engineered Safety Features	Essentially IBR of DCD and STD	No additional info beyond DCD
6.1 ESF Materials		• Review of vendor fabrication and welding procedures for austenitic stainless steels • Coating control program
6.2 Containment Systems		Containment Leak Rate Testing Program
6.3 Passive Core Cooling		Operating debris control program
6.4 Habitability Systems		Address mobile and stationary hazardous material sources Procedures and training commitment
6.5 Fission Product Removal and Control		Commitment to complete pipe hazard analysis prior to fabrication of piping, etc
6.6 Class 2 & 3 ISI		ISI Program Description for Class 2&3

Chapter 7 Instrumentation and Controls

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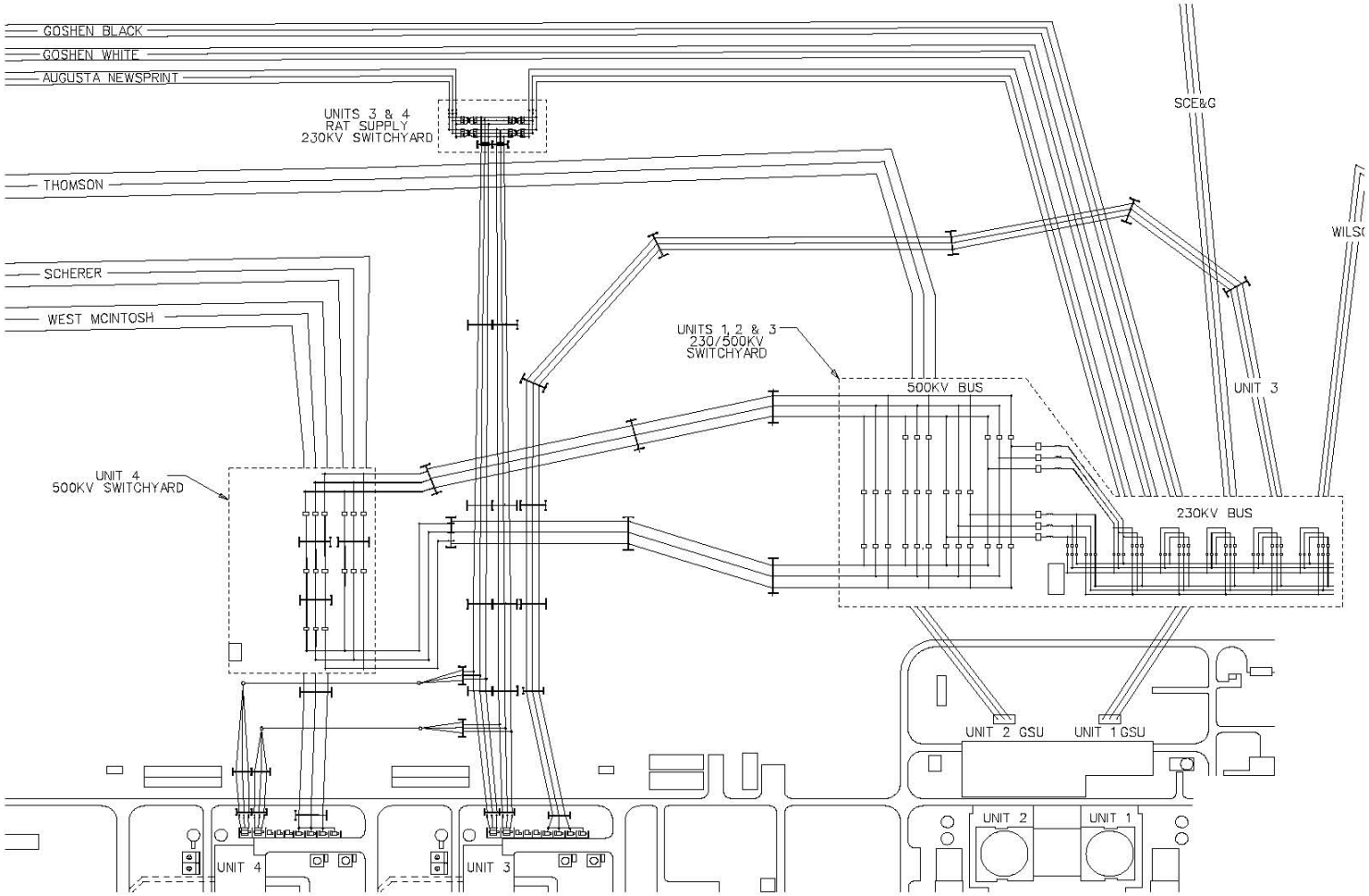
- Entire Chapter IBR
  - All COL items closed by DCD Revision 16
- COL Items
  - COL Items closed as part of DCD Rev 16
    - 7.1-1 Setpoint Calculations for Protective Functions
    - 7.1-2 Resolution of Generic Open Items and Plant-Specific Action Items
    - 7.2-1 FMEA for Protection System
  - COL Items closed in COL application
    - None
  - COL Holder Items
    - None

Chapter 8 Electrical Power

Section	DCD Use	Additional Areas
8.1 Introduction	Essentially IBR of DCD	General discussion of utility grid
8.2 Offsite Power System		• Transmission line and AC power design, testing, inspection plan • Discussion on transmission system mgmt • Switchyard Failure Modes and Effects Analysis • Grid stability analyses • Relationship between operations & PCC
8.3 Onsite Power System		• Onsite Standby Power System Performance, Testing, and Inspection • Testing of Containment Building Electrical Penetrations • Grounding System Considering Site Location • Site Lightning Protection



VEGP COL 8.2-1

Figure 8.2-202
Switchyard General Arrangement

Chapter 9 Auxiliary Systems

Section	DCD Use	Additional Areas
9.1 Fuel Storage& Handling	Essentially IBR of DCD and STD	ISI for load handling systems
9.2 Water Systems		• Design of well & potable water system • Design of waste water retention basins
9.3 Process Auxiliaries		Procedures for instrument air and safety related valve failures
9.4 Air Conditioning, HVAC		Program for compliance to HVAC standards
9.5 Other Auxiliary Systems		• Address fire protection features • Site-specific fire protection analysis for yard area and outlying buildings • Address communication system (including emergency offsite) interfaces to required offsite locations • Address the security communication system

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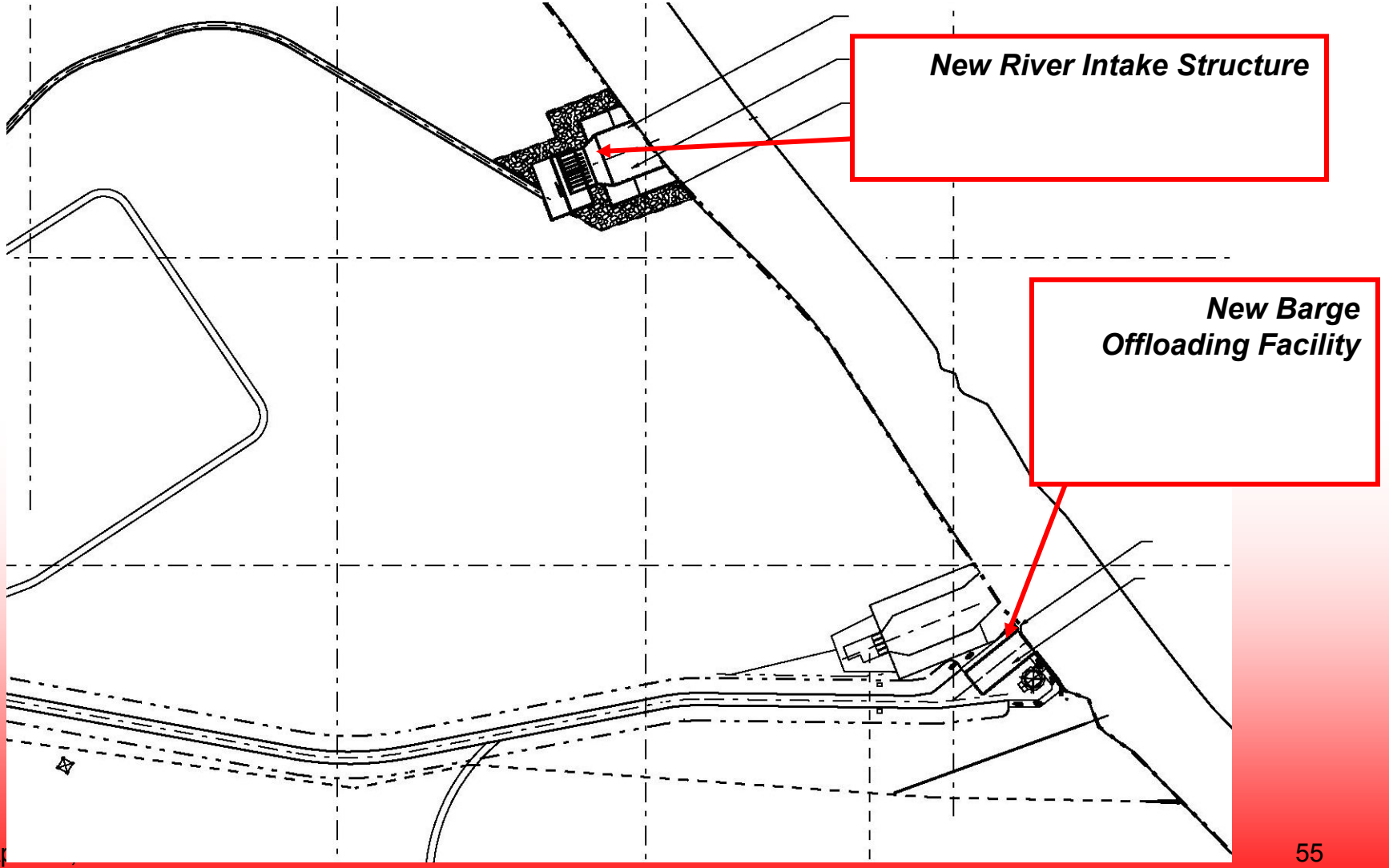
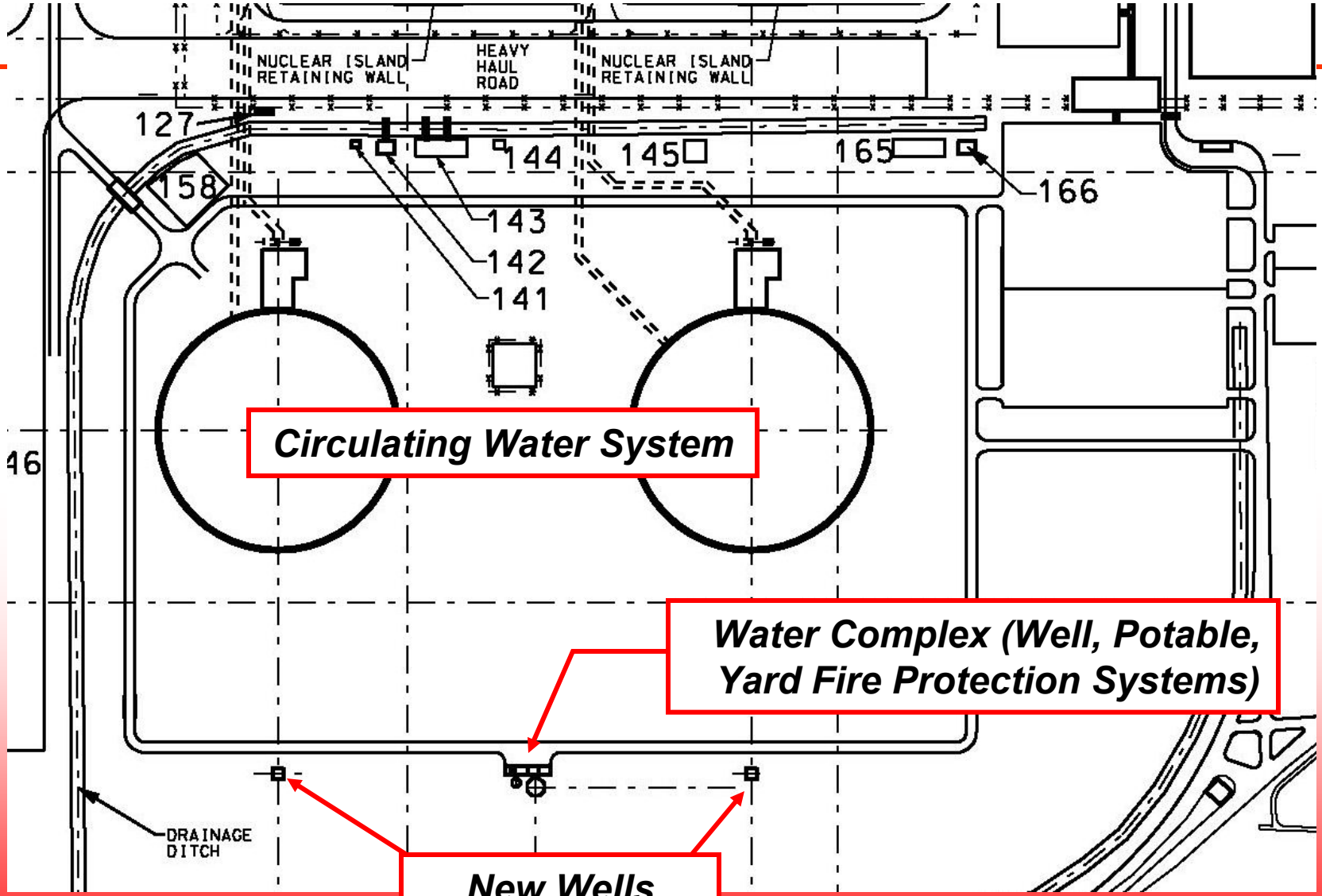
Intake Structure



Water Systems Configuration



Chapter 10 Steam and Power Conversion

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Section	DCD Use	Additional Areas
10.1 Summary Description	Essentially IBR of DCD and STD	Erosion Corrosion Monitoring Program
10.2 Turbine Generator		Holder item – Develop a turbine maintenance and inspection program
10.3 Main Steam Supply		Chemical addition and IGSCC minimization
10.4 Other Features of Steam & Power Conversion System		Circ water system design

Chapter 11 Radioactive Waste Management

Section	DCD Use	Additional Areas
11.1 Source Terms	Essentially IBR of DCD, some ESPA, and STD including NEI templates	No additional info beyond DCD
11.2 Liquid Waste Mgmt		Offsite dose calcs, Cost Benefit Analysis*
11.3 Gaseous Waste Mgmt		Offsite dose calcs, Cost Benefit Analysis*
11.4 Solid Waste Mgmt		Process Control Program
11.5 Radiation Monitoring		ODCM program description template

*NEI 07-11 still referenced based on NRC letter dated March 19, 2008 from Bill Reckley

VEGP will work with industry to revise FSAR Chapter 11

Chapter 12 Radiation Protection

Section	DCD Use	Additional Areas
12.1 Assuring ALARA	Essentially IBR from DCD and NEI templates, and STD	ALARA NEI Template; Addresses 20.1406 issues
12.2 Radiation Sources		Additional sources handling
12.3 Rad Protection Design Features		• Administrative controls for design features control access to radiologically restricted areas • Criteria & methods for obtaining representative measurement of radiological conditions, particularly in work areas • Groundwater monitoring program • Documentation of operational events of interest for decommissioning
12.4 Dose Assessment		• Provides dose estimates to construction workers
12.5 Health Physics Facility Design		• Radiation Protection Program Description NEI Template; Addresses 20.1406 issues

Chapter 13 Conduct of Operations

Section	DCD Use	Additional Areas
13.1 Organizational Structure	Essentially IBR from DCD, ESP and NEI templates and STD	Provides high level site organization
13.2 Training		Industry Training Program NEI Template
13.3 Emergency Planning		**Separate part - IBR from ESPA w/ new and additional information evaluation**
13.4 Operational Programs		Provides various operational programs implementation milestones
13.5 Plant Procedures		Description of procedures for normal, abnormal, and emergency activities
13.6 Security		Separate Part – IBR from ESPA
13.7 Fitness for Duty		IBR from ESPA (LWA scope only) and reference to NEI template for const & ops
13.AA Construction Organization		Provides construction organization details
13.BB Std Supplement for Cold License		NEI developed standard insert to address cold license operator training

STD COL 13.3-2 This COL Item is addressed in Section 13.3 and in the Emergency Plan.

Add the following sections after Subsection 13.3.6.

VEGP SUP 13.3-2 13.3.7 NEW OR ADDITIONAL INFORMATION

VEGP COL 13.3-1 In accordance with 10CFR 52.79(b)(4) and 10CFR 50.54(q), no new or additional emergency planning information that would materially change the bases for compliance with emergency planning requirements has been identified.

VEGP SUP 13.3-3 13.3.8 ESP COL ACTION ITEMS

VEGP ESP COL 13.3-1 SNC will submit a revision to the VEGP Units 3 and 4 Emergency Action Levels (EALs) within 90 days of NRC endorsement of NEI 07-01.

VEGP ESP COL 13.3-2 SNC will submit a fully developed set of VEGP Units 3 and 4 EALs when design details are completed or propose ITAAC for those elements of the EAL scheme not completed.

VEGP ESP COL 13.3-3
VEGP DEP 18.8-1 Location of the Technical Support Center (TSC) is described in the ESPA emergency plan.

Chapter 14 Initial Test Program

Section	DCD Use	Additional Areas
14.1 Specific info in FSAR	Essentially IBR of DCD and STD	No additional info beyond DCD
14.2 Specific info in Standard SAR		• Organization and Staffing • Conduct of test program • Review and evaluation of test results • Testing interface requirements • First-plant-only and three-plant-only tests
14.3 Certified Design Material		Supplemental description of ITAAC screening
14.4 COL Applicant Responsibilities		Responsibilities for above items

Chapter 15 Accident Analysis

Section	DCD Use	Additional Areas
15.1 Increase in Heat Removal from Primary System	Entirely IBR of DCD, except for 15.7	No additional info beyond DCD
15.2 Decrease in Heat Removal by Secondary System		No additional info beyond DCD
15.3 Decrease in Reactor Coolant System Flow Rate		No additional info beyond DCD
15.4 Reactivity & Power Distribution Anomalies		No additional info beyond DCD
15.5 Increase in Reactor Coolant Inventory		No additional info beyond DCD
15.6 Decrease in Reactor Coolant Inventory		Bounded by DCD X/Qs
15.7 Radioactive Release		Radioactive release from tank rupture – resolved in ESP Sec 2.4.13
15.8 Anticipated Transients Without Scram		No additional info beyond DCD
15A Eval Models & Parameters for Analysis of Rad Conseq of Acc		Bounded by DCD X/Qs

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Chapter 16 Technical Specifications

Section	DCD Use	Additional Areas
16.1 Technical Specifications	Essentially IBR	Provided in Part 4
16.2 Design Reliability Assurance Prog		No additional info beyond DCD
16.3 Investment Protection		Control the operability of investment protection SSCs

Chapter 17 Quality Assurance (Construction and Operations)

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Section	DCD Use	Additional Areas
17.1 QA During Design & Construction	Essentially IBR of DCD	Program of contractors. Limited info req'd as agreed by NRC and NEI
17.2 QA During the Operations Phase		DCD points to 17.5
17.3 QA During Design, Procurement, Fabrication, Inspection, and/or Testing		No additional info beyond DCD
17.4 Design Reliability Assurance Program		No additional info beyond DCD
17.5 Quality Assurance Program		New program based on NEI template
17.6 Maintenance Rule Program		IBR NEI template

CHAPTER 17

QUALITY ASSURANCE

17.1 QUALITY ASSURANCE DURING THE DESIGN AND CONSTRUCTION PHASES

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

Replace the information in DCD Section 17.1 with the following information.

VEGP COL 17.5-1 SNC is responsible for the establishment and execution of quality assurance program requirements during the design, construction, and operations phases of VEGP Units 3 and 4. SNC may delegate the work of establishing and executing the quality assurance program, or any parts thereof, but retains responsibility for the quality assurance program.

Southern Nuclear has contracted with several vendors to develop the VEGP Units 3 and 4 COL application, including site characterization activities. The process of collection, review, and analysis of specific data was performed principally either under the Bechtel Corporation QA program or the MacTec QA program. SNC oversight is provided through its review and approval of these QA plans, by conducting QA audits and surveillances, and by direct participation in and oversight of the COL application development activities. The later includes provide site specific applicant input and review of COL application content, signing the COL application as applicant at submittal, and working directly with these and other contractors to respond to NRC requests for additional information.

The “Quality Assurance Program Description” (QAPD) discussed in Section 17.5 establishes the QA program under which this COL application was developed and further established the requirements for the remaining portion of the design and construction phases.

Chapter 18 Human Factors Engineering

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Section	DCD Use	Additional Areas
18.1 Overview	Essentially IBR except as noted	No additional info beyond DCD
18.2 Human Factors Eng Prog Mgmt		Location of the EOF and TSC
18.3 – 18.8 Human Factor Analysis Chapters		No additional info beyond DCD, except in 18.6 (Staffing) – focuses on minimum
18.9 Procedure Development		Provides location of TSC and OSC
18.10 Training Program Development		Standard information
18.11 HFE Verification and Validation		No additional info beyond DCD
18.12 Inventory		No additional info beyond DCD
18.13 Design Implementation		No additional info beyond DCD
18.14 Human Performance Monitoring		Description of process after operation

Chapter 19 - Probabilistic Risk Assessment

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- Sections 19.1 through 19.58
  - Entirely IBR
- Section 19.59 - PRA Results and Insights
  - Essentially IBR
  - Provides conclusion of evaluation that generic PRA is adequate for plant specific PRA
  - Provides standard COL information for:
    - Implementation of severe accident management guidance
    - PRA configuration control
  - COL Holder items

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Part 3 Environmental Report

- Regulations require a New and Significant Evaluation from the ESP FEIS
- FEIS not available – by agreement with NRC will use the DEIS and update at FEIS
- Procedure developed and New and Significant review conducted of DCD Rev 16 changes from 15 and updates to other area such as construction costs and staffing levels
- No new item was found significant
- Results and background material (~2000 pages) available for audit by NRC

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Part 3 –Environmental Report

- The filing schedule for the Vogtle COLA results in a unique situation for the COLA Environmental Report (ER)
- COLA has been filed before the Vogtle ESP is issued
- COLA filing also occurs prior to NRC issuing Final Environmental Statement (FES) for ESP
- Draft EIS for Vogtle ESP contains no unresolved issues; focus for COLA ER is to preserve finality for environmental issues
- New and Significant Information evaluation required for COLA ER will provide the bridge from the ESP EIS to the COLA EIS
- SNC worked with NRC to develop acceptable approach to manage New and Significant Information evaluation process

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Part 3 –Environmental Report

- Based on discussion with NRC, New and Significant Information evaluation will be integrated with comments on the DEIS
- SNC conducted comprehensive, line-by-line review of DEIS and reviewed supporting information to identify key inputs that have potential to affect DEIS conclusions
- Each key input identified was evaluated to identify potential new information
- All new information provided to NRC in comments on DEIS In December 2007 with SNC conclusion on relevance to DEIS conclusions
- All new information evaluated for significance using SNC procedure; documentation retained for review during COLA environmental audit

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Part 3 –Environmental Report

- The COLA ER contains 11 Chapters and is structured in the same format as the DEIS per discussion with NRC
- ER draws heavily on the information in the DEIS
- Chapter 1 – Introduction is the keystone for the entire document and is utilized to provide description of ER development, New and Significant information evaluation process, and preservation of finality
- Remaining chapters focus on describing basic functions and directing readers to relevant sections of the EIS
- Additional information provided only where appropriate to ensure clear understanding of material or to introduce new information identified in New and Significant evaluation

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Part 3 - Environmental Report

- Chapter 1- Introduction
- Chapter 2- Affected Environment
- Chapter 3- Site Layout &Plant Description
- Chapter 4- Construction Impacts
- Chapter 5- Operational Impacts
- Chapter 6- Fuel Cycle, Transportation, and Decommissioning
- Chapter 7- Cumulative Impacts
- Chapter 8- Need for Power
- Chapter 9- Environmental Impacts of Alternatives
- Chapter 10- Comparison of Site Impacts with Alternate Site Impacts
- Chapter 11- Conclusions and Recommendations

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Part 3 –Environmental Report

Chapter 1 Introduction

- Background
- Site Preparation/Preliminary Construction
- Review of COL Application
- Proposed Federal Action
- Purpose and Need for Action
- Alternatives to Proposed Action
- Compliance and Consultations
- Status of Agency Consultations
- Conformance with Division 4 Regulatory Guides
- References
- No new and significant information identified

The content guidelines outlined in NUREG-1555 are generally consistent with the guidance contained in Regulatory Guide 4.2. No other Division 4 regulatory guides are applicable to the supplemental analyses presented in the ER.

1.6 REPORT CONTENTS

The ER is organized as follows. Chapter 1 provides the purpose and need for the proposed action, altenatives to the proposed action, the status of regulatory compliance and consultation activities, and the methodology used to prepare the ER. Chapter 2 describes the proposed site and environment that would be affected by the addition of two new reactors at VEGP. Chapter 3 describes the characteristics of the AP1000 power plant, and its interfaces with the environment that are the bases for evaluating environmental impacts. Chapter 4 examines the environmental impacts of construction and Chapter 5 evaluates the environmental impacts of operations to determine the suitability of the VEGP site for the new units. Chapter 6 evaluates the impacts of the uranium fuel cycle, transportation associated with constructing and operating the facility, and decommissioning of the units at the end of plant life. Chapter 7 evaluates the cumulative impacts of the proposed action, and other past, present and reasonably foreseeable actions in the vicinity of VEGP. Chapter 8 examines the need for power. Chapter 9 examines alternatives to the proposed action, alternative locations, and alternative energy sources. Chapter 10 compares the proposed action with alternatives, and Chapter 11 summarizes the findings and conclusions.

1.7 ENVIRONMENTAL REPORT METHODOLOGY

1.7.1 DEMONSTRATION THAT ER CONFORMS WITH REGULATORY REQUIREMENTS

10 CFR Section 51.50(c)(1) states that COLAs referencing an ESP need not contain information or analyses submitted in the ESP application or resolved in the ESP EIS. Alternatively, the COLA may reference an ESP application that has been docketed but not issued (10 CFR 52.27(c). Still, the ER must contain, in addition to the environmental information and analyses otherwise required (10 CFR 51.50(c)(1)):

(i) Information to demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the ESP.

(ii) Information to resolve any significant environmental issue that was not resolved in the ESP proceeding.

(iii) Any new and significant information for issues related to the impacts of construction and operation of the facility that were resolved in the ESP proceeding.

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Part 3 – Environmental Report

Chapters 2 and 3

- Chapter 2 provides general description of site and surrounding environment; no new and significant information identified
- Chapter 3 provides description of proposed plant and how it is situated on the site; Minor changes included to update site plan and intake structure; no new and significant information identified

2.0 AFFECTED ENVIRONMENT

Chapter 2 describes the VEGP site, the vicinity or the region, as appropriate, for each environmental topic that could be affected by the construction or operation of two new nuclear units at the VEGP site.

2.1 SITE LOCATION

VEGP ESP EIS Chapter 2, Section 2.1 described the VEGP site and the proposed locations of the new reactors. The EIS did not identify any significant issues that were not resolved. Having implemented the process described in Section 1.7.2, SNC identified no new and significant information related to the site location.

2.2 LAND

VEGP ESP EIS Chapter 2, Section 2.2 described the habitat types on the VEGP site and the proposed transmission line corridor, the land uses in the vicinity and region, access to the site, and nearby communities. The EIS did not identify any significant issues that were not resolved. Having implemented the process described in Section 1.7.2, SNC identified no new and significant information related to this resource.

2.3 METEOROLOGY AND AIR QUALITY

VEGP ESP EIS Chapter 2, Section 2.3 described the climate and air quality of the VEGP site and region and the existing meteorological monitoring program at the VEGP site. The EIS did not identify any significant issues that were not resolved. Having implemented the process described in Section 1.7.2, SNC identified no new and significant information related to these topics.

2.4 GEOLOGY

VEGP ESP EIS Chapter 2, Section 2.4 described the basic geology underlying the VEGP site and region. The EIS did not identify any significant issues that were not resolved. Having implemented the process described in Section 1.7.2, SNC identified no new and significant information related to this topic.

2.5 RADIOLOGICAL ENVIRONMENT

VEGP ESP EIS Chapter 2, Section 2.5 described radiological doses to the maximally exposed individual due to operation of VEGP Units 1 and 2 as <0.1 mrem per year for the years 2001 – 2004. The NRC also reviewed studies of tritium concentrations in the water table aquifer and determined that atmospheric deposition, not transriver flow from the Savannah River Site, is the source of elevated tritium concentrations. The EIS did not identify any significant issues that were not resolved. Having implemented the process described in Section 1.7.2, SNC identified no new and significant information related to the radiological environment.

Table 3.0-1 VEGP Site Characteristics, AP1000 Design Parameters and Site Interface Values (Continued)

Part III Site Interface Values	ESP		COL	
Item	Single Unit [Two Unit] Value	Description and Reference	Single Unit [Two Unit] Value	Comments
Plant Characteristics				
Total Acreage	310 acres for 2 units	The land area required to provide space for all plant facilities, including power block, switchyard, spent fuel storage, and administrative facilities.	320 acres for 2 units	Acreage increased by approximately 10 acres. SNC does not believe this increase on a site with additional undeveloped acreage in a rural county would change NRC's significance evaluation of SMALL impacts on land use.
Groundwater Consumptive Use	376 gpm (1570 gpm) [752 gpm (3140 gpm)]	The expected (maximum) rate of withdrawal of groundwater to serve the new units. (Table 3.0-1 in the ESP Application listed the expected gpm for 2 units as 762, which was a typographical error.)	376 gpm (1398.5 gpm) [752 gpm (2797 gpm)	The maximum rate of withdrawal of groundwater to serve the new units has decreased by approximately 11 percent. See Section 3.2.1. SNC believes that the analysis in the ESP bounds this value, and that NRC's conclusion of SMALL impacts would not change.
Plant Population				
Operation	345 [600]	The number of people required to operate and maintain the plant	400 [800]	SNC reviewed the socioeconomic impacts of the increased workforce on the counties most likely to be affected and concluded that because the increase would occur as the larger construction workforce left the area, NRC's conclusions on the significance of the impacts would not change.

Part 3 – Environmental Report

Chapters 4 and 5

- Chapter 4 discusses impacts of pre-construction and construction process; no new and significant information identified
- Chapter 5 focuses on operational impacts; no new and significant information identified

Part 3 – Environmental Report

Chapters 6 and 7

- Chapter 6 addresses Fuel Cycle, Transportation, and Decommissioning; no new and significant information identified
- Chapter 7 discusses Cumulative Impacts; no new and significant information identified

Part 3 – Environmental Report

Chapters 8 and 9

- Chapter 8 Need for Power based predominantly on Georgia 2007 IRP filing; no new and significant information identified
- Chapter 9 contains alternatives evaluation; no new and significant information identified

Part 3 – Environmental Report

Chapters 10 and 11

- Chapter 10 deals with comparing the site with alternative sites as well as a no action alternative; no new and significant information identified
- Chapter 11 summarizes major conclusions of each chapter; no new and significant information identified

Part 3 – Environmental Report

Summary and Conclusions

- Unique conditions exist for Vogtle COLA ER
- SNC worked with NRC staff and management to ensure SNC process meets NRC expectations
- New and Significant evaluation is the key in transition from ESP EIS to COLA EIS
- SNC and ER vendors conducted extensive New and Significant evaluation
- No New and Significant information identified

Integration of ESPA into COLA

- COLA FSAR IBRs ESPA SSAR
  - Roadmap provided in Table 1.6-202
  - Some minor variances from ESPA
- COLA ER references the ESP EIS
- COLA EP IBRs ESPA EP

VEGP SUP 1.6-2

Table 1.6-202 (Sheet 1 of 3)
Cross Reference of ESPA SSAR Sections Incorporated by Reference into FSAR Sections

	SSAR Section	SSAR Section Title	Corresponding FSAR Section
	1.1	Introduction	SSAR Section 1.1 provides general information related to the ESP proceeding, and is not applicable to any particular FSAR section.
	1.2	General Site Description	Section 1.1.1 Plant Location
	1.3	Site Characteristics, Design Parameters, and Site Interface Values	Section 2.0, Site Characteristics
	1.4	Identification of Agents and Contractors	Section 1.4, Identification of Agents and Contractors
	1.5	Requirements for Further Technical Information	Section 1.5, Requirements for Further Technical Information
VEGP ESP VAR 1.6-1	1.6	Material Incorporated by Reference	This ESPA SSAR section is not Incorporated by Reference into the FSAR. This section of the ESPA SSAR includes a reference to Revision 15 of the AP1000 DCD and additional Westinghouse technical reports that have been superseded by the referenced DCD. COLA Part 7 requests a variance for this ESPA section.
	1.7	Drawings and Other Detailed Information	Section 1.7, Drawings and Other Detailed Information
	1.8	Conformance to NRC Regulations and Regulatory Guidance	Section 1.9, Compliance With Regulatory Criteria.
	2.1	Geography and Demography	Section 2.1, Geography and Demography
	2.2	Identification of Potential Hazards in Site Vicinity	Section 2.2, Nearby Industrial, Transportation, and Military Facilities
	2.3	Meteorology	Section 2.3, Meteorology

VEGP SUP 1.6-2

Table 1.6-202 (Sheet 2 of 3)
Cross Reference of ESPA SSAR Sections Incorporated by Reference into FSAR Sections

	SSAR Section	SSAR Section Title	Corresponding FSAR Section
	2.4	Hydrologic Engineering	Section 2.4, Hydrologic Engineering
	2.5	Geology, Seismology, and Geotechnical Engineering	Section 2.5, Geology, Seismology, and Geotechnical Information
	3.5.1.6	Aircraft Hazards	Section 3.5.1.6, Aircraft Hazards
VEGP ESP VAR 1.6-2	3.8.5	Foundations	This ESPA SSAR subsection is Incorporated by Reference into FSAR Subsection 3.8.5.1 with the exception of the first two paragraphs. These paragraphs include a reference to Revision 15 of the AP1000 DCD and additional Westinghouse technical reports that have been superseded by the referenced DCD. COLA Part 7 requests a variance for this ESPA section.
	11.2.3	Liquid Radioactive Releases	Section 11.2.3.5, Estimated Doses
	11.3.3	Gaseous Radioactive Releases	Section 11.3.3.4, Estimated Doses
	13.3	Emergency Planning	Section 13.3, Emergency Planning
	13.6	Industrial Security	Section 13.6, Security
	13.7	Fitness for Duty	Section 13.7, Fitness for Duty
VEGP ESP VAR 1.6-3	15	Accident Analyses	This ESPA SSAR chapter is not Incorporated by Reference into the FSAR. This chapter of the ESPA SSAR provides accident release information that has been superseded by the referenced DCD. COLA Part 7 requests a variance for this ESPA section.

VEGP SUP 1.6-2

Table 1.6-202 (Sheet 3 of 3)
Cross Reference of ESPA SSAR Sections Incorporated by Reference into FSAR Sections

SSAR Section	SSAR Section Title	Corresponding FSAR Section
17	Quality Assurance	This ESPA SSAR chapter is not Incorporated by Reference into the FSAR. The SNC Nuclear Development Quality Assurance Manual, provided as Appendix 17.1A of the ESPA SSAR, is now provided in COLA Part 11.

Closing Remarks

- Thank you for your time and attention