CHAPTER 1
INTRODUCTION AND GENERAL DESCRIPTION OF THE PLANT

TABLE OF CONTENTS

Section	Title	Page
1.1	INTRODUCTION	1.1-1
1.1.1	PLANT LOCATION	1.1-1
1.1.5	SCHEDULE	1.1-2
1.1.6.1	Regulatory Guide 1.70	1.1-2
1.1.6.3	Text, Tables, and Figures	1.1-2
1.1.6.5	Proprietary Information	1.1-3
1.1.6.6	Acronyms	1.1-3
1.1.7	COMBINED LICENSE INFORMATION	1.1-4
1.2	GENERAL PLANT DESCRIPTION	1.2-1
1.2.2	SITE DESCRIPTION	1.2-1
1.2.3	PLANT ARRANGEMENT DESCRIPTION	1.2-2
1.3	COMPARISONS WITH SIMILAR FACILITY DESIGNS	1.3-1
1.4	IDENTIFICATION OF AGENTS AND CONTRACTORS	1.4-1
1.4.1	APPLICANT - PROGRAM MANAGER	1.4-1
1.4.2.7	Other Participants	1.4-2
1.5	REQUIREMENTS FOR FURTHER TECHNICAL INFORMATION	1.5-1
1.6	MATERIAL REFERENCED	1.6-1
1.7	DRAWINGS AND OTHER DETAILED INFORMATION	1.7-1
1.7.2	PIPING AND INSTRUMENTATION DIAGRAMS	1.7-1
1.8	INTERFACES FOR STANDARD DESIGN	1.8-1
1.9	COMPLIANCE WITH REGULATORY CRITERIA	1.9-1
1.9.1	REGULATORY GUIDES	1.9-1
1.9.1.1	Division 1 Regulatory Guides - Power Reactors	1.9-1
1.9.1.2	Division 4 Regulatory Guides - Environmental and Siting	1.9-2
1.9.1.3	Division 5 Regulatory Guides - Materials and Plant Protection	1.9-2
1.9.1.4	Division 8 Regulatory Guides - Occupational Health	1.9-3
1.9.1.5	Combined License Information	1.9-3

TABLE OF CONTENTS (CONT.)

Section	Title	Page
1.9.2	COMPLIANCE WITH STANDARD REVIEW PLAN (NUREG-0800)	1.9-4
1.9.4.1	Review of NRC List of Unresolved Safety Issues and Generic Safety Issues	1.9-4
1.9.4.2.3	New Generic Issues	1.9-4
1.9.5.1.5	Station Blackout	1.9-6
1.9.5.2.15	Severe Accident Mitigation Design Alternatives	1.9-7
1.9.5.5	Operational Experience	1.9-7
1.9.6	REFERENCES	1.9-8
1.10	NUCLEAR POWER PLANTS TO BE OPERATED ON MULTI-UNIT SITES	1.10-1
1.10.1	POTENTIAL CONSTRUCTION ACTIVITY HAZARDS	1.10-1
1.10.2	POTENTIALLY IMPACTED SSCS AND LIMITING CONDITIONS FOR OPERATION	1.10-2
1.10.3	MANAGERIAL AND ADMINISTRATIVE CONTROLS	1.10-2
APP. 1A	CONFORMANCE WITH REGULATORY GUIDES	1A-1
APP. 1AA	CONFORMANCE WITH REGULATORY GUIDES	1AA-1
APP. 1B	SEVERE ACCIDENT MITIGATION DESIGN ALTERNATIVES	1B-1

LIST OF TABLES

Number	Title
1.1-201	Acronyms Used in the FSAR
1.1-202	Left Margin Annotations
1.1-203	Estimated Completion Dates and Commercial Operation Dates for VCSNS Units 2 and 3
1.6-201	Additional Material Referenced
1.7-201	AP1000 System Designators And System Drawings
1.8-201	Summary of FSAR Departures from the DCD
1.8-202	COL Item Tabulation
1.8-203	Summary of FSAR Discussions of AP1000 Plant Interfaces
1.9-201	Regulatory Guide/FSAR Section Cross-References
1.9-202	Conformance with SRP Acceptance Criteria
1.9-203	Listing Of Unresolved Safety Issues And Generic Safety Issues
1.9-204	Generic Communications Assessment
1.10-201	Potential Hazards from Construction Activities
1.10-202	Hazards During Construction Activities
1.10-203	Managerial and Administrative Construction Controls

LIST OF FIGURES

Number	Title
1.1-201	Site Location Map
1.1-202	VCSNS Site Plan
1.2-201	Annex Building General Arrangement Plan at Elevation 100'-0" & 107'-2"

CHAPTER 1
INTRODUCTION AND GENERAL DESCRIPTION OF THE PLANT

1.1 INTRODUCTION

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

Add the following paragraph to the end of DCD Section 1.1

STD SUP 1.1-1 This Final Safety Analysis Report (FSAR) incorporates the Design Control Document (DCD) (as identified in Table 1.6-201) for a simplified passive advanced light water reactor plant provided by Westinghouse Electric Company, the entity originally sponsoring and obtaining the AP1000 design certification documented in 10 CFR Part 52, Appendix D. Throughout this FSAR, the "referenced DCD" is the AP1000 DCD submitted by Westinghouse as Revision 19 including any supplemental material as identified in Table 1.6-201. Unless otherwise specified, reference to the DCD refers to Tier 2 information, including references to the sensitive unclassified non-safeguards information (including proprietary information) and safeguards information, contained in the AP1000 DCD. Such DCD information is included in this combined license application in the same manner as it is included in the AP1000 DCD, i.e., references in the DCD are included as references in the FSAR, and material incorporated by reference into the DCD is incorporated by reference into the FSAR. Appropriate agreements are in place to provide for the licensee's rights to possession (including constructive possession) and use of the withheld sensitive unclassified non-safeguards information (including proprietary information) and safeguards information referenced in the AP1000 DCD for the life of the project.

Appendix D to 10 CFR Part 52 is hereby incorporated by reference into the COL application.

VCS SUP 1.1-2 This FSAR is hereby submitted under Section 103 of the Atomic Energy Act by SCE&G to the NRC as part of the application for two Class 103 combined licenses (COLs) to construct and operate two nuclear power plants under the provisions of 10 CFR Part 52 Subpart C.

1.1.1 PLANT LOCATION

VCS COL 2.1-1 Add the following text at the beginning of DCD Subsection 1.1.1:

The site for VCSNS Units 2 and 3 is located approximately 1 mile from the center of Unit 1 in western Fairfield County. The Monticello Reservoir provides the water requirements of Units 2 and 3. The reservoir is located east of the Broad River and west of South Carolina State Highway 215.

Units 2 and 3 will be located approximately 15 miles west of Winnsboro, the county seat. Newberry, the county seat of Newberry County, is about 17 miles away in a westerly direction. Columbia, the South Carolina state capital, is located about 26 miles to the southeast.

Figure 1.1-201 identifies the site location. Figure 1.1-202 shows the plant arrangement within the site.

1.1.5 SCHEDULE

Add the following text to the end of DCD Subsection 1.1.5:

VCS COL 1.1-1

Table 1.1-203 displays the anticipated schedule for construction and operation of two AP1000 units at the VCSNS site. A site-specific construction plan and startup schedule will be provided to the NRC after issuance of the COL and when a final decision has been made to construct the plant.

1.1.6.1 Regulatory Guide 1.70

Add the following text to the end of DCD Subsection 1.1.6.1.

STD SUP 1.1-6

This FSAR generally follows the AP1000 DCD organization and numbering. Some organization and numbering differences are adopted where necessary to include additional material, such as additional content identified in Regulatory Guide 1.206. Any exceptions are identified with the appropriate left margin annotation as discussed in Subsection 1.1.6.3 and Table 1.1-202.

1.1.6.3 Text, Tables, and Figures

Add the following text to the end of DCD Subsection 1.1.6.3.

STD SUP 1.1-3 Table 1.1-202 describes the left margin annotations used in this document to identify departures, supplementary information, COL items, and conceptual design information.

FSAR tables, figures, and references are numbered in the same manner as the DCD, but the first new FSAR item is numbered as 201, the second 202, the third 203, and consecutively thereafter. When a table, figure, or reference in the DCD is changed, the change is appropriately left margin annotated as identified above.

New appendices are included in the FSAR with double letter designations following the pertinent chapter (e.g., 12AA).

When it provides greater contextual clarity, an existing DCD table or figure is revised by adding new information to the table or figure and replacing the DCD table or figure with a new one in the FSAR. In this instance, the revised table or figure clearly identifies the information being added, and retains the same numbering as in the DCD, but the table or figure number is revised to end with the designation “R” to indicate that the table or figure has been revised and replaced. For example, revised “Table 4.2-1” would become “Table 4.2-1R.” New and revised tables and figures are labeled in the left margin as described in Table 1.1-202.

1.1.6.5 Proprietary Information

Insert the following text to the end of DCD Subsection 1.1.6.5.

STD SUP 1.1-4 Some portions of this FSAR may be considered as proprietary, personal, or sensitive and withheld from public disclosure pursuant to 10 CFR 2.390 and Regulatory Issue Summary (RIS) 2005-026. Such material is clearly marked and the withheld material is separately provided for NRC review.

1.1.6.6 Acronyms

Add the following text to the end of DCD Subsection 1.1.6.6.

VCS SUP 1.1-5 Table 1.1-201 provides a list of acronyms used in the FSAR in addition to the acronyms identified in DCD Table 1.1-1 and system designations identified in Table 1.7-201 and DCD Table 1.7-2.

1.1.7 COMBINED LICENSE INFORMATION

Add the following text to the end of DCD Subsection 1.1.7.

VCS COL 1.1-1 This COL item is addressed in Subsection 1.1.5.

VCS SUP 1.1-5

Table 1.1-201 (Sheet 1 of 7)
Acronyms Used in the FSAR

Acronym	Definition
27J	Newberry Airport
AFB	Air Force Base
AFCCC	Air Force Combat Climatology Center
AFCCC-NCDC	Air Force Combat Climatology Center, National Climatic Data Center
ALOHA	Areal Locations of Hazardous Atmospheres
ANSS	Advanced National Seismic System
ARCON96	X/Qs computer model described in NUREG/CR-6331
ASCE	American Society of Chemical Engineers
ASCii	American Standard Code for Information Interchange
ASTM	American Society for Testing and Materials
CAE	Columbia Metropolitan Airport
CAV	Cumulative Absolute Velocity
CEM	U.S. Army Corps of Engineers, Coastal Engineering Manual
CEUS	Central and Eastern United States
COLA	Combined License Application
CPT	Cone Penetrometer Test
CPW	Construction Potable Water
CR	Compression Ratio
CRR	Cyclic Resistance Ratio
CSDRS	Certified Seismic Design Response Spectrum
CSR	Cyclic Stress Ratio
CWS	Circulating Water System
DB	Dry Bulb

VCS SUP 1.1-5

Table 1.1-201 (Sheet 2 of 7)
Acronyms Used in the FSAR

Acronym	Definition
DBF	Design Basis Flood
DCD	Design Control Document
DEGADIS	Dense Gas Dispersion Computer Model
DNAG	Geological Society of America, Decade of North American Geology (project)
DOE	U.S. Department of Energy
DS	Direct Shear
EAB	Exclusion Area Boundary
ECFS	East Coast Fault System
ECMA	East Coast Magnetic Anomaly
EOF	Emergency Operations Facility
EPA	Environmental Protection Agency
EPRI	Electric Power Research Institute
EQPARAM	Electric Power Research Institute Computer Code
ER	Environmental Report
EST	Earth Science Team
ETR	Energy Transfer Ratio
ETSZ	Eastern Tennessee Seismic Zone
FAA	Federal Aviation Administration
FDW	Fairfield County Airport
FERC	Federal Energy Regulatory Commission
FRISK88	Risk Engineering, Inc. computer model software
FS	Factor of Safety
FSAR	Final Safety Analysis Report
GMRS	Ground Motion Response Spectrum

VCS SUP 1.1-5

Table 1.1-201 (Sheet 3 of 7)
Acronyms Used in the FSAR

Acronym	Definition
HEC-RAS	Hydraulic Compacted Model Developed by the USAEC
HMR	Hydrometeorological Report
HVAC	Heating, Ventilation and Air Conditioning
ICRP	International Commission on Radiation Protection
IDLH	Immediately Dangerous to Life and Health
IPCS	Integrated Plant Computer System
JFDs	Joint Frequency Distributions
LCD	Local Climatological Data
LFL	Lower Flammability Limit
LPZ	Low Population Zone
LST	Local Standard Time
M	Moment Magnitude
MACTEC	Mactec Engineering and Consulting of Charlotte, North Carolina
MCR	Main Cooling Reservoir
MCWB	Mean Coincident Wet Bulb Temperature
ML	defined by Unified Soil System Classification
ML/MH	defined by Unified Soil System Classification
Mmax	Maximum Magnitude
MPC	Maximum Permissible Concentration
MPO	Columbia, South Carolina, Metropolitan Planning Organization
MSDS	Material Safety Data Sheet
MSF	Magnitude Scaling Factor
MSL	Mean Sea Level
MWe	Megawatts electric
MWR	Moderately Weathered Rock

VCS SUP 1.1-5

Table 1.1-201 (Sheet 4 of 7)
Acronyms Used in the FSAR

Acronym	Definition
NAAQS	National Ambient Air Quality Standard
NAD83	North American Datum, 1983
NAVD	North American Vertical Datum
NAVD88	North American Vertical Datum, 1988
NCDC	National Climatic Data Center
NGVD29	National Geodetic Vertical Datum, 1929
NOAA-CSC	National Oceanic and Atmospheric Administration Coastal Services Center
NPDES	National Pollutant Discharge Elimination System
NS (railroad)	Norfolk Southern Railroad
NWS	National Weather Service
OSHA	Occupational Safety and Health Administration
PAVAN	Computer Code as described in NUREG/CR-2858
PBA	Power Block Area
PCS	Passive Containment Cooling System
PEL	Permissible Exposure Limit
PGA	Peak Ground Acceleration
pH	Potential of Hydrogen, measure of acid or base
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation
PMWP	Probable Maximum Winter Precipitation
PORV	Power Operated Relief Valve
PSHA	Probabilistic Seismic Hazard Analysis
PSHAKE	Bechtel Computer Program for Equivalent Linear Seismic Response Analysis of Horizontally Layered Soil Deposits
PVC	Poly-Vinyl-Chloride

VCS SUP 1.1-5

Table 1.1-201 (Sheet 5 of 7)
Acronyms Used in the FSAR

Acronym	Definition
PWR	Partially Weathered Rock
QA/QC	Quality Assurance / Quality Control
RCL	Radiological Chemistry Lab
RCTS	Resonant Column Torsional Shear
RIS	Reservoir Induced Seismicity
RMS	Radiation Monitoring System
RQD	Rock Quality Designation
RR	Recompression Ratio
RTD	Resistance Temperature Detector
SC14	Shealy Airport
SC63	Summer Nuclear Station; private unattended helipad
SCARNG	South Carolina Army National Guard
SCBCB	South Carolina Budget and Control Board
SCDHEC	South Carolina Department of Health and Environmental Control
SCDOT	South Carolina Department of Transportation
SCE&G	South Carolina Electric and Gas
SDF	Spillway Design Flood
SECPOP	Sandia Laboratories computer code used to calculate population by EPZs
SEL	Site Elevation
SERCC	Southeast Regional Climate Center
SEUSSN	Southeastern United States Seismic Network
SM	Defined by Unified Soil System Classification
SNM	Special Nuclear Material
SOG	Seismicity Owner's Group

VCS SUP 1.1-5

Table 1.1-201 (Sheet 6 of 7)
Acronyms Used in the FSAR

Acronym	Definition
SPT	Standard Penetration Test
SSE	Safe Shutdown Earthquake
SSHAC	Senior Seismic Hazard Analysis Committee
STEL	Short Term Exposure Limit
SUNSI	Sensitive Unclassified Non-Safeguards Information
SWB	Service Water Building
SWS	Service Water System
TB	Turbine Building
TDS	Total Dissolved Solids
TEEL	Temporary Emergency Exposure Limit
TIP	NRC's Trial Implementation Project
TNT	Trinitrotoluene
TOC	Total Organic Carbon
TOXDISP	Computer model, estimates vapor concentrations at distance/ elevation from toxic spills
TS	Technical Specification(s)
TSC	Technical Support Center
TWA	Time Weighted Average
UCSS	Updated Charleston Seismic Source
UFL	Upper Flammability Limit
UFSAR	Updated Final Safety Analysis Report
UHRS	Uniform Hazard Response Spectra
UHS	Ultimate Heat Sink
USACE	U.S. Army Corps of Engineers
USCS	United Soil Classification System

VCS SUP 1.1-5

Table 1.1-201 (Sheet 7 of 7)
Acronyms Used in the FSAR

Acronym	Definition
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
UST	Underground Storage Tank
UTM	Universal Transverse Mercator Coordinate System
VCIS	U.S. Forrest Service Ventilation Climate Information System
VCSNS	V. C. Summer Nuclear Station
V_s	Shear Wave Velocity
WB	Wet Bulb
WT	Water Treatment
XOQDOQ	Dispersion Model Outlined in Regulatory Guide 1.111
ZRA	Zone of River Anomalies

STD SUP 1.1-3

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

MARGIN NOTATION	DEFINITION AND USE
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 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.

STD SUP 1.1-3

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

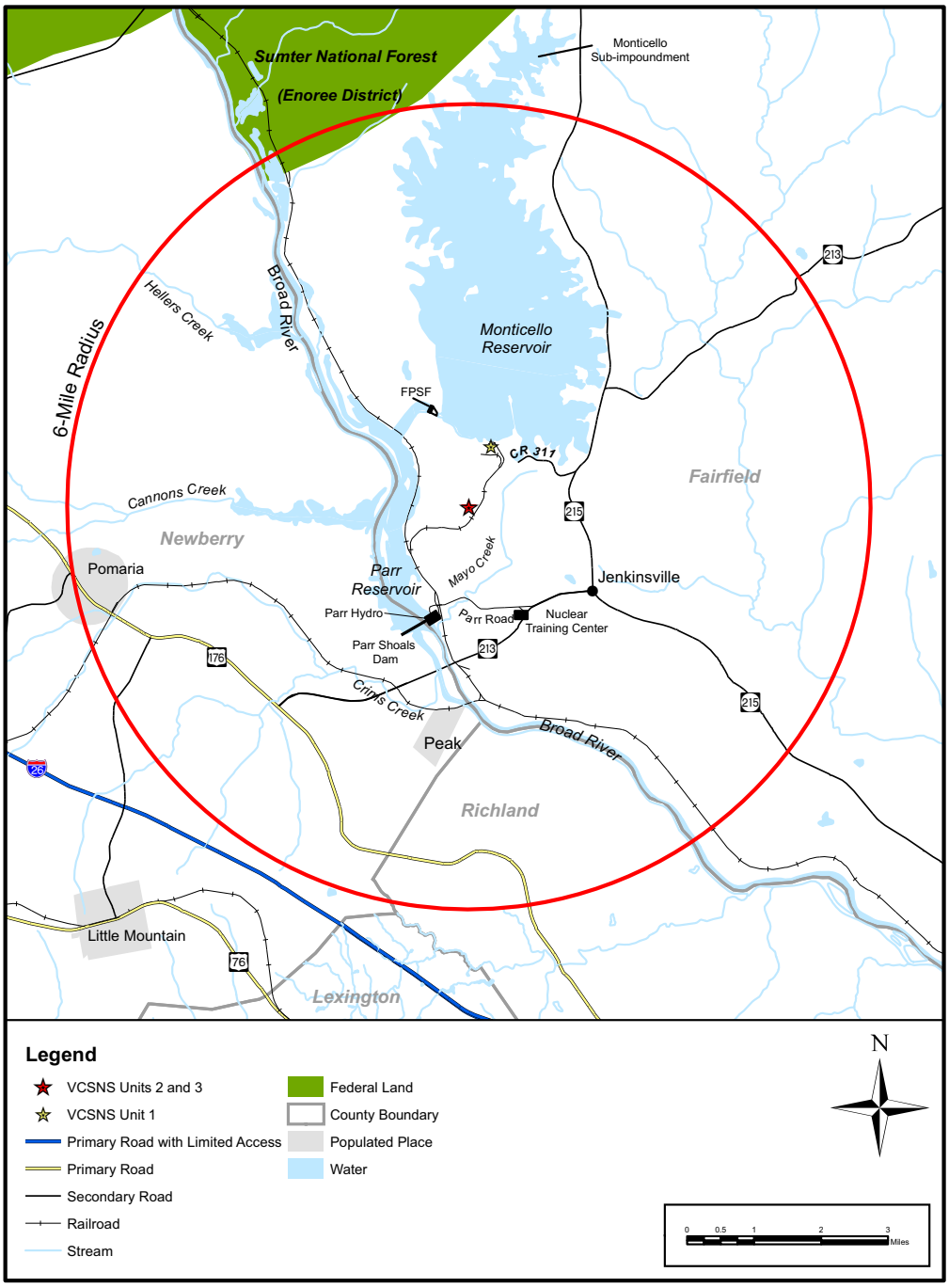
STD SUP X.Y-#	FSAR information that supplements the material in the DCD and is common to other COL applicants. Each SUP item is numbered separately at an appropriate subsection level, e.g., STD SUP 1.10-1, or STD SUP 9.5.1-1
NPP SUP X.Y-#	FSAR information that supplements the material in the DCD and 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.

VCS COL 1.1-1

Table 1.1-203
Estimated Completion Dates and Commercial Operation Dates for VCSNS Units 2 and 3

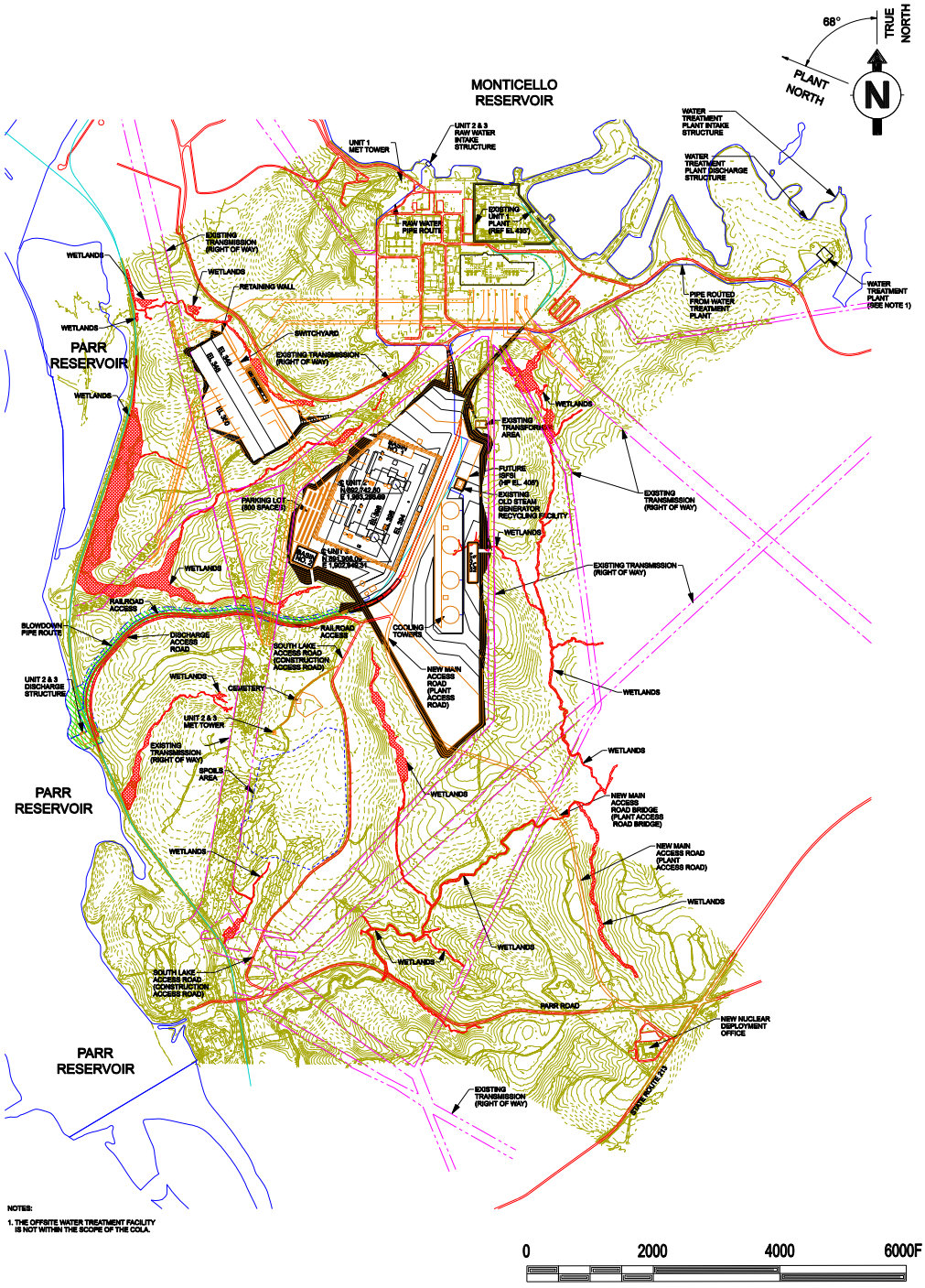
Unit 2	
Commencement of Construction	2nd Q 2011
Construction Completion	2nd Q 2015
Commercial Operation	1st Q 2016

Unit 3	
Commencement of Construction	2nd Q 2011
Construction Completion	2nd Q 2018
Commercial Operation	1st Q 2019



VCS COL 2.1-1

Figure 1.1-201
Site Location Map



VCS COL 2.1-1

Figure 1.1-202
VCSNS Site Plan

1.2 GENERAL PLANT DESCRIPTION

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

1.2.2 SITE DESCRIPTION

In Subsection 1.2.2 of the DCD, replace the information entitled "Site Plan" with the following text.

VCS COL 2.1-1
VCS COL 3.3-1
VCS COL 3.5-1

Site Plan

A typical site plan for a single-unit AP1000 reference unit is shown in DCD Figure 1.2-2. The directions north, south, east, and west used in this description are the conventions used in the DCD for the orientation of AP1000 structures and equipment and differ from geographic north, south, east, and west. For Units 2 and 3, the plant orientation is rotated with respect to true north. Units 2 and 3 plant north is 68 degrees counter clockwise from true north. To differentiate between the site-specific and DCD orientation systems, orientations in the site-specific portions of the FSAR will be preceded with the word "plant" (as in "plant north") or, in some subsections, true north will be used. When true north is used, it will be specified in the subsection.

The AP1000 convention throughout the DCD is that design plant grade is given a reference elevation of 100 feet; see, for example, DCD Figure 1.2-13. For Units 2 and 3, this plant elevation of 100 feet correlates to the North American Vertical Datum 1988 (NAVD88) elevation of 400 feet. Site-specific elevations are given in NAVD88. To differentiate between the DCD and site-specific elevations, elevations provided in the site-specific portions of the FSAR include the acronym SEL preceding the elevation unless it is otherwise specified in the FSAR Section or Subsection.

Figure 1.1-202 provides the general arrangement of major plant buildings and structures including the circulating water pump structure, cooling towers, water intake, plant discharge point, settling basins, switchyard, and access roads.

As stated in DCD Subsection 1.2.1.6.1, the power block complex consists of five principal building structures; the nuclear island, the turbine building, the annex building, the diesel generator building and the radwaste building. Each of these building structures is constructed on an individual basemat. The nuclear island consists of the containment, the shield building, and the auxiliary building, all of which are constructed on a common basemat. The power block complex for both units is within a common perimeter.

DCD Figure 1.2-3 provides a functional representation of the principal systems and components that are located in each of the key AP1000 buildings. This figure identifies major systems and components that are contained in these structures.

Units 2 and 3 each use two mechanical draft cooling towers rather than natural draft cooling towers provided in the DCD conceptual design and shown on Figure 1.2-2. The cooling towers are shown on Figure 1.1-202 and the details of the cooling towers are discussed in Section 10.4.

Road access to the site is from SC 213. Rail access is also available from the Norfolk Southern Railroad as shown on Figure 1.1-202. The Norfolk Southern Railroad line parallels the Broad River west of the site, along the east bank of the Broad River. This line provides rail access to the site by having a spur track owned by SCE&G leading off the main line from a switch southwest of the site.

1.2.3 PLANT ARRANGEMENT DESCRIPTION

VCS DEP 18.8-1 Add the following information at the end of the first paragraph of DCD Subsection 1.2.3.

Figure 1.2-201 replaces DCD Figure 1.2-18 to reflect the relocation of the Operations Support Center.

Security-Related Information — Withheld Under 10 CFR 2.390(d)
(See Part 9 of this COL Application)

VCS DEP 18.8-1

(Note: This figure replaces DCD Figure 1.2-18. This replacement is necessary to support the alternate locations of the Technical Support Center and the Operations Support Center per Departure Number VCS DEP 18.8-1.)

Figure 1.2-201
Annex Building General Arrangement Plan at Elevation 100'-0" & 107'-2"

1.3 COMPARISONS WITH SIMILAR FACILITY DESIGNS

This section of the referenced DCD is incorporated by reference with no departures or supplements.

1.4 IDENTIFICATION OF AGENTS AND CONTRACTORS

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

1.4.1 APPLICANT - PROGRAM MANAGER

VCS SUP 1.4-1 Add the following paragraphs as the first paragraphs in DCD Subsection 1.4.1.

SCE&G has been authorized by the South Carolina Public Service Authority (Santee Cooper) to act as their agent in applying for a Combined License (COL) for Units 2 and 3. SCE&G and Santee Cooper will jointly own the facility and share in the costs (including the cost of decommissioning) and output of the facility as follows: SCE&G, 55%; Santee Cooper, 45%. SCE&G will retain sole responsibility for operation of VCSNS Units 2 and 3 after the requirements of 10 CFR 52.103(g) are satisfied.

SCE&G is the principal subsidiary of SCANA Corporation, an energy-based holding company with headquarters in Cayce, South Carolina. SCE&G is a regulated public utility engaged in the generation, transmission, distribution, and sale of electricity in South Carolina. SCE&G is also engaged in the purchase and sale of natural gas in central and southern South Carolina. SCE&G has constructed and currently operates V.C. Summer Unit 1. Unit 1 began construction in April 1973 and has been commercially operated since January 1984.

Santee Cooper is South Carolina's state-owned electric and water utility with headquarters in Moncks Corner, South Carolina. Santee Cooper also generates the power distributed by the state's 20 electric cooperatives.

SCE&G has an Engineering, Procurement, and Construction (EPC) contract with a Consortium comprised of Westinghouse Electric Company, LLC and Stone and Webster, Inc. Stone and Webster, Inc. was acquired by the Shaw Group, Inc. (also referred to as Shaw) in 2000. The Consortium will act as the AP1000 provider, architect-engineer and constructor for VCSNS Units 2 and 3.

Add the following paragraphs to the end of DCD Subsection 1.4.1:

VCS SUP 1.4-3 Shaw is a Fortune 500 company which has been an active participant in the nuclear industry for nearly 60 years (as Stone and Webster, Inc.), from providing engineering and design services for Shippingport, the nation's first commercial nuclear power plant, to the restart of the Tennessee Valley Authority's Browns Ferry Unit 1, which at the time was the largest nuclear construction project in the western hemisphere. Shaw continues to prove its leadership role in the nuclear industry by being part of the AP1000 Consortium.

Westinghouse Electric Company, LLC (Westinghouse) offers a wide range of nuclear plant products and services to utilities throughout the world, including fuel, service and maintenance, instrumentation and control, and advanced nuclear plant designs, including the AP1000 certified reactor design. Westinghouse has operations in twelve states and fourteen countries. After designing the world's first commercial pressurized water reactor nuclear power plant at Shippingport in 1957, Westinghouse and its licensees provided more than 40 percent of the world's 434 operating commercial nuclear plants. By the end of 2003, reactors based on Westinghouse technology had amassed over 2500 reactor-years of power generation.

Westinghouse is responsible for the overall plant design, AP1000 Design Certification revisions, procurement of primary NSSS equipment and power block major components including the Turbine Generator, and plant training simulator. Shaw is responsible for site development, construction, site specific design related work, secondary equipment procurement, module fabrication, and supply of bulk materials and commodities. Westinghouse and Shaw are jointly responsible for testing and startup.

1.4.2.7 Other Participants

VCS SUP 1.4-2 Add the following paragraphs to the end of DCD Subsection 1.4.2.7.

Support was received in the development of the COL Application for Units 2 and 3 from a project team consisting of Bechtel Power Corporation; Westinghouse Electric Company LLC; NuStart Energy, Inc.; MACTEC Engineering & Consultants; William A. Lettis and Associates, Inc., and Tetra Tech NUS, Inc.

Bechtel Power Corporation

Bechtel Power Corporation prepared and published the COL Application and acted as the program manager for the COL Application.

MACTEC Engineering and Consulting, Inc.

MACTEC Engineering and Consulting, Inc. performed geotechnical field investigations and laboratory testing in support of the COL Application. This included performing standard penetration tests, obtaining core samples and rock cores, and installing ground water observation wells as a subcontractor to Bechtel Power Corporation.

NuStart Energy, Inc.

NuStart Energy, Inc. prepared the Reference COLA used as a template for preparation of the non-site-specific portions of the COL Application.

Risk Engineering, Inc.

Risk Engineering, Inc. performed the probabilistic seismic hazard analyses for development of the site-specific ground motion response spectra as a subcontractor to Bechtel Power Corporation.

Tetra Tech NUS, Inc.

Tetra Tech NUS, Inc. provided services for site investigations and preparation of the Environmental Report and portions of the FSAR as a subcontractor to Bechtel Power Corporation.

William A. Lettis and Associates, Inc.

William Lettis & Associates, Inc. performed the investigations and analyses required to prepare the geology, seismology, and geotechnical engineering section of the COL Application as a subcontractor to Bechtel Power Corporation. This included investigating the subsurface materials present at the site, performing a comprehensive geotechnical exploration, and performing geophysical surveys to assess the dynamic response of soil and rock.

1.5 REQUIREMENTS FOR FURTHER TECHNICAL INFORMATION

This section of the referenced DCD is incorporated by reference with no departures or supplements.

1.6 MATERIAL REFERENCED

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

Add the following text to the end of DCD Section 1.6.

STD SUP 1.6-1 Table 1.6-201 provides a list of the various technical documents incorporated by reference in the FSAR in addition to those technical documents incorporated by reference in the AP1000 DCD.

STD SUP 1.6-1

Table 1.6-201
Additional Material Referenced

Author / Report Number[a]	Title	Revision	FSAR Section	Document Transmittal	ADAMS Accession Number
Westinghouse / APP-GW-GL-700	AP1000 Design Control Document	19	All	June 2011	ML11171A500
NEI 07-08A	Generic FSAR Template Guidance for Ensuring That Occupational Radiation Exposures Are As Low As Is Reasonably Achievable (ALARA)	0	12.1	October 2009	ML093220164
NEI 07-03A	Generic FSAR Template Guidance for Radiation Protection Program Description	0	Appendix 12AA	May 2009	ML091490684
NEI 06-13A	Template for an Industry Training Program Description	2	13.2	March 2009	ML090910554
NEI 07-02A	Generic FSAR Template Guidance for Maintenance Rule Program Description for Plants Licensed Under 10 CFR Part 52	0	17.6	March 2008	ML080910149
10 CFR Part 52 Appendix D	Design Certification Rule for the AP1000 Design	–	1.1	–	–
QAPD	SCE&G Quality Assurance Program Description	2	17.5	May 2010	ML101470214
Emergency Plan	VCSNS 2 and 3 Emergency Plan	4	13.3	February 2011	ML110410260
Security Plan	VCSNS 2 and 3 Physical Security Plan	2	13.6	August 2010	Not Applicable (Safeguards)
Cyber Security Plan	VCSNS 2 and 3 Cyber Security Plan	1	13.6	June 2011	Not Applicable (SUNSI)

VCS SUP 1.6-2

a) The NRC-accepted NEI documents identified by the A in the document number include the accepted template, the NRC safety evaluation, and corresponding responses to the NRC Requests for Additional Information. Only the accepted template is incorporated by reference. The remainder of the document is referenced but not incorporated into the FSAR.

(A) Denotes NRC approved document.

1.7 DRAWINGS AND OTHER DETAILED INFORMATION

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

1.7.2 PIPING AND INSTRUMENTATION DIAGRAMS

Add the following text to the end of DCD Subsection 1.7.2.

VCS SUP 1.7-1 Table 1.7-201 contains a list of piping and instrumentation diagrams (P&IDs) or system diagrams and the corresponding FSAR figure numbers that supplement the DCD.

VCS SUP 1.7-1

Table 1.7-201
AP1000 System Designators And System Drawings

Designator	System	FSAR Section	FSAR Figure
CWS	Circulating Water System	10.4.5	10.4-201 10.4-202 10.4-203
RWS	Raw Water System	9.2.11	9.2-201
ZBS	Switchyard Single Line Diagram	8.2	8.2-202

1.8 INTERFACES FOR STANDARD DESIGN

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

Add the following paragraphs to the end of DCD Section 1.8.

VCS SUP 1.8-1 Departures from the referenced DCD are summarized in Table 1.8-201. Table 1.8-201 lists each departure and the FSAR section or subsection impacted.

VCS SUP 1.8-2 DCD Table 1.8-2 presents Combined License Information for the AP1000. Items requiring COL Applicant or COL Holder action are presented in Table 1.8-202. FSAR section(s) addressing these COL items are tabulated in this table. COL Holder items listed in Table 1.8-202 are regulatory commitments of the COL Holder and these actions will be completed as specified in the appropriate section of the referenced DCD. Completion of these COL Holder items is the subject of a Combined License Condition as presented in a separate document submitted as part of this COL Application.

VCS SUP 1.8-3 DCD Table 1.8-1 presents interface items for the AP1000. FSAR section(s) addressing these interface items are tabulated in Table 1.8-203.

VCS SUP 1.8-1

Table 1.8-201
Summary of FSAR Departures from the DCD

Departure Number	Departure Description Summary	FSAR Section or Subsection
STD DEP 1.1-1	An administrative departure is established to identify instances where the renumbering of FSAR sections is necessary to effectively include content consistent with Regulatory Guide 1.206, as well as NUREG-0800. See note (a).	9.2.11 9.2.12 9.2.13 9.5.1.8 9.5.1.9 13.1 13.1.4 13.5 13.5.3 13.7 17.5 17.6 17.7 17.8
VCS DEP 2.0-1	An administrative departure is established to identify instances where the renumbering of FSAR sections is necessary to effectively include content consistent with Regulatory Guide 1.206, as well as NUREG-0800 which differs from STD DEP 1.1-1.	2.0 2.1 2.2 2.4 2.5
VCS DEP 2.0-2	The site parameter value provided in the DCD Tier 1, Table 5.0-1 for the air temperature maximum wet bulb (noncoincident) is 86.1°F. This site parameter value is listed as the maximum safety wet bulb (noncoincident) air temperature in DCD Tier 2, Table 2-1. The corresponding site characteristic value is 87.3°F as reported in FSAR Subsection 2.3.1.5. This site characteristic exceeds the DCD site parameter by 1.2°F.	2.0 2.3.1.5 5.4.7.1 6.2.1.1.3 6.2.2.3 6.4 6.4.1.1 9.1.3.1.3.1 9.2.2.1 9.2.7.2.4
STD DEP 8.3-1	The Class 1E voltage regulating transformers do not have active components to limit current.	8.3.2.2
VCS DEP 18.8-1	At VCSNS, the Technical Support Center (TSC) is not located in the control support area (CSA) as identified in DCD Subsection 18.8.3.5; the TSC location is as described in the Emergency Plan. Additionally, the Operations Support Center (OSC) is also being moved from the location identified in DCD Subsections 18.8.3.6 and 12.5.2.2 and as identified on DCD figures in Subsections 1.2 and 12.3, and Appendix 9A; the OSC location is as described in the Emergency Plan.	1.2.2 12.3 12.3.1.2 12.5.2.2 12.5.3.2 18.8.3.5 18.8.3.6 Appendix 9A

(a) The Departure is standard for AP1000 COLAs but the applicable FSAR Sections or Subsections may vary in the AP1000 Subsequent COLAs.

VCS SUP 1.8-2

Table 1.8-202 (Sheet 1 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
1.1-1	Construction and Startup Schedule	1.1.7	1.1.5 1.1.7	A
1.9-1	Regulatory Guide Conformance	1.9.1.5	1.9.1 1.9.1.1 1.9.1.2 1.9.1.3 1.9.1.4 1.9.1.5 Appendix 1A Appendix 1AA	A
1.9-2[(a)]	Bulletins and Generic Letters	1.9.5.5	1.9.5.5	A
1.9-3[(a)]	Unresolved Safety Issues and Generic Safety Issues	Table 1.9-2 1.9.4.1	1.9.4.1 1.9.4.2.3	A
2.1-1	Geography and Demography	2.1.1	1.1.1 1.2.2 2.1.1	A
2.2-1	Identification of Site-specific Potential Hazards	2.2.1	2.2	A
2.3-1	Regional Climatology	2.3.6.1	2.3.1	A
2.3-2	Local Meteorology	2.3.6.2	2.3.2	A
2.3-3	Onsite Meteorological Measurements Program	2.3.6.3	2.3.3	A
2.3-4	Short-Term Diffusion Estimates	2.3.6.4	2.3.4.1 15.6.5.3.7.3 15A.3.3	A
2.3-5	Long-Term Diffusion Estimates	2.3.6.5	2.3.5.1	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 2 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
2.4-1	Hydrological Description	2.4.1.1	2.4	A
2.4-2	Floods	2.4.1.2	2.4.2	A
2.4-3	Cooling Water Supply	2.4.1.3	2.4.7 2.4.11	A
2.4-4	Groundwater	2.4.1.4	2.4.12	A
2.4-5	Accidental Release of Liquid Effluents into Ground and Surface Water	2.4.1.5	2.4.13	A
2.4-6	Flood Protection Emergency Operation Procedures	2.4.1.6	2.4.10 2.4.14	A
2.5-1	Basic Geologic and Seismic Information	2.5.1	2.5.1	A
2.5-2	Site Seismic and Tectonic Characteristics Information	2.5.2.1	2.5.2.1	A
2.5-3	Geoscience Parameters	2.5.2.3	2.5.2.6	A
2.5-4	Surface Faulting	2.5.3	2.5.3	A
2.5-5	Site and Structures	2.5.4.6.1	2.5.4.1	A
2.5-6	Properties of Underlying Materials	2.5.4.6.2	2.5.4.2	A
2.5-7	Excavation and Backfill	2.5.4.6.3	2.5.4.5	A
2.5-8	Ground Water Conditions	2.5.4.6.4	2.5.4.6	A
2.5-9	Liquefaction Potential	2.5.4.6.5	2.5.4.8	A
2.5-10	Bearing Capacity	2.5.4.6.6	2.5.4.10.1	A
2.5-11	Earth Pressures	2.5.4.6.7	2.5.4.10.3	A
2.5-12	Static and Dynamic Stability of Facilities	2.5.4.6.9	2.5.4.10.2	A
2.5-13	Subsurface Instrumentation	2.5.4.6.10	2.5.4.13	A
2.5-14	Stability of Slopes	2.5.5	2.5.5	A
2.5-15	Embankments and Dams	2.5.6	2.5.6	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 3 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
2.5-16	Settlement of Nuclear Island	2.5.4.6.11	2.5.4.10.2	A
2.5-17	Waterproofing System	2.5.4.6.12	2.5.4.14 3.8.5.1	A
3.3-1	Wind and Tornado Site Interface Criteria	3.3.3	1.2.2 2.2 3.3.1.1 3.3.2.1 3.3.2.3 3.3.3 3.5.1.5 3.5.1.6	A
3.4-1	Site-Specific Flooding Hazards Protective Measures	3.4.3	3.4.1.3 3.4.3	A
3.5-1	External Missile Protection Requirements	3.5.4	1.2.2 2.2 3.3.1.1 3.3.2.1 3.3.2.3 3.5.1.5 3.5.1.6 3.5.4	A
3.6-1	Pipe Break Hazards Analysis	3.6.4.1	3.6.4.1 14.3.3.1	H
3.6-4	Primary System Inspection Program for Leak-Before-Break Piping	3.6.4.4	3.6.4.4	A
3.7-1	Seismic Analysis of Dams	3.7.5.1	3.7.2.12 3.7.5.1	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 4 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
3.7-2	Post-Earthquake Procedures	3.7.5.2	3.7.4.4 3.7.5.2	A
3.7-3	Seismic Interaction Review	3.7.5.3	3.7.5.3	H
3.7-4	Reconciliation of Seismic Analyses of Nuclear Island Structures	3.7.5.4	3.7.5.4	H
3.7-5	Location of Free-Field Acceleration Sensor	3.7.5.5	3.7.4.2.1 3.7.5.5	A
3.8-5	Structures Inspection Program	3.8.6.5	3.8.3.7 3.8.4.7 3.8.5.7 3.8.6.5 17.6	A
3.8-6	Construction Procedures Program	3.8.6.6	3.8.6.6	H
3.9-2	Design Specification and Reports	3.9.8.2	3.9.8.2	H
3.9-3	Snubber Operability Testing	3.9.8.3	3.9.3.4.4 3.9.8.3	A
3.9-4	Valve Inservice Testing	3.9.8.4	3.9.6 3.9.6.2.2 3.9.6.2.3 3.9.6.2.4 3.9.6.2.5 3.9.6.3 3.9.8.4	A
3.9-5	Surge Line Thermal Monitoring	3.9.8.5	3.9.3.1.2 3.9.8.5 14.2.9.2.22	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 5 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
3.9-7	As-Designed Piping Analysis	3.9.8.7	3.9.8.7 14.3.3.2	H
3.11-1	Equipment Qualification File	3.11.5	3.11.5	H
4.4-2	Confirm Assumptions for Safety Analyses DNBR Limits	4.4.7.2	4.4.7	H
5.2-1	ASME Code and Addenda	5.2.6.1	5.2.1.1 5.2.6.1	A
5.2-2	Plant Specific Inspection Program	5.2.6.2	5.2.4 5.2.4.1 5.2.4.3.1 5.2.4.4 5.2.4.5 5.2.4.6 5.2.4.8 5.2.4.9 5.2.4.10 5.2.6.2	A
5.2-3	Response to Unidentified Reactor Coolant System Leakage Inside Containment	5.2.6.3	5.2.6.3 5.2.5.3.5	A
5.3-1	Reactor Vessel Pressure – Temperature Limit Curves	5.3.6.1	5.3.6.1	H
5.3-2	Reactor Vessel Materials Surveillance Program	5.3.6.2	5.3.2.6 5.3.2.6.3 5.3.6.2	A
5.3-4	Reactor Vessel Materials Properties Verification	5.3.6.4.1	5.3.6.4.1	H
5.3-7	Quickloc Weld Build-up ISI	5.3.6.6	5.2.4.1 5.3.6.6	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 6 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
5.4-1	Steam Generator Tube Integrity	5.4.15	5.4.2.5 5.4.15	A
6.1-1	Procedure Review for Austenitic Stainless Steels	6.1.3.1	6.1.1.2 6.1.3.1	A
6.1-2	Coating Program	6.1.3.2	6.1.2.1.6 6.1.3.2	A
6.2-1	Containment Leak Rate Testing	6.2.6	6.2.5.1 6.2.5.2.2 6.2.6	A
6.3-1	Containment Cleanliness Program	6.3.8.1	6.3.8.1	A
6.4-1	Local Hazardous Gas Services and Monitoring	6.4.7	2.2.2.2.1.1 6.4.4 6.4.4.2 6.4.7	A
6.4-2	Procedures for Training for Control Room Habitability	6.4.7	6.4.3 6.4.7	A
6.6-1	Inspection Programs	6.6.9.1	6.6 6.6.1 6.6.3.1 6.6.4 6.6.6 6.6.9.1	A
6.6-2	Construction Activities	6.6.9.2	6.6.2 6.6.9.2	A
7.1-1	Setpoint Calculations for Protective Functions	7.1.6.1	7.1.6.1	B

VCS SUP 1.8-2

Table 1.8-202 (Sheet 7 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
7.5-1	Post Accident Monitoring System	7.5.5	7.5.2 7.5.3.5 7.5.5	A
8.2-1	Offsite Electrical Power	8.2.5	8.2.1 8.2.1.1 8.2.1.2 8.2.1.3 8.2.5	A
8.2-2	Technical Interfaces	8.2.5	8.2.1.2.2 8.2.2 8.2.5	A
8.3-1	Grounding and Lightning Protection	8.3.3	8.3.1.1.7 8.3.1.1.8 8.3.3	A
8.3-2	Onsite Electrical Power Plant Procedures	8.3.3	8.3.1.1.2.4 8.3.1.1.6 8.3.2.1.4 8.3.3	A
9.1-5	Inservice Inspection Program of Cranes	9.1.6.5	9.1.4.4 9.1.5.4 9.1.6	A
9.1-6	Radiation Monitor	9.1.6.6	9.1.4.3.8 9.1.5.3 9.1.6	A
9.1-7	Coupon Monitoring Program	9.1.6.7	9.1.6	H

VCS SUP 1.8-2

Table 1.8-202 (Sheet 8 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
9.2-1	Potable Water	9.2.11.1	9.2.5.2.1 9.2.5.3 9.2.12.1	A
9.2-2	Waste Water Retention Basins	9.2.11.2	9.2.9.2.2 9.2.12.2	A
9.3-1	Air Systems (NUREG-0933 Issue 43)	9.3.7	9.3.7	A
9.4-1	Ventilation Systems Operations	9.4.12	9.4.1.1.1 9.4.1.2.3.1 9.4.1.4 9.4.7.4 9.4.12	A
9.5-1	Qualification Requirements for Fire Protection Program	9.5.1.8.1	9.5.1.6 9.5.1.8 9.5.1.8.1.2 9.5.1.8.2 9.5.1.8.2.1 9.5.1.8.2.2 9.5.1.8.2.2.1 9.5.1.8.3 9.5.1.8.6 9.5.1.8.7 9.5.1.9.1 13.1.1.2.10 13.1.1.3.2.1.4	A
9.5-2	Fire Protection Analysis Information	9.5.1.8.2	9.5.1.9.2 9A.3.3	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 9 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
9.5-3	Regulatory Conformance	9.5.1.8.3	9.5.1.8.1.1 9.5.1.8.8 9.5.1.9.3 9A.3.3.7 9A.4	A
9.5-4	NFPA Exceptions	9.5.1.8.4	9.5.1.8.1.1 9.5.1.9.4	A
9.5-6	Verification of Field Installed Fire Barriers	9.5.1.8.6	9.5.1.8.6 9.5.1.9.6	H
9.5-8	Establishment of Procedures to Minimize Risk for Fire Areas Breached During Maintenance	9.5.1.8.7	9.5.1.8.1.2.a.3.vi 9.5.1.9.7	A
9.5-9	Offsite Interfaces	9.5.2.5.1	9.5.2.5.1	A
9.5-10	Emergency Offsite Communications	9.5.2.5.2	9.5.2.5.2	A
9.5-11	Security Communications	9.5.2.5.3	9.5.2.5.3	A
9.5-13	Fuel Degradation Protection	9.5.4.7.2	9.5.4.5.2 9.5.4.7.2	A
10.1-1	Erosion-Corrosion Monitoring	10.1.3	10.1.3.1	H
10.2-1	Turbine Maintenance and Inspection	10.2.6	10.2.6	H
10.4-1	Circulating Water Supply	10.4.12.1	10.4.5.2.1 10.4.5.2.2 10.4.5.5 10.4.12.1	A
10.4-2	Condensate, Feedwater and Auxiliary Steam System Chemistry Control	10.4.12.2	10.4.7.2.1 10.4.12.2	A
10.4-3	Potable Water	10.4.12.3	10.4.12.3	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 10 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
11.2-1	Liquid Radwaste Processing by Mobile Equipment	11.2.5.1	11.2.1.2.5.2 11.2.5.1	A
11.2-2	Cost Benefit Analysis of Population Doses	11.2.5.2	11.2.3.3 11.2.3.5 11.2.3.5.3 11.2.3.5.4 11.2.5.2	A
11.3-1	Cost Benefit Analysis of Population Doses	11.3.5.1	11.3.3.4 11.3.3.4.3 11.3.3.4.4 11.3.5.1	A
11.4-1	Solid Waste Management System Process Control Program	11.4.6	11.4.6	A
11.5-1	Plant Offsite Dose Calculation Manual (ODCM)	11.5.8	11.5.8	A
11.5-2	Effluent Monitoring and Sampling	11.5.8	11.5.1.2 11.5.2.4 11.5.3 11.5.4 11.5.4.1 11.5.6.5 11.5.8	A
11.5-3	10 CFR 50, Appendix I	11.5.8	11.2.3.3 11.2.3.5 11.3.3.4 11.3.5.1 11.5.8	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 11 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
12.1-1	ALARA and Operational Policies	12.1.3	12.1 12.1.3 Appendix 12AA	A
12.2-1	Additional Contained Radiation Sources	12.2.3	12.2.1.1.10 12.2.3	A
12.3-1	Administrative Controls for Radiological Protection	12.3.5.1	12.3.5.1 12.5.4 Appendix 12AA	A
12.3-2	Criteria and Methods for Radiological Protection	12.3.5.2	12.3.4 12.3.5.2	A
12.3-3	Groundwater Monitoring Program	12.3.5.3	12.3.5.3 Appendix 12AA	A
12.3-4	Record of Operational Events of Interest for Decommissioning	12.3.5.4	12.3.5.4 Appendix 12AA	A
12.5-1	Radiological Protection Organization and Procedures	12.5.5	12.5.5 Appendix 12AA	A
13.1-1	Organizational Structure of Combined License Applicant	13.1.1	13.1 13.1.1.2.10 13.1.1.2.11 13.1.1.3.2.1.4 13.1.1.3.2.2 13.1.1.4 13.1.2.1 13.1.3.1 13.1.4 Appendix 13AA	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 12 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
13.2-1	Training Program for Plant Personnel	13.2.1	13.2 13.2.1	A
13.3-1	Emergency Planning and Communications	13.3.1	13.3 13.3.1	A
13.3-2	Activation of Emergency Operations Facility	13.3.1	13.3 13.3.1	A
13.4-1	Operational Review	13.4.1	13.4 13.4.1	A
13.5-1	Plant Procedures	13.5.1	13.5 13.5.1 13.5.3	A
13.6-1	Security	13.6	13.6 13.6.1 14.3.2.3.2	A
13.6-5	Cyber Security Program	13.6.1	13.6.1	H
14.4-1	Organization and Staffing	14.4.1	14.2.2 14.4.1	A
14.4-2	Test Specifics and Procedures	14.4.2	14.4.2	H
14.4-3	Conduct of Test Program	14.4.3	14.2.1 14.2.1.4 14.2.1.5 14.2.3 14.2.3.1 14.2.6 14.4.3	H

VCS SUP 1.8-2

Table 1.8-202 (Sheet 13 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
14.4-4	Review and Evaluation of Test Results	14.4.4	14.2.3.2.1 14.2.3.3.1 14.4.4	H
14.4-5	Testing Interface Requirements	14.4.5	14.2.9.4.15 14.2.9.4.22 14.2.10.4.29 14.4.5	A
14.4-6	First-Plant-Only and Three-Plant-Only Tests	14.4.6	14.4.6	B
15.0-1	Documentation of Plant Calorimetric Uncertainty Methodology	15.0.15.1	15.0.3.2 15.0.15	H
15.7-1	Consequences of Tank Failure	15.7.6	15.7.6	A
16.1-1	Technical Specification Preliminary Information	16.1	16.1.1	A
16.3-1	Procedure to Control Operability of Investment Protection Systems, Structures and Components	16.3.2	16.3.1 16.3.2	A
17.5-1	Quality Assurance Design Phase	17.5.1	17.5 17.7	A
17.5-2	Quality Assurance for Procurement, Fabrication, Installation, Construction and Testing	17.5.2	17.5 17.7	A
17.5-4	Quality Assurance Program for Operations	17.5.4	17.5 17.7	A
17.5-8	Operational Reliability Assurance Program Integration with Quality Assurance Program	17.5.8	17.5 17.7	A
18.2-2	Design of the Emergency Operations Facility	18.2.6.2	18.2.1.3 18.2.6.2	A

VCS SUP 1.8-2

Table 1.8-202 (Sheet 14 of 14)
COL Item Tabulation

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
18.6-1	Plant Staffing	18.6.1	13.1.1.4 13.1.3.1 18.6 18.6.1	A
18.10-1	Training Program Development	18.10.1	13.1.1.3.2.2.1 13.2 18.10 18.10.1	A
18.14-1	Human Performance Monitoring	18.14	18.14	A
19.59.10-1	As-Built SSC HCLPF Comparison to Seismic Margin Evaluation	19.59.10.5	19.59.10.5	H
19.59.10-2	Evaluation of As-Built Plant Versus Design in AP1000 PRA and Site-Specific PRA External Events	19.59.10.5	19.59.10.5	B
19.59.10-3	Internal Fire and Internal Flood Analyses	19.59.10.5	19.59.10.5	H
19.59.10-4	Implement Severe Accident Management Guidance	19.59.10.5	19.59.10.5	H
19.59.10-5	Equipment Survivability	19.59.10.5	19.59.10.5	H
19.59.10-6	Confirm that the Seismic Margin Assessment analysis is applicable to the COL site	19.59.10.5	19.55.6.3 19.59.10.5	A

a) COL Items 1.9-2 and 1.9-3 are un-numbered in the DCD.

VCS SUP 1.8-3

Table 1.8-203 (Sheet 1 of 6)
Summary of FSAR Discussions of AP1000 Plant Interfaces

Item No.	Interface	Interface Type	Matching Interface item	Section[a] or Subsection
1.1	Post accident Radio-Iodine sampling capability per NUREG 0737	Requirement of AP1000	Combined License applicant program	[b]
2.1	Envelope of AP1000 plant site related parameters	Site Interface	Site specific parameters	Table 2.0-201
2.2	External missiles from man-made hazards and accidents	Site Interface	Site specific parameters	2.2.3.1, 3.5
2.3	Maximum loads from man-made hazards and accidents	Site Interface	Site specific parameters	2.2.3.1
2.4	Limiting meteorological parameters (X/Q) for design basis accidents and for routine releases and other extreme meteorological conditions for the design of systems and components exposed to the environment.	Site Interface	Site specific parameters	Table 2.0-201
2.5	Tornado and operating basis wind loadings	Site Interface	Site specific parameters	Table 2.0-201
2.6	External missiles generated by natural phenomena	Site Interface	Site specific parameters	Table 2.0-201
2.7	Snow, ice and rain loads	Site Interface	Site specific parameters	2.3.1.3.4, 2.3.1.3.5
2.8	Ambient air temperatures	Site Interface	Site specific parameters	Table 2.0-201
2.9	Onsite meteorological measurement program	Requirement of AP1000	Combined License applicant program	2.3.3
2.10	Flood and ground water elevations	Site Interface	Site specific parameters	Table 2.0-201
2.11	Hydrostatic loads on systems, components and structures	Site Interface	Site specific parameters	Table 2.0-201
2.12	Seismic parameters peak ground acceleration response spectra shear wave velocity	Site Interface	Site specific parameters	Table 2.0-201
2.13	Required bearing capacity of foundation materials	Site Interface	Site specific parameters	Table 2.0-201
3.1	Deleted	N/A	N/A	N/A
3.2	Operating procedures to minimize water hammer	Requirement of AP1000	Combined License applicant procedure	10.3.2.2.1, 10.4.7.2.1
3.3	Site seismic sensor location and "trigger" value	Requirement of AP1000	Onsite implementation	3.7.4.2.1, DCD 3.7.4.2

VCS SUP 1.8-3

Table 1.8-203 (Sheet 2 of 6)
Summary of FSAR Discussions of AP1000 Plant Interfaces

Item No.	Interface	Interface Type	Matching Interface item	Section[a] or Subsection
3.4	Depth of overburden	Requirement of AP1000	Onsite implementation	3.8.5.1, 2.5.4
3.5	Depth of embedment	Requirement of AP1000	Onsite implementation	3.8.5.1, 2.5.4
3.6	Specific depth of waterproofing	Requirement of AP1000	Onsite implementation	2.5.4
3.7	Foundation Settlement Monitoring	Requirement of AP1000	Combined License applicant coordination	2.5.4.13
3.8	Lateral earth pressure loads	Not an Interface	N/A	N/A
3.9	Preoperational piping vibration test parameters	Not an Interface	N/A	N/A
3.10	Inservice Inspection requirements and locations	Requirement of AP1000	Combined License applicant program	3.9.6, 5.2.4, 6.6
3.11	Maintenance of preservice and reference test data for inservice testing of pumps and valves	Requirement of AP1000	Combined License applicant program	3.9.6
3.12	Earthquake response procedures	Requirement of AP1000	Combined License applicant program	3.7.4.4
5.1	Steam Generator Tube Surveillance Requirements	Requirement of AP1000	Combined License applicant program	5.4.2.5
6.1	Inservice Inspection requirements for the containment	Requirement of AP1000	Combined License applicant program	6.6, 6.2
6.2	Off site environmental conditions assumed for Main Control Room and control support area habitability design	AP1000 Interface	Site specific parameters	2.2.3, 6.4
7.1	Listing of all design criteria applied to the design of the I&C systems	Not an Interface	N/A	N/A
7.2	Power required for site service water instrumentation	NNS and Not an Interface	N/A	N/A
7.3	Other provisions for site service water instrumentation	NNS and Not an Interface	N/A	N/A
7.4	Post Accident Monitoring System	NNS	Combined License applicant coordination	7.5.5

VCS SUP 1.8-3

Table 1.8-203 (Sheet 3 of 6)
Summary of FSAR Discussions of AP1000 Plant Interfaces

Item No.	Interface	Interface Type	Matching Interface item	Section[(a)] or Subsection
8.1	Listing of design criteria applied to the design of the offsite power system	NNS	Combined License applicant coordination	8.1.4.3
8.2	Offsite ac requirements: – Steady-state load; – Inrush kVA for motors; – Nominal voltage; – Allowable voltage regulation; – Nominal frequency; – Allowable frequency fluctuation; – Maximum frequency decay rate; – Limiting under frequency value for RCP	NNS	Combined License applicant coordination	8.2.2
8.3	Offsite transmission system analysis: – Loss of AP1000 or largest unit; – Voltage operating range; – Transient stability must be maintained and the RCP bus voltage must remain above the voltage required to maintain the flow assumed in Chapter 15 analyses for a minimum of three (3) seconds following a turbine trip.; – The protective devices controlling the switchyard breakers are set with consideration given to preserving the plant grid connection following a turbine trip.	NNS	Combined License applicant analysis	8.2.2, 8.2.1.2.2
8.4	Listing of design criteria applied to the design of onsite ac power systems	NNS and Not an Interface	N/A	N/A
8.5	Onsite ac requirements	NNS and Not an Interface	N/A	N/A
8.6	Diesel generator room coordination	NNS and Not an Interface	N/A	N/A
8.7	Listing of design criteria applied to the design of onsite dc power systems	Not an Interface	N/A	N/A

VCS SUP 1.8-3

Table 1.8-203 (Sheet 4 of 6)
Summary of FSAR Discussions of AP1000 Plant Interfaces

Item No.	Interface	Interface Type	Matching Interface item	Section[a] or Subsection
8.8	Provisions of dc power systems to accommodate the site service water system	NNS and Not an Interface	N/A	N/A
9.1	Listing of design criteria applied to the design of portions of the site service water within AP1000	NNS and Not an Interface	N/A	N/A
9.2	Integrated heat load to site service water system	NNS and Not an Interface	N/A	N/A
9.3	Plant cooling water systems parameters	NNS and Not an Interface	N/A	N/A
9.4	Plant makeup water quality limits	NNS	Site specific parameter	9.2.11
9.5	Requirements for location and arrangement of raw and sanitary water systems	NNS	Site implementation	9.2.5, 9.2.6, 9.2.11
9.6	Ventilation requirements for diesel generator room	NNS and Not an Interface	N/A	N/A
9.7	Requirements to satisfy fire protection program	AP1000 Interface	Combined License applicant program	9.5.1
11.1	Expected release rates of radioactive material from the Liquid Waste System including: – Location of release points – Effluent temperature – Effluent flow rate – Size and shape of flow orifices	Site interface	Site specific parameters	9.2.11.4, 11.2
11.2	Expected release rates of radioactive materials from the Gaseous Waste System including: – Location of release points – Height above grade – Height relative to adjacent buildings – Effluent temperature – Effluent flow rate – Effluent velocity – Size and shape of flow orifices	Site interface	Site specific parameters	11.3

VCS SUP 1.8-3

Table 1.8-203 (Sheet 5 of 6)
Summary of FSAR Discussions of AP1000 Plant Interfaces

Item No.	Interface	Interface Type	Matching Interface item	Section[(a)] or Subsection
11.3	Expected release rates of radioactive material from the Solid Waste System including: – Location of release points – Material types – Material qualities – Size and shape of material containers	Site interface	Site specific parameters	11.4.6
11.4	Requirements for offsite sampling and monitoring of effluent concentrations	AP1000 Interface	Combined License applicant program	11.5.3, 11.5.7
12.1	Identification of miscellaneous radioactive sources	AP1000 Interface	Combined License applicant program	12.2.1.1.10
13.1	Features that may affect plans for coping with emergencies as specified in 10 CFR 50, Appendix O	AP1000 Interface	Combined License applicant program	13.3
13.2	Physical Security Plan consistent with AP1000 plant	AP1000 Interface	Combined License applicant program	13.6
14.1	Identification of special features to be considered in development of the initial test program	Requirement of AP1000	Combined License applicant program	14
14.2	Maintenance of preoperational test data and inservice inspection baseline data	AP1000 Interface	Combined License applicant program	14
16.1	Administrative requirements associated with reliability information maintenance	AP1000 Interface	Combined License applicant program	16
16.2	Administrative requirements associated with the Technical Specifications	Requirement of AP1000	Combined License applicant implementation	16
16.3	Site and operator related information associated with the Reliability Assurance Program (D-RAP)	Requirement of AP1000	Combined License applicant implementation	16.2
18.1	Operating staff consistent with Human Factors evaluations	AP1000 Interface	Combined License applicant program	18.6
18.2	Operator training consistent with Human Factors evaluations	AP1000 Interface	Combined License applicant program	18.8, 18.10

VCS SUP 1.8-3

Table 1.8-203 (Sheet 6 of 6)
Summary of FSAR Discussions of AP1000 Plant Interfaces

Item No.	Interface	Interface Type	Matching Interface item	Section[a] or Subsection
18.3	Operating Procedures consistent with Human Factors evaluations	AP1000 Interface	Combined License applicant program	18.8, 18.9, 18.10
18.4	Final coordination and integration of human system interface areas within a specific AP1000 consistent with Human Factors evaluations	AP1000 Interface	Combined License applicant program	(b)
18.5	Final coordination and integration of Combined License applicant facilities with those of a specific AP1000 consistent with Human Factors evaluations	AP1000 Interface	Combined License applicant program	(b)

a) This table supplements DCD Table 1.8-1 by providing additional information in the section or subsection column.
b) Westinghouse has determined that this item has been fully addressed by the DCD. Thus, the item is not addressed by the COLA.

1.9 COMPLIANCE WITH REGULATORY CRITERIA

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

1.9.1 REGULATORY GUIDES

Add the following paragraphs to the end of DCD Subsection 1.9.1:

STD COL 1.9-1 Divisions 2, 3, 6, 7, 9, and 10 of the regulatory guides do not apply to the construction or operational safety considerations and are not addressed in the FSAR.

Division 4 of the regulatory guides applies to the Environmental Report and the topics are addressed in the Environmental Report. Two Division 4 Regulatory Guides are addressed in Appendix 1AA.

Division 5 of the regulatory guides applies to materials and plant protection. As appropriate, the Division 5 regulatory guide topics are addressed in the DCD and plant-specific security plans (i.e., Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Cyber Security Plan).

Applicable Division 8 Regulatory Guides are addressed in Appendix 1AA.

Appendix 1AA provides a discussion of plant specific regulatory guide conformance, addressing new Regulatory Guides and new revisions not addressed by the referenced DCD. Regulatory Guides that are completely addressed by the DCD are not listed.

The following subsections provide a summary discussion of Divisions 1, 4, 5 and 8 of the regulatory guides as applicable to the content of this FSAR, or to the construction and/or operations phases.

1.9.1.1 Division 1 Regulatory Guides - Power Reactors

Add the following paragraphs to the end of DCD Subsection 1.9.1.1:

STD COL 1.9-1 Appendix 1AA provides an evaluation of the degree of compliance with Division 1 regulatory guides as applicable to the content of this FSAR, or to the site-specific design, construction and/or operational aspects. The revisions of the regulatory guides against which the degree of compliance is evaluated are indicated. Any exceptions or alternatives to the provisions of the regulatory guides are identified and justification is provided. One such general alternative is the use of previous

revisions of the Regulatory Guide for design aspects as stated in the DCD in order to preserve the finality of the certified design (see Notes at the end of Appendix 1AA). Stated conformance with the programmatic and/or operational aspects is only to the extent that a design change or departure from the approved DCD is not required to implement those programmatic and/or operational aspects. Table 1.9-201 identifies the appropriate regulatory guide to FSAR cross-references. The cross-referenced sections contain descriptive information applicable to the regulatory guide positions found in Appendix 1AA.

Superseded or canceled regulatory guides are not considered in Appendix 1AA or Table 1.9-201.

1.9.1.2 Division 4 Regulatory Guides - Environmental and Siting

Add the following as the first paragraph in DCD Subsection 1.9.1.2:

STD COL 1.9-1 Division 4 of the regulatory guides applies to the Environmental Report and the topics are addressed in the Environmental Report. Appendix 1AA provides an evaluation of the degree of compliance with Division 4 regulatory guides as applicable to the content of this FSAR, or to the site-specific design, construction and/or operational aspects. The revisions of the regulatory guides against which the plant is evaluated are indicated. Any exceptions or alternatives to the provisions of the regulatory guides are identified and justification is provided. One such general alternative is the use of previous revisions of the Regulatory Guide for design aspects as stated in the DCD in order to preserve the finality of the certified design (see Notes at the end of Appendix 1AA). Stated conformance with the programmatic and/or operational aspects is only to the extent that a design change or departure from the approved DCD is not required to implement those programmatic and/or operational aspects. For those regulatory guides applicable, Table 1.9-201 identifies the appropriate FSAR cross-references. The cross-referenced sections contain descriptive information applicable to the regulatory guide positions found in Appendix 1AA.

1.9.1.3 Division 5 Regulatory Guides - Materials and Plant Protection

Add the following as the first paragraph in DCD Subsection 1.9.1.3:

STD COL 1.9-1 Division 5 of the regulatory guides applies to materials and plant protection. Appendix 1AA provides an evaluation of the degree of conformance with Division 5 regulatory guides as applicable to the content of the AP1000 DCD and the plant-specific Cyber Security Plan. The plant-specific physical security plans (i.e.,

Physical Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan) were developed using the template in NEI 03-12, Revision 6, "Template for the Security Plan, Training and Qualification Plan, Safeguards Contingency Plan [and Independent Spent Fuel Storage Installation Security Program]," which was endorsed for use by NRC letter dated April 9, 2009. The plant-specific physical security plans include no substantive deviations from the NRC-endorsed template in NEI 03-12, Revision 6. Therefore, the degree of conformance with Division 5 regulatory guides for the plant-specific physical security plans is consistent with the degree of conformance of NEI 03-12, Revision 6.

1.9.1.4 Division 8 Regulatory Guides - Occupational Health

Add the following paragraphs to the end of DCD Subsection 1.9.1.4:

STD COL 1.9-1 Appendix 1AA provides an evaluation of the degree of compliance with Division 8 regulatory guides as applicable to the content of this FSAR, or to the site-specific design, construction and/or operational aspects. The revisions of the regulatory guides against which the plant is evaluated are indicated. Any exceptions or alternatives to the provisions of the regulatory guides are identified and justification is provided. One such general alternative is the use of previous revisions of the Regulatory Guide for design aspects as stated in the DCD in order to preserve the finality of the certified design (see Notes at the end of Appendix 1AA). Stated conformance with the programmatic and/or operational aspects is only to the extent that a design change or departure from the approved DCD is not required to implement those programmatic and/or operational aspects. For those regulatory guides applicable, Table 1.9-201 identifies the appropriate FSAR cross-references. The cross-referenced sections contain descriptive information applicable to the regulatory guide positions found in Appendix 1AA.

Superseded or canceled regulatory guides are not considered in Appendix 1AA or Table 1.9-201.

1.9.1.5 Combined License Information

Add the following as the first paragraph in DCD Subsection 1.9.1.5:

STD COL 1.9-1 Division 1, 4, 5 and 8 Regulatory Guides applicable to the content of this FSAR, or to the site-specific design, construction and/or operational aspects are listed in Table 1.9-201 and Appendix 1AA.

1.9.2 COMPLIANCE WITH STANDARD REVIEW PLAN (NUREG-0800)

Add the following paragraph to the end of DCD Subsection 1.9.2:

STD SUP 1.9-1 Table 1.9-202 provides the required assessment of conformance with the applicable acceptance criteria and the associated FSAR cross-references.

The design related SRP acceptance criteria addressed by the certified design are identified as such in Table 1.9-202.

1.9.4.1 Review of NRC List of Unresolved Safety Issues and Generic Safety Issues

Add the following paragraphs to the end of DCD Subsection 1.9.4.1:

STD COL 1.9-3 Table 1.9-203 addresses the second un-numbered COL Information Item identified at the end of DCD Table 1.8-2 and listed in Table 1.8-202 as COL Information Item 1.9-3, "Unresolved Safety Issues and Generic Safety Issues." As such, Table 1.9-203 lists those issues on DCD Table 1.9-2 identified by Note "d," which apply to other than design issues, Note "f," which apply either to resolution of Combined License (COL) Information Items or to nuclear power plant operations issues, Note "h," which apply to issues unresolved pending generic resolution at the time of submittal of the AP1000 DCD, and any new Unresolved Safety Issues and Generic Safety Issues that have been included in NUREG-0933 (through supplement 30) since the DCD was developed. Many of these have since been resolved and incorporated into the applicable licensing regulations or guidance, (e.g., the standard review plans). These resolved items (as indicated by NUREG-0933) are identified only as "Resolved per NUREG-0933." Many others are not in the list of items in NUREG-0933 Appendix B identified as applicable to new plants. These items are identified only as "Not applicable to new plants." For the remaining items, the table provides the FSAR sections that address the topic.

1.9.4.2.3 New Generic Issues

STD COL 1.9-3 Add the following text in DCD Subsection 1.9.4.2.3., following the AP1000 Position for Issue 185.

Issue 186 Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants

Discussion:

This issue concerns licensees operating within the regulatory guidelines of Generic Letter 85-11 that may not have taken adequate measures to assess and mitigate the consequences of dropped heavy loads.

FSAR Position:

There are no planned heavy load lifts outside those already described in the DCD. However, over the plant life there may be occasions when heavy loads not presently addressed need to be lifted (i.e. in support of special maintenance/ repairs). For these occasions, special procedures are generated that address to the activity. Further discussion is provided in DCD Subsection 9.1.5.3.

Issue 189 Susceptibility of Ice Condenser and Mark III Containments to Early Failure From Hydrogen Combustion During a Severe Accident Description

Discussion:

This issue concerns the early containment failure probability for ice condenser and BWR MARK III containments given the relatively low containment free volume and low containment strength in these designs.

FSAR Position:

The AP1000 design does not have an ice condenser containment or a Mark III containment. Therefore, this issue is not addressed in this FSAR.

Add the following text in DCD Subsection 1.9.4.2.3 following the AP1000 Position for Issue 191.

STD COL 1.9-3 Issue 191 Assessment of Debris Accumulation on PWR Sump Performance (REV. 1)

Discussion:

Results of research on BWR ECCS suction strainer blockage identified new phenomena and failure modes that were not considered in the resolution of Issue A-43. In addition, operating experience identified new contributors to debris and possible blockage of PWR sumps, such as degraded or failed containment paint coatings.

FSAR Position:

The design aspects of this issue are addressed by the DCD. The protective coatings program controls the procurement, application, inspection, and monitoring of Service Level I and Service Level III coatings with the quality assurance features discussed above. The protective coatings program complies with Regulatory Guide 1.54, and is controlled and implemented by administrative procedures. The program is discussed in Subsection 6.1.2.1.6.

Administrative procedures implement the containment cleanliness program. Implementation of the program minimizes the amount of debris that might be left in containment following refueling and maintenance outages. The program is consistent with the containment cleanliness program used in the evaluation discussed in DCD Subsection 6.3.8.2. The program is discussed in Subsection 6.3.8.1.

Issue 196 Boral Degradation

Discussion:

The issue specifically addresses the use of Boral in long-term dry storage casks for spent reactor fuel.

FSAR Position:

Long-term dry storage casks for spent reactor fuel are not used and therefore this issue is not addressed in this FSAR.

1.9.5.1.5 Station Blackout

Add the following text to the end of the DCD Subsection 1.9.5.1.5.

STD SUP 1.9-3 Training and procedures to mitigate a 10 CFR 50.63 “loss of all alternating current power” (or station blackout (SBO)) event are implemented in accordance with Sections 13.2 and 13.5, respectively. As recommended by NUMARC 87-00 (Reference 201), the SBO event mitigation procedures address response (e.g., restoration of onsite power sources), ac power restoration (e.g., coordination with transmission system load dispatcher), and severe weather guidance (e.g., identification of actions to prepare for the onset of severe weather such as an impending tornado), as applicable. The AP1000 is a passive design and does not rely on offsite or onsite ac sources of power for at least 72 hours after an SBO event, as described above. In addition, there are no nearby large power sources,

such as gas turbine or black start fossil fuel plant, that can directly connect to the station to mitigate the event.

Restoration from an SBO event will be contingent upon ac power being made available from any one of the transmission lines described in Section 8.2 or any one of the standby diesel generators.

1.9.5.2.15 Severe Accident Mitigation Design Alternatives

Add the following text to the end of DCD Subsection 1.9.5.2.15.

FSAR Position:

STD SUP 1.9-2 The severe accident mitigation design alternatives (SAMDA) evaluation for AP1000 contained in DCD Appendix 1B is not incorporated into this FSAR, but is addressed in the COL application Environmental Report.

1.9.5.5 Operational Experience

Add the following paragraph to the end of DCD Subsection 1.9.5.5.

STD COL 1.9-2 Table 1.9-204 lists the Bulletins and Generic Letters addressed by topical discussion in this FSAR. Table 1.9-204 also lists Bulletins and Generic Letters categorized as part of the first un-numbered COL Information Item identified at the end of DCD Table 1.8-2 and listed in Table 1.8-202 as COL Information Item 1.9-2. Table 1.9-204 provides the appropriate FSAR cross-references for the discussion of the topics addressed by those Bulletins and Generic Letters. Bulletins or Generic Letters issued after those listed in the DCD are also included in Table 1.9-204. Issues identified as “procurement” or “maintenance” or “surveillance” in WCAP-15800 are addressed as part of the scope of the certified design and are not specifically identified in Table 1.9-204. Issues identified as “procedural” in WCAP-15800 are addressed by the procedures discussed in DCD Section 13.5 and are not specifically identified in Table 1.9-204. Other items in WCAP-15800, including the Circulars and Information Notices, are considered to have been adequately addressed based on the guidance identified in Regulatory Guide 1.206 and the NRC Standard Review Plans.

1.9.6 REFERENCES

Add the following text to the end of DCD Subsection 1.9.6.

201. NUMARC 87-00, Guidelines and Technical Bases for NUMARC Initiatives Addressing Station Blackout at Light Water Reactors, Revision 1, August 1991.

STD COL 1.9-1

Table 1.9-201 (Sheet 1 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	Division 1 Regulatory Guides		
STD COL 1.9-1	1.6	Independence Between Redundant Standby (Onsite) Power Sources and Between Their Distribution Systems (Rev. 0, March 1971)	16 (TS Bases 3.8.1)
	1.7	Control of Combustible Gas Concentrations in Containment (Rev. 3, March 2007)	DCD discussion only; see DCD Table 1.9-1
	1.8	Qualification and Training of Personnel for Nuclear Power Plants (Rev. 3, May 2000)	12.1 (NEI 07-08A) Appendix 12AA Appendix 12AA (NEI 07-03A) 13.1.1.4 13.1.3.1 13.2 (NEI 06-13A) 16 (TS 5.3.1) 17.5 (QAPD, IV)
	1.11	Instrument Lines Penetrating the Primary Reactor Containment (Rev. 1, March 2010)	DCD discussion only; see DCD Table 1.9-1
	1.12	Nuclear Power Plant Instrumentation for Earthquakes (Rev. 2, March 1997)	3.7.4.1
	1.13	Spent Fuel Storage Facility Design Basis (Rev. 2, March 2007)	16 (TS Bases 3.7.11) 16 (TS Bases 3.7.12)
	1.20	Comprehensive Vibration Assessment Program for Reactor Internals During Preoperational and Initial Startup Testing (Rev. 3, March 2007)	DCD discussion only; see DCD Table 1.9-1
VCS COL 1.9-1	1.21	Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents From Light-Water-Cooled Nuclear Power Plants (Rev. 1, June 1974)	2.3.3.4.1 11.5.1.2 11.5.4.1 11.5.4.2 12.3.4

STD COL 1.9-1

Table 1.9-201 (Sheet 2 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	1.23	Meteorological Monitoring Programs for Nuclear Power Plants (Rev. 1, March 2007)	2.3.2.2.3 2.3.3.3 2.3.3.3.1 2.3.3.3.2 2.3.3.3.4 2.3.3.3.5.1 2.3.3.3.5.2 2.3.3.5.1 2.3.3.5.2 2.3.3.5.3
STD COL 1.9-1	1.26	Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants (Rev. 4, March 2007)	5.2.4.1 17.5 (QAPD IV)
VCS COL 1.9-1	1.27	Ultimate Heat Sink for Nuclear Power Plants (Rev. 2, January 1976)	Not referenced
STD COL 1.9-1	1.28	Quality Assurance Program Requirements (Design and Construction) (Rev. 3, August 1985)	14.2.2.2 17.5 (QAPD, II, 17.1) 17.5 (QAPD, IV)
	1.29	Seismic Design Classification (Rev. 4, March 2007)	17.5 (QAPD IV)
	1.30	Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment (Rev. 0, August 1972)	Not referenced; see Appendix 1AA
	1.31	Control of Ferrite Content in Stainless Steel Weld Metal (Rev. 3, April 1978)	6.1.1.2
	1.32	Criteria for Power Systems for Nuclear Power Plants (Rev. 3, March 2004)	16 (TS Bases 3.8.1)
	1.33	Quality Assurance Program Requirements (Operation) (Rev. 2, February 1978)	16 (TS 5.4.1) 17.5 (QAPD, IV)
	1.37	Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water Cooled Nuclear Power Plants (Rev. 1, March 2007)	17.5 (QAPD, II, 13.2) 17.5 (QAPD IV)

STD COL 1.9-1

Table 1.9-201 (Sheet 3 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	1.38	Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water- Cooled Nuclear Power Plants (Rev. 2, May 1977)	DCD discussion only; see DCD Table 1.9-1
	1.39	Housekeeping Requirements for Water- Cooled Nuclear Power Plants (Rev. 2, September 1977)	DCD discussion only; see DCD Table 1.9-1
	1.44	Control of the Use of Sensitized Stainless Steel (Rev. 0, May 1973)	6.1.1.2
	1.45	Reactor Coolant Pressure Boundary Leakage Detection Systems (Rev. 0, May 1973)	16 (TS Bases 3.4.7) 16 (TS Bases 3.4.9)
	1.52	Design, Inspection and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants (Rev. 3, June 2001)	16 (TS 3.7.6)
	1.53	Application of the Single-Failure Criterion to Safety Systems (Rev. 2, November 2003)	DCD discussion only; see DCD Table 1.9-1
	1.54	Service Level I, II, and III Protective Coatings Applied to Nuclear Power Plants (Rev. 1, July 2000)	1.9.4.2.3 6.1.2.1.6
	1.57	Design Limits and Loading Combinations for Metal Primary Reactor Containment System Components (Rev. 1, March 2007)	DCD discussion only; see DCD Table 1.9-1
VCS COL 1.9-1	1.59	Design Basis Floods for Nuclear Power Plants (Rev. 2, August 1977)	Not referenced; see Appendix 1AA
STD COL 1.9-1	1.61	Damping Values for Seismic Design of Nuclear Power Plants (Rev. 1, March 2007)	DCD discussion only; see DCD Table 1.9-1
	1.68	Initial Test Program for Water-Cooled Nuclear Power Plants (Rev. 3, March 2007)	14.2.1 14.2.3 14.2.8 14.2.5.2 16 (TS Bases 3.1.8)

STD COL 1.9-1

Table 1.9-201 (Sheet 4 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	1.70	Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition) (Rev. 3, November 1978)	1.1.6.1
	1.71	Welder Qualification for Areas of Limited Accessibility (Rev 1, March 2007)	DCD discussion only; see DCD Table 1.9-1
	1.75	Criteria for Independence of Electrical Safety Systems (Rev 3, February 2005)	DCD discussion only; see DCD Table 1.9-1
VCS COL 1.9-1	1.76	Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants (Rev. 1, March 2007)	2.3.1.3.2
STD COL 1.9-1	1.77	Assumptions Used for Evaluating a Control Rod Ejection Accident for Pressurized Water Reactors (Rev 0, May 1974)	16 (TS Bases 3.2.1) 16 (TS Bases 3.2.2) 16 (TS Bases 3.2.4) 16 (TS Bases 3.2.5)
VCS COL 1.9-1	1.78	Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release (Rev. 1, December 2001)	2.2.3.1.3 2.2.3.1.3.3 2.2.3.1.3.4 2.3.4.2.2 6.4.3 6.4.4.2 16 (TS Bases 3.7.6) Table 19.58-201
STD COL 1.9-1	1.82	Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident (Rev. 3, November 2003)	DCD discussion only; see DCD Table 1.9-1
	1.83	Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes (Rev. 1, July 1975)	DCD discussion only; see DCD Table 1.9-1
	1.84	Design, Fabrication, and Materials Code Case Acceptability, ASME Section III (Rev. 33, August 2005)	DCD discussion only; see DCD Table 1.9-1
	1.86	Termination of Operating Licenses for Nuclear Reactors (Rev. 0, June 1974)	Not referenced; see Appendix 1AA

STD COL 1.9-1

Table 1.9-201 (Sheet 5 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
VCS COL 1.9-1	1.91	Evaluations of Explosions Postulated To Occur on Transportation Routes Near Nuclear Power Plants (Rev. 1, February 1978)	2.2 2.2.1 2.2.3.1.1 2.2.3.1.2 2.2.3.1.3 3.5.1.5
STD COL 1.9-1	1.92	Combining Modal Responses and Spatial Components in Seismic Response Analysis (Rev. 2, July 2006)	DCD discussion only; see DCD Table 1.9-1
	1.93	Availability of Electric Power Sources (Rev. 0, December 1974)	16 (TS Bases 3.8.1) 16 (TS Bases 3.8.5)
	1.94	Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants (Rev. 1, April 1976)	Not referenced; see Appendix 1AA
	1.97	Criteria For Accident Monitoring Instrumentation For Nuclear Power Plants (Rev. 4, June 2006)	Not referenced; see Appendix 1AA
	1.97	Instrumentation For Light-Water-Cooled Nuclear Power Plants to Assess Plant Environs Conditions During and Following an Accident (Rev. 3, May 1983)	Table 7.5-201 Appendix 12AA 16 (TS Bases 3.3.3)
	1.99	Radiation Embrittlement of Reactor Vessel Materials (Rev. 2, May 1988)	16 (TS Bases 3.4.3)
	1.101	Emergency Response Planning and Preparedness for Nuclear Power Reactors (Rev. 5, June 2005)	Not referenced; see Appendix 1AA
	1.101	Emergency Planning and Preparedness for Nuclear Power Reactors (Rev. 4, July 2003)	Not Referenced
	1.101	Emergency Response Planning and Preparedness for Nuclear Power Reactors (Rev. 3, August 1992)	9.5.1.8.2.2 Table 9.5-201 13.3 (Emergency Plan I.C.1)

STD COL 1.9-1

Table 1.9-201 (Sheet 6 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	1.109	Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I (Rev. 1, October 1977)	11.2.3.5 11.3.3.4 12.4.1.9.3 Table 12.4-201
	1.110	Cost-Benefit Analysis for Radwaste Systems for Light-Water-Cooled Nuclear Power Reactors (Draft Rev. 0, March 1976)	11.2.3.5.3 11.3.3.4.3
VCS COL 1.9-1	1.111	Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors (Rev. 1, July 1977)	2.3.5.1 2.3.3.5.1.2 2.3.4.2 12.4.1.9.3
STD COL 1.9-1	1.112	Calculation of Releases of Radioactive Materials in Gaseous or Liquid Effluents from Light-Water-Cooled Nuclear Power Reactors (Rev. 1, March 2007)	DCD discussion only; see DCD Table 1.9-1
	1.113	Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I (Rev. 1, April 1977)	11.2.3.3
VCS COL 1.9-1	1.114	Guidance to Operators at the Controls and to Senior Operators in the Control Room of a Nuclear Power Unit (Rev. 2, May 1989)	13.1.2.1.1.3.2.1.2 13.1.2.2
STD COL 1.9-1	1.115	Protection Against Low-Trajectory Turbine Missiles (Rev. 1, July 1977)	3.5.1.3
	1.116	Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems (Rev. 0-R, May 1977)	Not referenced; see Appendix 1AA
	1.121	Bases for Plugging Degraded PWR Steam Generator Tubes (Rev. 0, August 1976)	16 (TS Bases 3.4.18)
	1.124	Service Limits and Loading Combinations for Class 1 Linear-Type Supports (Rev. 2, February 2007)	DCD discussion only; see DCD Table 1.9-1

STD COL 1.9-1

Table 1.9-201 (Sheet 7 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	1.128	Installation Design and Installation of Vented Lead-Acid Storage Batteries for Nuclear Power Plants (Rev. 2, February 2007)	DCD discussion only; see DCD Table 1.9-1
	1.129	Maintenance, Testing, and Replacement of Vented Lead-Acid Storage Batteries for Nuclear Power Plants (Rev. 2, February 2007)	Table 8.1-201 8.3.2.1.4 16 (TS Bases 3.8.1)
	1.130	Service Limits and Loading Combinations for Class 1 Plate-And-Shell-Type Supports (Rev. 2, March 2007)	DCD discussion only; see DCD Table 1.9-1
VCS COL 1.9-1	1.132	Site Investigations for Foundations of Nuclear Power Plants (Rev. 2, October 2003)	2.5.4.2.3
STD COL 1.9-1	1.133	Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors (Rev. 1, May 1981)	Not referenced; see Appendix 1AA
	1.134	Medical Evaluation of Licensed Personnel at Nuclear Power Plants (Rev. 3, March 1998)	Not referenced; see Appendix 1AA
	1.135	Normal Water Level and Discharge at Nuclear Power Plants (Rev. 0, September 1977)	DCD discussion only; see DCD Table 1.9-1
VCS COL 1.9-1	1.138	Laboratory Investigations of Soils and Rocks for Engineering Analysis and Design of Nuclear Power Plants (Rev. 2, December 2003)	2.5.4.2.4
STD COL 1.9-1	1.139	Guidance for Residual Heat Removal (Rev. 0, May 1978)	DCD discussion only; see DCD Table 1.9-1
	1.140	Design, Inspection, and Testing Criteria for Air Filtration and Adsorption Units of Normal Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants (Rev. 2, June 2001)	9.4.1.4 9.4.7.4 16 (TS Bases 3.9.6)

STD COL 1.9-1

Table 1.9-201 (Sheet 8 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants (Rev. 2, November 2001)	11.2.1.2.5.2 11.2.3.6 11.3.3.6 11.4.5 11.4.6.2
VCS COL 1.9-1	1.145	Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants (Rev. 1, November 1982)	2.3.4.1 2.3.4.2
STD COL 1.9-1	1.147	Inservice Inspection Code Case Acceptability, ASME Section XI Division 1 (Rev. 15, October 2007)	5.2.4 6.6
	1.149	Nuclear Power Plant Simulation Facilities for Use in Operator Training and License Examinations (Rev. 3, October 2001)	13.2 (NEI 06-13A)
	1.150	Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations (Rev. 1, February 1983)	DCD discussion only; see DCD Table 1.9-1
	1.152	Criteria for Use of Computers in Safety Systems of Nuclear Power Plants (Rev. 2, January 2006)	Not referenced; see Appendix 1AA
	1.154	Format and Content of Plant-Specific Pressurized Thermal Shock Safety Analysis Reports for Pressurized Water Reactors (Rev. 0, January 1987)	Not referenced; see Appendix 1AA
	1.155	Station Blackout (Rev. 0, August 1998)	Table 8.1-201
	1.159	Assuring the Availability of Funds for Decommissioning Nuclear Reactors (Rev. 1, October 2003)	Not referenced; see Appendix 1AA
	1.160	Monitoring the Effectiveness of Maintenance at Nuclear Power Plants (Rev. 2, March 1997)	3.8.3.7 3.8.4.7 3.8.5.7 17.6 (NEI 07-02A)

STD COL 1.9-1

Table 1.9-201 (Sheet 9 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	1.162	Format and Content of Report for Thermal Annealing of Reactor Pressure Vessels (Rev. 0, February 1996)	Not referenced; see Appendix 1AA
	1.163	Performance-Based Containment Leak-Test Program (Rev. 0, September 1995)	6.2.5.1 6.2.5.2.2 16 (TS 5.5.8)
VCS COL 1.9-1	1.165	Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion (Rev. 0, March 1997)	2.5.2.2 2.5.2.2.2.4 2.5.2.4 2.5.2.4.1 2.5.2.4.6
STD COL 1.9-1	1.166	Pre-Earthquake Planning and Immediate Nuclear Power Plant Operator Post Earthquake Actions (Rev. 0, March 1997)	3.7.4.4
	1.167	Restart of a Nuclear Power Plant Shut Down by a Seismic Event (Rev. 0, March 1997)	3.7.4.4
	1.168	Verification, Validation, Reviews, and Audits for Digital Computer Software Used in Safety Systems of Nuclear Power Plants (Rev. 1, February 2004)	DCD discussion only; see DCD Table 1.9-1
	1.174	An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis (Rev. 1, November 2002)	Not referenced; see Appendix 1AA
	1.175	An Approach for Plant-Specific, Risk-Informed Decisionmaking: Inservice Testing (Rev. 0, August 1998)	Not referenced; see Appendix 1AA
	1.177	An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications (Rev. 0, August 1998)	16 (TS Bases 3.5.1) 16 (TS Bases 3.7.10)
	1.178	An Approach for Plant-Specific Risk-Informed Decisionmaking for Inservice Inspection of Piping (Rev. 1, September 2003)	Not referenced; see Appendix 1AA

STD COL 1.9-1

Table 1.9-201 (Sheet 10 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	1.179	Standard Format and Content of License Termination Plans for Nuclear Power Reactors (Rev. 0, January 1999)	Not referenced; see Appendix 1AA
	1.180	Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems (Rev. 1, October 2003)	DCD discussion only; see DCD Table 1.9-1
	1.181	Content of Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e) (Rev. 0, September 1999)	Not referenced; see Appendix 1AA
	1.182	Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants (Rev. 0, May 2000)	16 (TS Bases SR 3.0.3) 17.6 (NEI 07-02A)
	1.183	Alternative Radiological Source Terms for Evaluating Design Basis Accidents at Nuclear Power Reactors (Rev. 0, July 2000)	16 (TS Bases 3.7.5) 16 (TS Bases 3.9.4) 16 (TS Bases 3.9.7)
	1.184	Decommissioning of Nuclear Power Reactors (Rev. 0, July 2000)	Not referenced; see Appendix 1AA
	1.185	Standard Format and Content for Post- shutdown Decommissioning Activities Report (Rev. 0, July 2000)	Not referenced; see Appendix 1AA
	1.186	Guidance and Examples for Identifying 10 CFR 50.2 Design Bases (Rev. 0, December 2000)	Not referenced; see Appendix 1AA
	1.187	Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiment (Rev. 0, November 2000)	Not referenced; see Appendix 1AA
	1.188	Standard Format and Content for Applications To Renew Nuclear Power Plant Operating Licenses (Rev. 1, September 2005)	Not referenced; see Appendix 1AA
VCS COL 1.9-1	1.189	Fire Protection for Nuclear Power Plants (Rev. 1, March 2007)	9.5.1.8.1.1 9.5.1.8.2.2 13.1.1.1.3.2.1.4

STD COL 1.9-1

Table 1.9-201 (Sheet 11 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
STD COL 1.9-1	1.191	Fire Protection Program for Nuclear Power Plants During Decommissioning and Permanent Shutdown (Rev. 0, May 2001)	Not referenced; see Appendix 1AA
	1.192	Operation and Maintenance Code Case Acceptability, ASME OM Code (Rev. 0, June 2003)	3.9.6.3
	1.193	ASME Code Cases Not Approved for Use (Rev 1, August 2005)	Not referenced; see Appendix 1AA
	1.194	Atmospheric Relative Concentrations for Control Room Radiological Habitability Assessments at Nuclear Power Plants (Rev. 0, June 2003)	2.3.4.2.1.2
	1.195	Methods and Assumptions for Evaluating Radiological Consequences of Design Basis Accidents at Light-Water Nuclear Power Reactors (Rev. 0, May 2003)	Not referenced; see Appendix 1AA
	1.196	Control Room Habitability at Light-Water Nuclear Power Reactors (Rev. 1, January 2007)	6.4.3
	1.197	Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors (Rev. 0, May 2003)	DCD discussion only; see DCD Table 1.9-1
	1.198	Procedures and Criteria for Assessing Seismic Soil Liquefaction at Nuclear Power Plant Sites (Rev. 0, November 2003)	2.5.4.8
	1.199	Anchoring Components and Structural Supports in Concrete (Rev. 0, November 2003)	DCD discussion only; see DCD Table 1.9-1
	1.200	An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities (Rev. 1, January 2007)	19.59.10.6

STD COL 1.9-1

Table 1.9-201 (Sheet 12 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	1.201	Guidelines for Categorizing Structures, Systems, and Components in Nuclear Power Plants According to Their Safety Significance (Rev. 1, May 2006)	Not referenced; see Appendix 1AA
	1.202	Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors (Rev. 0, February 2005)	Not referenced; see Appendix 1AA
	1.203	Transient and Accident Analysis Methods (Rev. 0, December 2005)	Not referenced; see Appendix 1AA
	1.204	Guidelines for Lightning Protection of Nuclear Power Plants (Rev. 0, November 2005)	Table 8.1-201
	1.205	Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants (Rev. 0, May 2006)	Not referenced; see Appendix 1AA
VCS COL 1.9-1	1.206	Combined License Applications for Nuclear Power Plants (LWR Edition) (Rev. 0, June 2007)	See Appendix 1AA. 1.1.6.1 1.9.5.5 2.5.0 2.5.1 2.5.2.1.2 2.5.2.4.6 2.5.4 14.2.1 14.3.2.3.1 14.3.2.3.2 Table 8.1-201 Appendix 12AA (NEI 07-03A)
STD COL 1.9-1	1.207	Guidelines for Evaluating Fatigue Analyses Incorporating the Life Reduction of Metal Components Due to the Effects of the Light-Water Reactor Environment for New Reactors (Rev. 0, March 2007)	Not referenced; see Appendix 1AA
	1.208	A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion (Rev. 0, March 2007)	2.5.1 2.5.2 2.5.3 2.5.4

STD COL 1.9-1

Table 1.9-201 (Sheet 13 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides	FSAR Chapter, Section, or Subsection[a]
1.209	Guidelines for Environmental Qualification of Safety-Related Computer-Based Instrumentation and Control Systems in Nuclear Power Plants (Rev. 0, March 2007)	Not referenced; see Appendix 1AA
Division 4 Regulatory Guides		
4.7	General Site Suitability Criteria for Nuclear Power Stations (Rev. 2, April 1998)	Not referenced; see Appendix 1AA
4.15	Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) – Effluent Streams and the Environment (Rev. 2, July 2007)	11.5.3
4.15	Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) – Effluent Streams and the Environment (Rev. 1, February 1979)	11.5.1.2 11.5.3 11.5.4 11.5.6.5
Division 5 Regulatory Guides		Note b
Division 8 Regulatory Guides		
8.2	Guide for Administrative Practices in Radiation Monitoring (Rev. 0, February 1973)	12.1 (NEI 07-08A) 12.3.4
8.4	Direct-Reading and Indirect-Reading Pocket Dosimeters (Rev. 0, February 1973)	Appendix 12AA (NEI 07-03A)
8.5	Criticality and Other Interior Evacuation Signals (Rev. 1, March 1981)	Appendix 12AA (NEI 07-03A)
8.6	Standard Test Procedure for Geiger-Muller Counters (Rev. 0, May 1973)	Appendix 12AA (NEI 07-03A)
8.7	Instructions for Recording and Reporting Occupational Radiation Exposure Data (Rev. 2, November 2005)	12.1 (NEI 07-08A)

STD COL 1.9-1

Table 1.9-201 (Sheet 14 of 15)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
VCS COL 1.9-1	8.8	Information Relevant to Ensuring That Occupational Radiation Exposures at Nuclear Power Stations Will Be as Low as Is Reasonably Achievable (Rev. 3, June 1978)	12.1 (NEI 07-08A) 12.3.4 Appendix 12AA Appendix 12AA (NEI 07-03A) 13.1.2.1.1 13.1.1.3.2.2.3
STD COL 1.9-1	8.9	Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program (Rev. 1, July 1993)	12.1 (NEI 07-08A)
VCS COL 1.9-1	8.10	Operating Philosophy for Maintaining Occupational Radiation Exposures as Low as Is Reasonably Achievable (Rev. 1-R, May 1977)	12.1 (NEI 07-08A) 12.3.4 Appendix 12AA Appendix 12AA (NEI 07-03A) 13.1.1.3.2.2.3 13.1.2.1.1
STD COL 1.9-1	8.13	Instruction Concerning Prenatal Radiation Exposure (Rev. 3, June 1999)	12.1 (NEI 07-08A)
	8.15	Acceptable Programs for Respiratory Protection (Rev. 1, October 1999)	12.1 (NEI 07-08A)
	8.27	Radiation Protection Training for Personnel at Light-Water-Cooled Nuclear Power Plants (Rev. 0, March 1981)	12.1 (NEI 07-08A)
	8.28	Audible-Alarm Dosimeters (Rev. 0, August 1981)	12.1 (NEI 07-08A)
	8.29	Instruction Concerning Risks from Occupational Radiation Exposure (Rev. 1, February 1996)	12.1 (NEI 07-08A)
	8.34	Monitoring Criteria and Methods To Calculate Occupational Radiation Doses (Rev. 0, July 1992)	12.1 (NEI 07-08A)
	8.35	Planned Special Exposures (Rev. 0, June 1992)	12.1 (NEI 07-08A)
	8.36	Radiation Dose to the Embryo/Fetus (Rev. 0, July 1992)	12.1 (NEI 07-08A)
	8.38	Control of Access to High and Very High Radiation Areas of Nuclear Plants (Rev. 1, May 2006)	12.1 (NEI 07-08A)

STD COL 1.9-1

Table 1.9-201 (Sheet 15 of 15)
Regulatory Guide/FSAR Section Cross-References

Regulatory Guides	FSAR Chapter, Section, or Subsection[a]

a. NEI template are incorporated by reference. See Table 1.6-201.

b. Division 5 of the regulatory guides applies to materials and plant protection. As appropriate, the Division 5 regulatory guide topics are addressed in the DCD and plant-specific security plans (i.e., Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Cyber Security Plan).

STD SUP 1.9-1

Table 1.9-202 (Sheet 1 of 20)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
	1	Introduction and Interfaces, Initial Issuance, 03/2007	N/A	No specific acceptance criteria associated with these general requirements.
	2.0	Site Characteristics and Site Parameters, Initial Issuance, 03/2007	N/A	No specific acceptance criteria are identified.
	2.1.1	Site Location and Description	Acceptable	
	2.1.2	Exclusion Area Authority and Control	Acceptable	
VCS SUP 1.9-1	2.1.3	Population Distribution	Acceptable	
STD SUP 1.9-1	2.2.1 – 2.2.2	Identification of Potential Hazards in Site Vicinity	Acceptable	
	2.2.3	Evaluation of Potential Accidents	Acceptable	
	2.3.1	Regional Climatology	Acceptable	
	2.3.2	Local Meteorology	Acceptable	
	2.3.3	Onsite Meteorological Measurements Programs	Acceptable	
	2.3.4	Short-Term Atmospheric Dispersion Estimates for Accident Releases	Acceptable	
	2.3.5	Long-Term Atmospheric Dispersion Estimates for Routine Releases	Acceptable	
	2.4.1	Hydrologic Description	Acceptable	
	2.4.2	Floods, Rev. 4, 03/2007	Acceptable	
	2.4.3	Probable Maximum Flood (PMF) on Streams and Rivers, Rev. 4, 03/2007	Acceptable	
	2.4.4	Potential Dam Failures	Acceptable	
	2.4.5	Probable Maximum Surge and Seiche Flooding	Acceptable	
	2.4.6	Probable Maximum Tsunami Hazards	Acceptable	
	2.4.7	Ice Effects	Acceptable	
	2.4.8	Cooling Water Canals and Reservoirs	Acceptable	
	2.4.9	Channel Diversions	Acceptable	
	2.4.10	Flooding Protection Requirements	Acceptable	

Table 1.9-202 (Sheet 2 of 20)[a]
STD SUP 1.9-1 **Conformance with SRP Acceptance Criteria**

	Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
	2.4.11	Low Water Considerations	Acceptable	
	2.4.12	Groundwater	Acceptable	
	2.4.13	Accidental Releases of Radioactive Liquid Effluents in Ground and Surface Waters	Acceptable	
	2.4.14	Technical Specifications and Emergency Operation Requirements	Acceptable	
	2.5.1	Basic Geologic and Seismic Information, Rev.4, 03/2007	Acceptable	
VCS SUP 1.9-1	2.5.2	Vibratory Ground Motion, Rev. 4, 03/2007	Exception	Exception is taken to the guidance in R.G. 1.206 (C.I.2.5.2.4). Hazard curves were run at 15^{th} and 85^{th} fractiles instead of 16^{th} and 84^{th} fractiles as they are very close approximations (+/- 1 sigma).
STD SUP 1.9-1	2.5.3	Surface Faulting, Rev. 4, 03/2007	Acceptable	
	2.5.4	Stability of Subsurface Materials and Foundations	Acceptable	
	2.5.5	Stability of Slopes	Acceptable	
	3.2.1	Seismic Classification, Rev. 2, 03/2007		See Notes d and e.
	3.2.2	System Quality Group Classification, Rev. 2, 03/2007		See Notes d and e.
	3.3.1	Wind Loadings	Acceptable	See Notes d, e, and f.
	3.3.2	Tornado Loadings	Acceptable	See Notes d, e, and f.
	3.4.1	Internal Flood Protection for Onsite Equipment Failures	Acceptable	See Notes d, e, and f.
	3.4.2	Analysis Procedures		See Notes d and e.
	3.5.1.1	Internally Generated Missiles (Outside Containment)		See Notes d and e.

STD SUP 1.9-1

Table 1.9-202 (Sheet 3 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
3.5.1.2	Internally Generated Missiles (Inside Containment)		See Notes d and e.
3.5.1.3	Turbine Missiles	Acceptable	See Notes d, e, and f.
3.5.1.4	Missiles Generated by Tornadoes and Extreme Winds		See Notes d and e.
3.5.1.5	Site Proximity Missiles (Except Aircraft), Rev.4, 03/2007	Acceptable	See Notes d, e, and f.
3.5.1.6	Aircraft Hazards	Acceptable	See Notes d, e, and f. Aircraft hazard event probability is consistent with SRP 2.2.3, Rev. 3, Technical Rationale 2.
3.5.2	Structures, Systems, and Components to be Protected from Externally-Generated Missiles		See Notes d and e.
3.5.3	Barrier Design Procedures		See Notes d and e.
3.6.1	Plant Design for Protection Against Postulated Piping Failures in Fluid Systems Outside Containment		See Notes d and e.
3.6.2	Determination of Rupture Locations and Dynamic Effects Associated with the Postulated Rupture of Piping, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
3.6.3	Leak-Before-Break Evaluation Procedures, Rev. 1, 03/2007	Acceptable	See Notes d, e, and f.
3.7.1	Seismic Design Parameters		See Notes d and e.
3.7.2	Seismic System Analysis	Acceptable	See Notes d, e, and f.
3.7.3	Seismic Subsystem Analysis		See Notes d and e.
3.7.4	Seismic Instrumentation, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
3.8.1	Concrete Containment, Rev. 2, 03/2007		See Notes d and e.
3.8.2	Steel Containment, Rev. 2, 03/2007		See Notes d and e.

STD SUP 1.9-1

Table 1.9-202 (Sheet 4 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
3.8.3	Concrete and Steel Internal Structures of Steel or Concrete Containments, Rev. 2, 03/2007		See Notes d and e.
3.8.4	Other Seismic Category I Structures, Rev. 2, 03/2007		See Notes d and e.
3.8.5	Foundations, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
3.9.1	Special Topics for Mechanical Components		See Notes d and e.
3.9.2	Dynamic Testing and Analysis of Systems, Structures, and Components		See Notes d and e.
3.9.3	ASME Code Class 1, 2, and 3 Components, Component Supports, and Core Support Structures, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
3.9.4	Control Rod Drive Systems		See Notes d and e.
3.9.5	Reactor Pressure Vessel Internals		See Notes d and e.
3.9.6	Functional Design, Qualification, and Inservice Testing Programs for Pumps, Valves, and Dynamic Restraints	Acceptable	See Notes d, e, and f.
3.9.7	Risk-Informed Inservice Testing, Rev. 0, 08/1998	N/A	
3.9.8	Risk-Informed Inservice Inspection of Piping, Rev.0, 09/2003	N/A	
3.10	Seismic and Dynamic Qualification of Mechanical and Electrical Equipment		See Notes d and e.
3.11	Environmental Qualification of Mechanical and Electrical Equipment	Acceptable	See Notes d, e, and f.
3.12	ASME Code Class 1, 2, and 3 Piping Systems, Piping Components and their Associated Supports, Initial Issuance, 03/2007		See Note g.
3.13	Threaded Fasteners - ASME Code Class 1, 2, and 3, Initial Issuance, 03/2007		See Note g.

STD SUP 1.9-1

Table 1.9-202 (Sheet 5 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
4.2	Fuel System Design		See Notes d and e.
4.3	Nuclear Design		See Notes d and e.
4.4	Thermal and Hydraulic Design, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
4.5.1	Control Rod Drive Structural Materials		See Notes d and e.
4.5.2	Reactor Internal and Core Support Structure Materials		See Notes d and e.
4.6	Functional Design of Control Rod Drive System, Rev. 2, 03/2007		See Notes d and e.
5.2.1.1	Compliance with the Codes and Standards Rule, 10 CFR 50.55a	Acceptable	See Notes d, e, and f.
5.2.1.2	Applicable Code Cases		See Notes d and e.
5.2.2	Overpressure Protection		See Notes d and e.
5.2.3	Reactor Coolant Pressure Boundary Materials	Acceptable	See Notes d, e, and f.
5.2.4	Reactor Coolant Pressure Boundary Inservice Inspection and Testing, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
5.2.5	Reactor Coolant Pressure Boundary Leakage Detection, Rev. 2, 03/2007		See Notes d and e.
5.3.1	Reactor Vessel Materials, Rev. 2, 03/2007		See Notes d and e.
5.3.2	Pressure-Temperature Limits, Upper-Shelf Energy, and Pressurized Thermal Shock, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
5.3.3	Reactor Vessel Integrity, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
5.4	Reactor Coolant System Component and Subsystem Design, Rev. 2, 03/2007	N/A	No specific acceptance criteria associated with these general requirements.
5.4.1.1	Pump Flywheel Integrity (PWR), Rev. 2, 03/2007		See Notes d and e.
5.4.2.1	Steam Generator Materials		See Notes d and e.
5.4.2.2	Steam Generator Program, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.

STD SUP 1.9-1

Table 1.9-202 (Sheet 6 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
5.4.6	Reactor Core Isolation Cooling System (BWR), Rev. 4, 03/2007	N/A	
5.4.7	Residual Heat Removal (RHR) System, Rev. 4, 03/2007		See Notes d and e.
5.4.8	Reactor Water Cleanup System (BWR)	N/A	
5.4.11	Pressurizer Relief Tank		See Notes d and e.
5.4.12	Reactor Coolant System High Point Vents, Rev. 1, 03/2007		See Notes d and e.
5.4.13	Isolation Condenser System (BWR), Initial Issuance, 03/2007	N/A	
6.1.1	Engineered Safety Features Materials, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
6.1.2	Protective Coating Systems (Paints) – Organic Materials	Acceptable	See Notes d, e, and f.
6.2.1	Containment Functional Design		See Notes d and e.
6.2.1.1.A	PWR Dry Containments, Including Subatmospheric Containments		See Notes d and e.
6.2.1.1.B	Ice Condenser Containments, Rev. 2, 07/1981	N/A	
6.2.1.1.C	Pressure-Suppression Type BWR Containments, Rev. 7, 03/2007	N/A	
6.2.1.2	Subcompartment Analysis		See Notes d and e.
6.2.1.3	Mass and Energy Release Analysis for Postulated Loss-of-Coolant Accidents (LOCAs)		See Notes d and e.
6.2.1.4	Mass and Energy Release Analysis for Postulated Secondary System Pipe Ruptures, Rev. 2, 03/2007		See Notes d and e.
6.2.1.5	Minimum Containment Pressure Analysis for Emergency Core Cooling System Performance Capability Studies		See Notes d and e.

STD SUP 1.9-1

Table 1.9-202 (Sheet 7 of 20)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
	6.2.2	Containment Heat Removal Systems, Rev. 5, 03/2007		See Notes d and e.
	6.2.3	Secondary Containment Functional Design		See Notes d and e.
	6.2.4	Containment Isolation System		See Notes d and e.
	6.2.5	Combustible Gas Control in Containment	Acceptable	See Notes d, e, and f.
	6.2.6	Containment Leakage Testing	Acceptable	See Notes d, e, and f.
	6.2.7	Fracture Prevention of Containment Pressure Boundary, Rev. 1, 03/2007		See Notes d and e.
	6.3	Emergency Core Cooling System	Acceptable	See Notes d, e, and f.
	6.4	Control Room Habitability System	Acceptable	See Notes d, e, and f.
	6.5.1	ESF Atmosphere Cleanup Systems		See Notes d and e.
	6.5.2	Containment Spray as a Fission Product Cleanup System, Rev. 4, 03/2007		See Notes d and e.
	6.5.3	Fission Product Control Systems and Structures		See Notes d and e.
VCS SUP 1.9-1	6.5.4	Ice Condenser as a Fission Product Cleanup System, Rev. 3, 12/1988	N/A	
STD SUP 1.9-1	6.5.5	Pressure Suppression Pool as a Fission Product Cleanup System, Rev. 1, 03/2007	N/A	
	6.6	Inservice Inspection and Testing of Class 2 and 3 Components, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
	6.7	Main Steam Isolation Valve Leakage Control System (BWR), Rev. 2, 07/1981	N/A	
	7	Instrumentation and Controls –Overview of Review Process, Rev. 5, 03/2007		See Notes d and e.
	Appendix 7.0-A	Review Process for Digital Instrumentation and Control Systems, Rev. 5, 03/2007		See Notes d and e.
	7.1	Instrumentation and Controls –Introduction, Rev. 5, 03/2007		See Notes d and e.

STD SUP 1.9-1

Table 1.9-202 (Sheet 8 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
7.1-T Table 7-1	Regulatory Requirements, Acceptance Criteria, and Guidelines for Instrumentation and Control Systems Important to Safety, Rev. 5, 03/2007		See Notes d and e.
Appendix 7.1-A	Acceptance Criteria and Guidelines for Instrumentation and Controls Systems Important to Safety, Rev. 5, 03/2007		See Notes d and e.
Appendix 7.1-B	Guidance for Evaluation of Conformance to IEEE Std 279, Rev. 5, 03/2007		See Notes d and e.
Appendix 7.1-C	Guidance for Evaluation of Conformance to IEEE Std 603, Rev. 5, 03/2007		See Notes d and e.
Appendix 7.1-D	Guidance for Evaluation of the Application of IEEE Std 7-4.3.2 Initial Issuance 03/2007		See Notes d and e.
7.2	Reactor Trip System, Rev. 5, 03/2007		See Notes d and e.
7.3	Engineered Safety Features Systems, Rev. 5, 03/2007		See Notes d and e.
7.4	Safe Shutdown Systems, Rev. 5, 03/2007		See Notes d and e.
7.5	Information Systems Important to Safety, Rev. 5, 03/2007		See Notes d and e.
7.6	Interlock Systems Important to Safety, Rev. 5, 03/2007		See Notes d and e.
7.7	Control Systems, Rev. 5, 03/2007		See Notes d and e.
7.8	Diverse Instrumentation and Control Systems, Rev. 5, 03/2007		See Notes d and e.
7.9	Data Communication Systems, Rev. 5, 03/2007		See Notes d and e.
8.1	Electric Power – Introduction	N/A	No specific acceptance criteria associated with these general requirements.
8.2	Offsite Power System, Rev. 4, 03/2007	Acceptable	See Notes d, e, and f
8.3.1	A-C Power Systems (Onsite)	Acceptable	See Notes d, e, and f.

STD SUP 1.9-1

Table 1.9-202 (Sheet 9 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
8.3.2	D-C Power Systems (Onsite)	Acceptable	See Notes d, e, and f.
8.4	Station Blackout, Initial Issuance, 03/2007		See Note g.
9.1.1	Criticality Safety of Fresh and Spent Fuel Storage and Handling		See Notes d and e.
9.1.2	New and Spent Fuel Storage, Rev. 4, 03/2007		See Notes d and e.
9.1.3	Spent Fuel Pool Cooling and Cleanup System, Rev. 2, 03/2007		See Notes d and e.
9.1.4	Light Load Handling System (Related to Refueling)	Acceptable	See Notes d, e, and f.
9.1.5	Overhead Heavy Load Handling Systems, Rev. 1, 03/2007	Acceptable	See Notes d, e, and f.
9.2.1	Station Service Water System, Rev. 5, 03/2007	Acceptable	See Notes d, e, and f.
9.2.2	Reactor Auxiliary Cooling Water Systems, Rev. 4, 03/2007		See Notes d and e.
9.2.4	Potable and Sanitary Water Systems		See Notes d and e.
9.2.5	Ultimate Heat Sink	Acceptable	See Notes d, e, and f.
9.2.6	Condensate Storage Facilities	Acceptable	See Notes d, e, and f.
9.3.1	Compressed Air System, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
9.3.2	Process and Post-accident Sampling Systems		See Notes d and e.
9.3.3	Equipment and Floor Drainage System		See Notes d and e.
9.3.4	Chemical and Volume Control System (PWR) (Including Boron Recovery System)		See Notes d and e.
9.3.5	Standby Liquid Control System (BWR)	N/A	
9.4.1	Control Room Area Ventilation System	Acceptable	See Notes d, e, and f.
9.4.2	Spent Fuel Pool Area Ventilation System		See Notes d and e.
9.4.3	Auxiliary and Radwaste Area Ventilation System		See Notes d and e.
9.4.4	Turbine Area Ventilation System		See Notes d and e.
9.4.5	Engineered Safety Feature Ventilation System		See Notes d and e.
9.5.1	Fire Protection Program, Rev. 5, 03/2007	Acceptable	See Notes d, e, and f.

STD SUP 1.9-1

Table 1.9-202 (Sheet 10 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
9.5.2	Communications Systems	Acceptable	See Notes d, e, and f.
9.5.3	Lighting Systems		See Notes d and e.
9.5.4	Emergency Diesel Engine Fuel Oil Storage and Transfer System	Acceptable	See Notes d, e, and f.
9.5.5	Emergency Diesel Engine Cooling Water System		See Notes d and e.
9.5.6	Emergency Diesel Engine Starting System		See Notes d and e.
9.5.7	Emergency Diesel Engine Lubrication System		See Notes d and e.
9.5.8	Emergency Diesel Engine Combustion Air Intake and Exhaust System		See Notes d and e.
10.2	Turbine Generator	Acceptable	See Notes d, e, and f.
10.2.3	Turbine Rotor Integrity, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
10.3	Main Steam Supply System, Rev. 4, 03/2007	Acceptable	See Notes d, e, and f.
10.3.6	Steam and Feedwater System Materials	Acceptable	See Notes d, e, and f.
10.4.1	Main Condensers		See Notes d and e.
10.4.2	Main Condenser Evacuation System	Acceptable	See Notes d, e, and f.
10.4.3	Turbine Gland Sealing System		See Notes d and e.
10.4.4	Turbine Bypass System		See Notes d and e.
10.4.5	Circulating Water System	Acceptable	See Notes d, e, and f.
10.4.6	Condensate Cleanup System		See Notes d and e.
10.4.7	Condensate and Feedwater System, Rev. 4, 03/2007	Acceptable	See Notes d, e, and f.
10.4.8	Steam Generator Blowdown System (PWR)		See Notes d and e.
10.4.9	Auxiliary Feedwater System (PWR)		See Notes d and e.
11.1	Source Terms		See Notes d and e.
11.2	Liquid Waste Management System	Acceptable	See Notes d, e, and f.
11.3	Gaseous Waste Management System	Acceptable	See Notes d, e, and f.
11.4	Solid Waste Management System	Acceptable	See Notes d, e, and f.

STD SUP 1.9-1

Table 1.9-202 (Sheet 11 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
11.5	Process and Effluent Radiological Monitoring Instrumentation and Sampling Systems, Rev. 4, 03/2007	Acceptable	See Notes d, e, and f.
12.1	Assuring that Occupational Radiation Exposures Are As Low As Is Reasonably Achievable	Exception	See Notes d, e, and f. An exception is taken to following the guidance of RG 1.206 to address RG 8.20, 8.25, and RG 8.26. NUREG-1736, Final Report (published 2001) lists RG 8.20 and RG 8.26 as “outdated” and recommends the methods of RG 8.9 R1. RG 8.25 states it is not applicable to nuclear facilities licensed under 10 CFR Part 50, and, by extension, to 10 CFR Part 52. An exception is taken to RG 8.8 C.3.b. RG 1.16 C.1.b (3) data is no longer reported. Reporting per C.1.b (2) is also no longer required.

STD SUP 1.9-1

Table 1.9-202 (Sheet 12 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
12.2	Radiation Sources	Exception	See Notes d, e, and f. A general description of miscellaneous sealed sources related to radiography is provided in FSAR text. Other requested details are maintained on-site for NRC review and audit upon their procurement.
12.3 - 12.4	Radiation Protection Design Features	Acceptable	See Notes d, e, and f.
12.5	Operational Radiation Protection Program	Acceptable	See Notes d, e, and f.

STD SUP 1.9-1

Table 1.9-202 (Sheet 13 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
13.1.1	Management and Technical Support Organization, Rev. 5, 03/2007	Exception	See Notes d, e, and f. Design and construction responsibilities are not defined in numbers. The experience requirements of corporate staff are set by corporate policy and not provided here in detail, however the experience level of the corporate staff, as discussed Subsections 13.1.1, 13.1.1.1, and Appendix 13AA, in the area of nuclear plant development, construction, and management establishes that the applicant has the necessary capability and staff to ensure that design and construction of the facility will be performed in an acceptable manner. Resumes and/or other documentation of qualification and experience of initial appointees to appropriate management and supervisory positions are available for NRC after position vacancies are filled.

STD SUP 1.9-1

Table 1.9-202 (Sheet 14 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
13.1.2 - 13.1.3	Operating Organization, Rev. 6, 03/2007	Exception	See Notes d, e, and f. The SRP requires resumes of personnel holding plant managerial and supervisory positions to be included in the FSAR. Current industry practice is to have the resumes available for review by the regulator when requested but not be kept in the FSAR. Additionally, at time of COLA, most positions are unfilled.
13.2.1	Reactor Operator Requalification Program; Reactor Operator Training	Exception	See Notes d, e, and f. SRP requires meeting the guidance of NUREG-0711. NEI 06-13A, Template for an Industry Training Program Description, which is incorporated by reference in FSAR 13.2, does not address meeting the guidance of NUREG-0711. NEI 06-13A, is approved by NRC to meet the regulatory requirements for the FSAR description of the Training Program. SRP requires meeting the guidance of Regulatory Guide 1.149, “Nuclear Power Plant Simulation Facilities for Use in Operator Training and License Examinations” RG 1.149 is not addressed in NEI 06-13A. Level of detail is consistent with NEI 06-13A.

STD SUP 1.9-1

Table 1.9-202 (Sheet 15 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
13.2.2	Non-Licensed Plant Staff Training	Exception	See Notes d, e, and f. Level of detail is consistent with NEI 06-13A.
13.3	Emergency Planning	Acceptable	See Notes d, e, and f.
13.4	Operational Programs	Acceptable	See Notes d, e, and f.
13.5.1.1	Administrative Procedures – General, Initial Issuance, 03/2007	Exception	The procedure development schedule is addressed in the COL application (not in the SAR as requested by this SRP).
13.5.2.1	Operating and Emergency Operating Procedures, Rev. 2, 03/2007	Exception	See Notes d, e, and f. Procedures are generally identified in this section by topic, type, or classification in lieu of the specific title and represent general areas of procedural coverage.
13.6	Physical Security	Acceptable	See Security Plan developed in accordance with NEI 03-12.
13.6.1	Physical Security - Combined License Review Responsibilities, Initial Issuance, 03/2007	Acceptable	See Security Plan developed in accordance with NEI 03-12
13.6.2	Physical Security - Design Certification, Initial Issuance, 03/2007		See notes d and e.
13.6.3	Physical Security - Early Site Permit, Initial Issuance, 03/2007	N/A	
14.2	Initial Plant Test Program - Design Certification and New License Applicants	Exception	See Notes d, e, and f. The level of detail is consistent with DCD section content addressing nonsafety-related systems.
14.2.1	Generic Guidelines for Extended Power Uprate Testing Programs, Initial Issuance, 08/2006	N/A	No power uprate is sought.

STD SUP 1.9-1

Table 1.9-202 (Sheet 16 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
14.3	Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007	Acceptable	
14.3.1	[Reserved]		
14.3.2	Structural and Systems Engineering - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007		See Notes d and e.
14.3.3	Piping Systems and Components - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007		See Notes d and e.
14.3.4	Reactor Systems - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007		See Notes d and e.
14.3.5	Instrumentation and Controls - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007		See Notes d and e.
14.3.6	Electrical Systems - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007		See Notes d and e.
14.3.7	Plant Systems - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007	Acceptable	See Notes d, e, and f.
14.3.8	Radiation Protection - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007		See Notes d and e.
14.3.9	Human Factors Engineering - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007		See Notes d and e.
14.3.10	Emergency Planning - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007	Acceptable	See Notes d, e, and f.

STD SUP 1.9-1

Table 1.9-202 (Sheet 17 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
14.3.11	Containment Systems - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007		See Notes d and e.
14.3.12	Physical Security Hardware - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/2007	Acceptable	See Notes d, e, and f.
15	Introduction - Transient and Accident Analysis		See Notes d and e.
15.0.1	Radiological Consequence Analyses Using Alternative Source Terms, Rev. 0, 07/2000		See Notes d and e.
15.0.2	Review of Transient and Accident Analysis Method, Rev. 0, 12/2005		See Notes d and e.
15.0.3	Design Basis Accident Radiological Consequences of Analyses for Advanced Light Water Reactors, Initial Issuance, 03/2007		See Notes d and e.
15.1.1 - 15.1.4	Decrease in Feedwater Temperature, Increase in Feedwater Flow, Increase in Steam Flow, and Inadvertent Opening of a Steam Generator Relief or Safety Valve, Rev. 2, 03/2007		See Notes d and e.
15.1.5	Steam System Piping Failures Inside and Outside of Containment (PWR)		See Notes d and e.
15.2.1 - 15.2.5	Loss of External Load; Turbine Trip; Loss of Condenser Vacuum; Closure of Main Steam Isolation Valve (BWR); and Steam Pressure Regulator Failure (Closed), Rev. 2, 03/2007		See Notes d and e.
15.2.6	Loss of Nonemergency AC Power to the Station Auxiliaries, Rev. 2, 03/2007		See Notes d and e.
15.2.7	Loss of Normal Feedwater Flow		See Notes d and e.
15.2.8	Feedwater System Pipe Breaks Inside and Outside Containment (PWR), Rev. 2, 03/2007		See Notes d and e.

STD SUP 1.9-1

Table 1.9-202 (Sheet 18 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
15.3.1 - 15.3.2	Loss of Forced Reactor Coolant Flow Including Trip of Pump Motor and Flow Controller Malfunctions, Rev. 2, 03/2007		See Notes d and e.
15.3.3 - 15.3.4	Reactor Coolant Pump Rotor Seizure and Reactor Coolant Pump Shaft Break		See Notes d and e.
15.4.1	Uncontrolled Control Rod Assembly Withdrawal from a Subcritical or Low Power Startup Condition		See Notes d and e.
15.4.2	Uncontrolled Control Rod Assembly Withdrawal at Power		See Notes d and e.
15.4.3	Control Rod Misoperation (System Malfunction or Operator Error)		See Notes d and e.
15.4.4 - 15.4.5	Startup of an Inactive Loop or Recirculation Loop at an Incorrect Temperature, and Flow Controller Malfunction Causing an Increase in BWR Core Flow Rate, Rev. 2, 03/2007		See Notes d and e.
15.4.6	Inadvertent Decrease in Boron Concentration in the Reactor Coolant System (PWR), Rev. 2, 03/2007		See Notes d and e.
15.4.7	Inadvertent Loading and Operation of a Fuel Assembly in an Improper Position, Rev. 2, 03/2007		See Notes d and e.
15.4.8	Spectrum of Rod Ejection Accidents (PWR)		See Notes d and e.
15.4.8.A	Radiological Consequences of a Control Rod Ejection Accident (PWR), Rev. 1, 07/1981		See Notes d and e.
15.4.9	Spectrum of Rod Drop Accidents (BWR)	N/A	

STD SUP 1.9-1

Table 1.9-202 (Sheet 19 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
15.5.1 - 15.5.2	Inadvertent Operation of ECCS and Chemical and Volume Control System Malfunction that Increases Reactor Coolant Inventory, Rev. 2, 03/2007		See Notes d and e.
15.6.1	Inadvertent Opening of a PWR Pressurizer Pressure Relief Valve or a BWR Pressure Relief Valve, Rev. 2, 03/2007		See Notes d and e.
15.6.5	Loss-of-Coolant Accidents Resulting From Spectrum of Postulated Piping Breaks Within the Reactor Coolant Pressure Boundary		See Notes d and e.
15.8	Anticipated Transients Without Scram, Rev. 2, 03/2007		See Notes d and e.
15.9	Boiling Water Reactor Stability, Initial Issuance, 03/2007	N/A	
16	Technical Specifications	Acceptable	See Notes d, e, and f.
16.1	Risk-informed Decision Making: Technical Specifications, Rev. 1, 03/2007	N/A	This SRP applies to the Technical Specifications change process.
17.1	Quality Assurance During the Design and Construction Phases, Rev. 2, 07/1981	Acceptable	See Notes d, e, and f. This section covers the requirements of SRP Section 17.1 through reference to quality assurance plan which is maintained separately as described in FSAR Sections 17.1 and 17.5.
17.2	Quality Assurance During the Operations Phase, Rev. 2, 07/1981		See Notes d and e.
17.3	Quality Assurance Program Description, Rev. 0, 08/1990		See Notes d and e.
17.4	Reliability Assurance Program (RAP), Initial Issuance, 03/2007		See Notes d and e.

STD SUP 1.9-1

Table 1.9-202 (Sheet 20 of 20)[a]
Conformance with SRP Acceptance Criteria

Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
17.5	Quality Assurance Program Description - Design Certification, Early Site Permit and New License Applicants, Initial Issuance, 03/2007	Acceptable	See Notes d, e, and f. This section covers the requirements of SRP Section 17.5 through reference to Quality Assurance Program Description which is maintained separately and developed in accordance with NEI 06-14A.
17.6	Maintenance Rule, Initial Issuance, 03/2007	Acceptable	Content developed in accordance with NEI 07-02A
18.0	Human Factors Engineering, Rev. 2, 03/2007	Acceptable	See Notes d, e, and f.
19.0	Probabilistic Risk Assessment and Severe Accident Evaluation for New Reactors, Rev. 2, 06/2007	Acceptable	See Notes d, e, and f.
19.1	Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities, Rev. 2, 06/2007	Acceptable	See Notes d, e, and f.
19.2	Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance, Initial Issuance, 06/2007		See Note g.

a) This table is provided as a one-time aid to facilitate NRC review. This table becomes historical information and need not be updated
b) If no revision or date is specified, it is Rev. 3, 03/2007.
c) Consult the AP1000 Design Control Document (DCD) Appendix 1A and Appendix 1AA to determine extent of conformance with Regulatory Guides (except Regulatory Guide 1.206).
d) Conformance with a previous revision of this SRP is documented in AP1000 Design Control Document (Section 1.9.2 and WCAP-15799).
e) Conformance with the design aspects of this SRP is as stated in the AP1000 DCD.
f) Conformance with the plant or site-specific aspects of this SRP is as stated under “FSAR Position.”
g) This SRP is not applicable to the AP1000 certified design.

STD COL 1.9-3

Table 1.9-203 (Sheet 1 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
TMI Action Plan Items			
I.A.1.1	Shift Technical Advisor	f	Resolved per NUREG-0933
I.A.1.2	Shift Supervisor Administrative Duties	f	Resolved per NUREG-0933
I.A.1.3	Shift Manning	f	Resolved per NUREG-0933
I.A.1.4	Long-Term Upgrading	f	Resolved per NUREG-0933
I.A.2.1(1)	Qualifications - Experience	f	Resolved per NUREG-0933
I.A.2.1(2)	Immediate Upgrading of RO & SRO Training and Qualifications, Training	f	Resolved per NUREG-0933
I.A.2.1(3)	Facility Certification of Competence and Fitness of Applicants for Operator and Senior Operator Licenses	f	Resolved per NUREG-0933
I.A.2.3	Administration of Training Programs	f	Resolved per NUREG-0933
I.A.2.4	NRR Participation in Inspector Training	d	Not applicable to new plants
I.A.2.6(1)	Revise Regulatory Guide 1.8	f	Resolved per NUREG-0933
I.A.3.1	Revise Scope of Criteria for Licensing Examinations	f	Resolved per NUREG-0933
I.A.3.5	Establish Statement of Understanding with INPO and DOE	d	Not applicable to new plants
I.A.4.1(2)	Interim Changes in Training Simulators	f	Resolved per NUREG-0933
I.A.4.2(1)	Research on Training Simulators	f	Resolved per NUREG-0933
I.A.4.2(2)	Upgrade Training Simulator Standards	f	Resolved per NUREG-0933
I.A.4.2(3)	Regulatory Guide on Training Simulators	f	Resolved per NUREG-0933
I.A.4.2(4)	Review Simulators for Conformance to Criteria	f	Resolved per NUREG-0933
I.A.4.3	Feasibility Study of Procurement of NRC Training Simulator	d	Not applicable to new plants
I.A.4.4	Feasibility Study of NRC Engineering Computer	d	Not applicable to new plants

STD COL 1.9-3

Table 1.9-203 (Sheet 2 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
I.B.1.3(1)	Require Licensees to Place Plant in Safest Shutdown Cooling Following a Loss of Safety Function Due to Personnel Error	d	Not applicable to new plants
I.B.1.3(2)	Use Existing Enforcement Options to Accomplish Safest Shutdown Cooling	d	Not applicable to new plants
I.B.1.3(3)	Use Non-Fiscal Approaches to Accomplish Safest Shutdown Cooling	d	Not applicable to new plants
I.B.2.1(1)	Verify the Adequacy of Management and Procedural Controls and Staff Discipline	d	Not applicable to new plants
I.B.2.1(2)	Verify that Systems Required to Be Operable Are Properly Aligned	d	Not applicable to new plants
I.B.2.1(3)	Follow-up on Completed Maintenance Work Orders to Ensure Proper Testing and Return to Service	d	Not applicable to new plants
I.B.2.1(4)	Observe Surveillance Tests to Determine Whether Test Instruments Are Properly Calibrated	d	Not applicable to new plants
I.B.2.1(5)	Verify that Licensees Are Complying with Technical Specifications	d	Not applicable to new plants
I.B.2.1(6)	Observe Routine Maintenance	d	Not applicable to new plants
I.B.2.1(7)	Inspect Terminal Boards, Panels, and Instrument Racks for Unauthorized Jumpers and Bypasses	d	Not applicable to new plants
I.B.2.2	Resident Inspector at Operating Reactors	d	Not applicable to new plants
I.B.2.3	Regional Evaluations	d	Not applicable to new plants
I.B.2.4	Overview of Licensee Performance	d	Not applicable to new plants
I.C.1(1)	Small Break LOCAs	f	Resolved per NUREG-0933
I.C.1(2)	Inadequate Core Cooling	f	Resolved per NUREG-0933
I.C.1(3)	Transients and Accidents	f	Resolved per NUREG-0933
I.C.2	Shift and Relief Turnover Procedures	f	Resolved per NUREG-0933
I.C.3	Shift Supervisor Responsibilities	f	Resolved per NUREG-0933
I.C.4	Control Room Access	f	Resolved per NUREG-0933

STD COL 1.9-3

Table 1.9-203 (Sheet 3 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
I.C.6	Procedures for Verification of Correct Performance of Operating Activities	f	Resolved per NUREG-0933
I.C.7	NSSS Vendor Review of Procedures	f	Resolved per NUREG-0933
I.C.8	Pilot Monitoring of Selected Emergency Procedures for Near-Term Operating License Applicants	f	Resolved per NUREG-0933
I.D.5(5)	Disturbance Analysis Systems	d	Not applicable to new plants
I.D.6	Technology Transfer Conference	d	Not applicable to new plants
I.E.1	Office for Analysis and Evaluation of Operational Data	d	Not applicable to new plants
I.E.2	Program Office Operational Data Evaluation	d	Not applicable to new plants
I.E.3	Operational Safety Data Analysis	d	Not applicable to new plants
I.E.4	Coordination of Licensee, Industry, and Regulatory Programs	d	Not applicable to new plants
I.E.5	Nuclear Plant Reliability Data Systems	d	Not applicable to new plants
I.E.6	Reporting Requirements	d	Not applicable to new plants
I.E.7	Foreign Sources	d	Not applicable to new plants
I.E.8	Human Error Rate Analysis	d	Not applicable to new plants
I.F.2(6)	Increase the Size of Licensees' QA Staff	f	Resolved per NUREG-0933
I.F.2(9)	Clarify Organizational Reporting Levels for the QA Organization	f	Resolved per NUREG-0933
I.G.1	Training Requirements	f	Resolved per NUREG-0933
I.G.2	Scope of Test Program	f	Resolved per NUREG-0933
II.B.4	Training for Mitigating Core Damage	f	Resolved per NUREG-0933
II.B.5(1)	Behavior of Severely Damaged Fuel	d	Not applicable to new plants
II.B.5(2)	Behavior of Core Melt	d	Not applicable to new plants
II.B.5(3)	Effect of Hydrogen Burning and Explosions on Containment Structures	d	Not applicable to new plants

STD COL 1.9-3

Table 1.9-203 (Sheet 4 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
II.B.6	Risk Reduction for Operating Reactors at Sites with High Population Densities	f	Resolved per NUREG-0933
II.E.1.3	Update Standard Review Plan and Develop Regulatory Guide	d	Resolved per NUREG-0933
II.E.6.1	Test Adequacy Study	d	Resolved per NUREG-0933
II.F.5	Classification of Instrumentation, Control, and Electrical Equipment	d	Not applicable to new plants
II.H.4	Determine Impact of TMI on Socioeconomic and Real Property Values	d	Not applicable to new plants
II.J.1.1	Establish a Priority System for Conducting Vendor Inspections	d	Not applicable to new plants
II.J.1.2	Modify Existing Vendor Inspection Program	d	Not applicable to new plants
II.J.1.3	Increase Regulatory Control Over Present Non-Licensees	d	Not applicable to new plants
II.J.1.4	Assign Resident Inspectors to Reactor Vendors and Architect-Engineers	d	Not applicable to new plants
II.J.2.1	Reorient Construction Inspection Program	d	Not applicable to new plants
II.J.2.2	Increase Emphasis on Independent Measurement in Construction Inspection Program	d	Not applicable to new plants
II.J.2.3	Assign Resident Inspectors to All Construction Sites	d	Not applicable to new plants
II.J.3.1	Organization and Staffing to Oversee Design and Construction	f	Not applicable to new plants
II.J.4.1	Revise Deficiency Reporting Requirements	f	Resolved per NUREG-0933
II.K.1(1)	Review TMI-2 PNs and Detailed Chronology of the TMI-2 Accident	f	Resolved per NUREG-0933
II.K.1(3)	Review Operating Procedures for Recognizing, Preventing, and Mitigating Void Formation in Transients and Accidents	f	Resolved per NUREG-0933
II.K.1(4)	Review Operating Procedures and Training Instructions	f	Resolved per NUREG-0933
II.K.1(5)	Safety-Related Valve Position Description	f	Resolved per NUREG-0933

STD COL 1.9-3

Table 1.9-203 (Sheet 5 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
II.K.1(6)	Review Containment Isolation Initiation Design and Procedures	f	Resolved per NUREG-0933
II.K.1(9)	Review Procedures to Assure That Radioactive Liquids and Gases Are Not Transferred out of Containment Inadvertently	f	Resolved per NUREG-0933
II.K.1(10)	Review and Modify Procedures for Removing Safety-Related Systems from Service	f	Resolved per NUREG-0933
II.K.1(11)	Make All Operating and Maintenance Personnel Aware of the Seriousness and Consequences of the Erroneous Actions Leading up to, and in Early Phases of, the TMI-2 Accident	f	Resolved per NUREG-0933
II.K.1(12)	One Hour Notification Requirement and Continuous Communications Channels	f	Resolved per NUREG-0933
II.K.1(13)	Propose Technical Specification Changes Reflecting Implementation of All Bulletin Items	f	Resolved per NUREG-0933
II.K.1(14)	Review Operating Modes and Procedures to Deal with Significant Amounts of Hydrogen	f	Resolved per NUREG-0933
II.K.1(15)	For Facilities with Non-Automatic AFW Initiation, Provide Dedicated Operator in Continuous Communication with CR to Operate AFW	f	Resolved per NUREG-0933
II.K.1(16)	Implement Procedures That Identify PZR PORV "Open" Indications and That Direct Operator to Close Manually at "Reset" Setpoint	f	Resolved per NUREG-0933
II.K.1(17)	Trip PZR Level Bistable so That PZR Low Pressure Will Initiate Safety Injection	f	Resolved per NUREG-0933
II.K.1(26)	Revise Emergency Procedures and Train ROs and SROs	f	Resolved per NUREG-0933
II.K.3(3)	Report Safety and Relief Valve Failures Promptly and Challenges Annually	f	Resolved per NUREG-0933
II.K.3(5)	Automatic Trip of Reactor Coolant Pumps	f	Resolved per NUREG-0933
II.K.3(10)	Anticipatory Trip Modification Proposed by Some Licensees to Confine Range of Use to High Power Levels	f	Resolved per NUREG-0933

STD COL 1.9-3

Table 1.9-203 (Sheet 6 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
II.K.3(11)	Control Use of PORV Supplied by Control Components, Inc. Until Further Review Complete	f	Resolved per NUREG-0933
II.K.3(12)	Confirm Existence of Anticipatory Trip Upon Turbine Trip	f	Resolved per NUREG-0933
II.K.3(30)	Revised Small-Break LOCA Methods to Show Compliance with 10 CFR 50, Appendix K	f	Resolved per NUREG-0933
II.K.3(31)	Plant-Specific Calculations to Show Compliance with 10 CFR 50.46	f	Resolved per NUREG-0933
III.A.1.1(1)	Implement Action Plan Requirements for Promptly Improving Licensee Emergency Preparedness	f	Resolved per NUREG-0933
III.A.1.1(2)	Perform an Integrated Assessment of the Implementation	f	Not applicable to new plants
III.A.2.1(1)	Publish Proposed Amendments to the Rules	d	Resolved per NUREG-0933
III.A.2.1(2)	Conduct Public Regional Meetings	d	Not applicable to new plants
III.A.2.1(3)	Prepare Final Commission Paper Recommending Adoption of Rules	d	Not applicable to new plants
III.A.2.1(4)	Revise Inspection Program to Cover Upgraded Requirements	d	Resolved per NUREG-0933
III.A.2.2	Development of Guidance and Criteria	d	Resolved per NUREG-0933
III.A.3.3	Communications	d	Resolved per NUREG-0933
III.C.1(1)	Review Publicly Available Documents	d	Not applicable to new plants
III.C.1(2)	Recommend Publication of Additional Information	d	Not applicable to new plants
III.C.1(3)	Program of Seminars for News Media Personnel	d	Not applicable to new plants
III.C.2(1)	Develop Policy and Procedures for Dealing With Briefing Requests	d	Not applicable to new plants
III.C.2(2)	Provide Training for Members of the Technical Staff	d	Not applicable to new plants
III.D.2.4(2)	Place 50 TLDs Around Each Site	d	Not applicable to new plants
III.D.2.6	Independent Radiological Measurements	d	Not applicable to new plants
III.D.3.2(1)	Amend 10 CFR 20	d	Not applicable to new plants

STD COL 1.9-3

Table 1.9-203 (Sheet 7 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
III.D.3.2(2)	Issue a Regulatory Guide	d	Not applicable to new plants
III.D.3.2(3)	Develop Standard Performance Criteria	d	Not applicable to new plants
III.D.3.2(4)	Develop Method for Testing and Certifying Air-Purifying Respirators	d	Not applicable to new plants
III.D.3.3	In-Plant Radiation Monitoring	COL Item 12.3-2	12.3.4, Appendix 12AA
III.D.3.5(1)	Develop Format for Data To Be Collected by Utilities Regarding Total Radiation Exposure to Workers	d	Not applicable to new plants
III.D.3.5(2)	Investigate Methods of Obtaining Employee Health Data by Nonlegislative Means	d	Not applicable to new plants
III.D.3.5(3)	Revise 10 CFR 20	d	Not applicable to new plants
IV.A.1	Seek Legislative Authority	d	Not applicable to new plants
IV.A.2	Revise Enforcement Policy	d	Not applicable to new plants
IV.B.1	Revise Practices for Issuance of Instructions and Information to Licensees	d	Not applicable to new plants
IV.D.1	NRC Staff Training	d	Not applicable to new plants
IV.E.1	Expand Research on Quantification of Safety Decision-Making	d	Not applicable to new plants
IV.E.2	Plan for Early Resolution of Safety Issues	d	Not applicable to new plants
IV.E.3	Plan for Resolving Issues at the CP Stage	d	Not applicable to new plants
IV. E.4	Resolve Generic Issues by Rulemaking	d	Not applicable to new plants
IV.G.1	Develop a Public Agenda for Rulemaking	d	Not applicable to new plants
IV.G.2	Periodic and Systematic Reevaluation of Existing Rules	d	Not applicable to new plants
IV.G.3	Improve Rulemaking Procedures	d	Not applicable to new plants
IV.G.4	Study Alternatives for Improved Rulemaking Process	d	Not applicable to new plants
IV.H.1	NRC Participation in the Radiation Policy Council	d	Not applicable to new plants
V.A.1	Develop NRC Policy Statement on Safety	d	Not applicable to new plants

Table 1.9-203 (Sheet 8 of 14)
STD COL 1.9-3 **Listing Of Unresolved Safety Issues And Generic Safety Issues**

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
V.B.1	Study and Recommend, as Appropriate, Elimination of Nonsafety Responsibilities	d	Not applicable to new plants
V.C.1	Strengthen the Role of Advisory Committee on Reactor Safeguards	d	Not applicable to new plants
V.C.2	Study Need for Additional Advisory Committees	d	Not applicable to new plants
V.C.3	Study the Need to Establish an Independent Nuclear Safety Board	d	Not applicable to new plants
V.D.1	Improve Public and Intervenor Participation in the Hearing Process	d	Not applicable to new plants
V.D.2	Study Construction-During-Adjudication Rules	d	Not applicable to new plants
V.D.3	Reexamine Commission Role in Adjudication	d	Not applicable to new plants
V.D.4	Study the Reform of the Licensing Process	d	Not applicable to new plants
V.E.1	Study the Need for TMI-Related Legislation	d	Not applicable to new plants
V.F.1	Study NRC Top Management Structure and Process	d	Not applicable to new plants
V.F.2	Reexamine Organization and Functions of the NRC Offices	d	Not applicable to new plants
V.F.3	Revise Delegations of Authority to Staff	d	Not applicable to new plants
V.F.4	Clarify and Strengthen the Respective Roles of Chairman, Commission, and Executive Director for Operations	d	Not applicable to new plants
V.F.5	Authority to Delegate Emergency Response Functions to a Single Commissioner	d	Not applicable to new plants
V.G.1	Achieve Single Location, Long-Term	d	Not applicable to new plants
V.G.2	Achieve Single Location, Interim	d	Not applicable to new plants
Task Action Plan Items			
A-3	Westinghouse Steam Generator Tube Integrity (former USI)	COL Item 5.4-1	5.4.2.5
A-19	Digital Computer Protection System	d	Not applicable to new plants
A-20	Impacts of the Coal Fuel Cycle	d	Not applicable to new plants
A-23	Containment Leak Testing	COL Item 6.2-1	6.2.5.1

STD COL 1.9-3

Table 1.9-203 (Sheet 9 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
A-27	Reload Applications	d	Not applicable to new plants
B-1	Environmental Technical Specifications	d	Not applicable to new plants
B-2	Forecasting Electricity Demand	d	Not applicable to new plants
B-11	Subcompartment Standard Problems	d	Not applicable to new plants
B-13	Marviken Test Data Evaluation	d	Not applicable to new plants
B-20	Standard Problem Analysis	d	Not applicable to new plants
B-25	Piping Benchmark Problems	d	Not applicable to new plants
B-27	Implementation and Use of Subsection NF	d	Not applicable to new plants
B-28	Radionuclide/Sediment Transport Program	d	Not applicable to new plants
B-29	Effectiveness of Ultimate Heat Sinks	d	Not applicable to new plants
B-30	Design Basis Floods and Probability	d	Not applicable to new plants
B-33	Dose Assessment Methodology	d	Not applicable to new plants
B-35	Confirmation of Appendix I Models for Calculations of Releases of Radioactive Materials in Gaseous and Liquid Effluents from Light Water Cooled Power Reactors	d	Not applicable to new plants
B-37	Chemical Discharges to Receiving Waters	d	Not applicable to new plants
B-42	Socioeconomic Environmental Impacts	d	Not applicable to new plants
B-43	Value of Aerial Photographs for Site Evaluation	d	Not applicable to new plants
B-44	Forecasts of Generating Costs of Coal and Nuclear Plants	d	Not applicable to new plants
B-49	Inservice Inspection Criteria and Corrosion Prevention Criteria for Containments	d	Not applicable to new plants
B-59	(N-1) Loop Operation in BWRs and PWRs	d	Not applicable to new plants
B-64	Decommissioning of Reactors	f	Resolved per NUREG-0933.

Table 1.9-203 (Sheet 10 of 14)

STD COL 1.9-3

Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
B-72	Health Effects and Life Shortening from Uranium and Coal Fuel Cycles	d	Not applicable to new plants
C-4	Statistical Methods for ECCS Analysis	d	Not applicable to new plants
C-5	Decay Heat Update	d	Not applicable to new plants
C-6	LOCA Heat Sources	d	Not applicable to new plants
New Generic Issues			
43.	Reliability of Air Systems	f, j	Resolved per NUREG-0933.
59.	Technical Specification Requirements for Plant Shutdown when Equipment for Safe Shutdown is Degraded or Inoperable	d	Not applicable to new plants
67.2.1	Integrity of Steam Generator Tube Sleeves	d	Not applicable to new plants
67.5.1	Reassessment of Radiological Consequences	d	Not applicable to new plants
67.5.2	Reevaluation of SGTR Design Basis	d	Not applicable to new plants
67.10.0	Supplement Tube Inspections	d	Not applicable to new plants
99.	RCS/RHR Suction Line Valve Interlock on PWRs	f	Resolved per NUREG-0933.
111.	Stress Corrosion Cracking of Pressure Boundary Ferritic Steels in Selected Environments	d	Not applicable to new plants
112.	Westinghouse RPS Surveillance Frequencies and Out-of-Service Times	d	Not applicable to new plants
118.	Tendon Anchorage Failure	f	Resolved per NUREG-0933.
119.1	Piping Rupture Requirements and Decoupling of Seismic and LOCA Loads	d	Not applicable to new plants
119.3	Decoupling the OBE from the SSE	d	Not applicable to new plants
119.4	BWR Piping Materials	d	Not applicable to new plants
119.5	Leak Detection Requirements	d	Not applicable to new plants

STD COL 1.9-3

Table 1.9-203 (Sheet 11 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
128.	Electrical Power Reliability	h (High)	Resolved per NUREG-0933.
130.	Essential Service Water Pump Failures at Multiplant Sites	f	See DCD Subsection 1.9.4, item 130
133.	Update Policy Statement on Nuclear Plant Staff Working Hours	d	Not applicable to new plants
136.	Storage and Use of Large Quantities of Cryogenic Combustibles On Site	d	Not applicable to new plants
139.	Thinning of Carbon Steel Piping in LWRs	d	Not applicable to new plants
146.	Support Flexibility of Equipment and Components	d	Not applicable to new plants
147.	Fire-Induced Alternate Shutdown Control Room Panel Interactions	d	Not applicable to new plants
148.	Smoke Control and Manual Fire-Fighting Effectiveness	d	Not applicable to new plants
155.2	Establish Licensing Requirements For Non-Operating Facilities	d	Not applicable to new plants
156	Systematic Evaluation Program	f	Not applicable to new plants
156.6.1	Pipe Break Effects on Systems and Components	High	The AP1000 is a new plant that takes the effects of a pipe break into account and therefore issue 156.6.1 is not applicable.
163	Multiple Steam Generator Tube Leakage	h (High)	See DCD Subsection 1.9.4.2.3, item 163
168	Environmental Qualification Of Electrical Equipment	f	Not applicable to new plants
178	Effect Of Hurricane Andrew On Turkey Point	d	Not applicable to new plants
180	Notice Of Enforcement Discretion	d	Not applicable to new plants
181	Fire Protection	d	Not applicable to new plants
183	Cycle-Specific Parameter Limits In Technical Specifications	d	Not applicable to new plants

Table 1.9-203 (Sheet 12 of 14)
STD COL 1.9-3 **Listing Of Unresolved Safety Issues And Generic Safety Issues**

	Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
	184	Endangered Species	d	Not applicable to new plants
	185	Control of Recriticality following Small-Break LOCA in PWRs	h	Not applicable to new plants
	186	Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants	Continue	1.9.4.2.3 9.1.5.3
	189	Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident Description	Continue	Not applicable to the AP1000.
	191	Assessment Of Debris Accumulation On PWR Sump Performance	h (High)	See DCD Subsections 6.3.2.2.7 and 1.9.4.2.3, item 191
	199	Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States	Issue to be Prioritized by NRC in the Future	2.5
	Human Factors Issues			
VCS COL 1.9-3	HF1.1	Shift Staffing	f	13.1.2.3 18.6
STD COL 1.9-3	HF2.1	Evaluate Industry Training	d	Not applicable to new plants
	HF2.2	Evaluate INPO Accreditation	d	Not applicable to new plants
	HF2.3	Revise SRP Section 13.2	d	Not applicable to new plants
	HF3.1	Develop Job Knowledge Catalog	d	Not applicable to new plants
	HF3.2	Develop License Examination Handbook	d	Not applicable to new plants
	HF3.5	Develop Computerized Exam System	d	Not applicable to new plants
	HF4.2	Procedures Generation Package Effectiveness Evaluation	d	Not applicable to new plants
	HF7.1	Human Error Data Acquisition	d	Not applicable to new plants
	HF7.2	Human Error Data Storage and Retrieval	d	Not applicable to new plants
	HF7.3	Reliability Evaluation Specialist Aids	d	Not applicable to new plants
	HF7.4	Safety Event Analysis Results Applications	d	Not applicable to new plants

STD COL 1.9-3

Table 1.9-203 (Sheet 13 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
Chernobyl Issues			
CH1.1A	Symptom-Based EOPs	d	Not applicable to new plants
CH1.1B	Procedure Violations	d	Not applicable to new plants
CH1.2A	Test, Change, and Experiment Review Guidelines	d	Not applicable to new plants
CH1.2B	NRC Testing Requirements	d	Not applicable to new plants
CH1.3A	Revise Regulatory Guide 1.47	d	Not applicable to new plants
CH1.4A	Engineered Safety Feature Availability	d	Not applicable to new plants
CH1.4B	Technical Specification Bases	d	Not applicable to new plants
CH1.4C	Low Power and Shutdown	d	Not applicable to new plants
CH1.5	Operating Staff Attitudes Toward Safety	d	Not applicable to new plants
CH1.6A	Assessment of NRC Requirements on Management	d	Not applicable to new plants
CH1.7A	Accident Management	d	Not applicable to new plants
CH2.1A	Reactivity Transients	d	Not applicable to new plants
CH2.3B	Contamination Outside Control Room	d	Not applicable to new plants
CH2.3C	Smoke Control	d	Not applicable to new plants
CH2.3D	Shared Shutdown Systems	d	Not applicable to new plants
CH2.4A	Firefighting With Radiation Present	d	Not applicable to new plants
CH3.1A	Containment Performance	d	Not applicable to new plants
CH3.2A	Filtered Venting	d	Not applicable to new plants
CH4.3A	Ingestion Pathway Protective Measures	d	Not applicable to new plants
CH4.4A	Decontamination	d	Not applicable to new plants
CH4.4B	Relocation	d	Not applicable to new plants
CH5.1A	Mechanical Dispersal in Fission Product Release	d	Not applicable to new plants

STD COL 1.9-3

Table 1.9-203 (Sheet 14 of 14)
Listing Of Unresolved Safety Issues And Generic Safety Issues

Action Plan Item/ Issue No.	Title	Applicable Screening Criteria	Notes
CH5.1B	Stripping in Fission Product Release	d	Not applicable to new plants
CH5.2A	Steam Explosions	d	Not applicable to new plants
CH6.1B	Structural Graphite Experiments	d	Not applicable to new plants
CH6.2	Assessment	d	Not applicable to new plants

Notes (from DCD Table 1.9-2):

(d) Issue is not a design issue (Environmental, Licensing, or Regulatory Impact Issue; or covered in an existing NRC program).

(f) Issue is not an AP1000 design certification issue. Issue is applicable to current operating plants or is programmatic in nature.

(h) Issue is unresolved pending generic resolution (for example, prioritized as High, Medium, or possible resolution identified).

(j) The AP600 DSER (Draft NUREG-01512) identified this item as required to be discussed.

STD COL 1.9-2

Table 1.9-204 (Sheet 1 of 6)
Generic Communications Assessment

	Number	Title	Comment
	BULLETIN		
	80-06	Engineered Safety Feature (ESF) Reset Controls (3/80)	See Note a.
	80-10	Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment (5/80)	Appendix 12AA
VCS COL 1.9-2	80-15	Possible Loss of Emergency Notification System (ENS) with Loss of Offsite Power (6/80)	9.5.2.5.1 Emergency Plan
STD COL 1.9-2	88-11	Pressurizer Surge Line Thermal Stratification	3.9.3.1.2
	02-01	Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity	5.2.4 See Note a.
	02-02	Reactor Pressure Vessel Head and Vessel Head Penetration Nozzle Inspection Programs	5.2.4 See Note a.
	03-01	Potential Impact of Debris Blockage on Emergency Sump Recirculation at Pressurized-Water Reactors	6.3 See Note a.
	03-02	Leakage from Reactor Pressure Vessel Lower Head Penetrations and Reactor Coolant Pressure Boundary Integrity	5.2.4.3 See Note a.
	03-03	Potentially Defective 1-inch Valves for Uranium Hexafluoride Cylinders	N/A
	03-04	Rebaselining of Data in the Nuclear Materials Management and Safeguards System	N/A One time report.

STD COL 1.9-2

Table 1.9-204 (Sheet 2 of 6)
Generic Communications Assessment

Number	Title	Comment
04-01	Inspection of Alloy 82/182/600 Materials Used in the Fabrication of Pressurizer Penetrations and Steam Space Piping Connections at Pressurized-Water Reactors	See Note a.
05-01	Material Control and Accounting at Reactors and Wet Spent Fuel Storage Facilities	13.5.2.2.9
05-02	Emergency Preparedness and Response Actions for Security-Based Events	13.3
GENERIC LETTERS		
80-22	Transmittal of NUREG-0654 “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans” (3/80)	13.3
80-26	Qualifications of Reactor Operators (3/80)	13.2 18.10
80-51	On-Site Storage Of Low-Level Waste (6/90)	11.4.6
80-55	Possible Loss of Hotline With Loss Of Off-Site Power	See Bulletin 80-15
80-77	Refueling Water Level (8/80)	16.1 See Note a.
80-094	Emergency Plan (11/80)	13.3
80-099	Technical Specification Revisions for Snubber Surveillance (11/80)	Snubbers no longer in generic Tech Specs See Note a.
80-108	Emergency Planning (12/80)	13.3
81-02	Analysis, Conclusions and Recommendations Concerning Operator Licensing (1/81)	13.2

STD COL 1.9-2

Table 1.9-204 (Sheet 3 of 6)
Generic Communications Assessment

	Number	Title	Comment
	81-10	Post-TMI Requirements for the Emergency Operations Facility (2/81)	13.3
	81-38	Storage of Low-Level Radioactive Waste at Power Reactor Sites (11/81)	11.4.6
	81-40	Qualifications of Reactor Operators (12/81)	13.1 13.2
	82-02	Commission Policy on Overtime (2/82)	16.1
	82-04	Use of INPO See-in Program (3/82)	13.1 13.5
VCS COL 1.9-2	82-12	Nuclear Power Plant Staff Working Hours (6/82)	13.1.2.3 13.5.1
STD COL 1.9-2	82-13	Reactor Operator and Senior Reactor Operator Examinations (6/82)	For information only.
	82-18	Reactor Operator and Senior Reactor Operator Requalification Examinations (10/82)	13.2
	83-06	Certificates and Revised Format For Reactor Operator and Senior Reactor Operator Licenses (1/83)	13.2
	83-11	Licensee Qualification for Performing Safety Analyses in Support of Licensing Actions (2/83)	13.1 See Note a.
	83-12	Issuance of NRC FORM 398 - Personal Qualifications Statement - Licensee (2/83)	13.2
	83-17	Integrity of the Requalification Examinations for Renewal of Reactor Operator and Senior Reactor Operator Licenses (4/83)	13.1
	83-22	Safety Evaluation of "Emergency Response Guidelines" (6/83)	18.9
	83-40	Operator Licensing Examination (12/83)	13.2

STD COL 1.9-2

Table 1.9-204 (Sheet 4 of 6)
Generic Communications Assessment

Number	Title	Comment
84-10	Administration of Operating Tests Prior to Initial Criticality (10 CFR 55.25) (4/84)	13.2
84-14	Replacement and Requalification Training Program (5/84)	13.2
84-17	Annual Meeting to Discuss Recent Developments Regarding Operator Training, Qualifications, and Examinations (7/84)	Administrative
84-20	Scheduling Guidance for Licensee Submittals of Reloads That Involve Unreviewed Safety Questions (8/84)	13.5
85-04	Operating Licensing Examinations (1/85)	Administrative
85-05	Inadvertent Boron Dilution Events (1/85)	13.5
85-14	Commercial Storage At Power Reactor Sites Of Low Level Radioactive Waste Not Generated By The Utility (8/85)	Administrative
85-18	Operator Licensing Examinations (9/85)	Administrative
85-19	Reporting Requirements On Primary Coolant Iodine Spikes (9/85)	16.1
86-14	Operator Licensing Examinations (8/86)	Administrative
87-14	Operator Licensing Examinations (8/87)	Administrative
88-05	Boric Acid Corrosion of Carbon Steel Reactor Pressure Boundary Components in PWR Plants (3/88)	5.2.4 See Note a.
88-14	Instrument Air Supply System Problems Affecting Safety-Related Equipment (8/88)	9.3.7
88-18	Plant Record Storage on Optical Disk (10/88)	17

STD COL 1.9-2

Table 1.9-204 (Sheet 5 of 6)
Generic Communications Assessment

Number	Title	Comment
89-07	Power Reactors Safeguards Contingency Planning for Surface Vehicle Bombs (4/89)	13.6
89-07 S1	Power Reactor Safeguards Contingency Planning for Surface Vehicle Bombs	13.6
89-08	Erosion/Corrosion-Induced Pipe Wall Thinning (5/89)	10.1.3.1
89-12	Operator Licensing Examination (7/89)	13.2
89-15	Emergency Response Data System (8/89)	9.5.2 13.3
89-17	Planned Administrative Changes to the NRC Operator Licensing Written Examination Process (9/89)	N/A
91-14	Emergency Telecommunications (9/91)	9.5.2 13.3
91-16	Licensed Operators and Other Nuclear Facility Personnel Fitness for Duty (10/91)	13.7
92-01	Reactor Vessel Structural Integrity (1/92)	5.3.2.6.3
93-01	Emergency Response Data System Test Program	13.3
93-03	Verification of Plant Records	17
96-02	Reconsideration of Nuclear Power Plant Security Requirements Associated with an Internal Threat (2/96)	13.6
03-01	Control Room Habitability	6.4 See Note a.
04-01	Requirements for Steam Generator Tube Inspections	5.4.2.5 16.1 See Note a.

STD COL 1.9-2

Table 1.9-204 (Sheet 6 of 6)
Generic Communications Assessment

Number	Title	Comment
04-02	Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors	6.3.8.1 See Note a.
06-01	Steam Generator Tube Integrity and Associated Technical Specifications	5.4.2.5 16.1 See Note a.
06-02	Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power	8.2.1.1 8.2.2 See Note a.
06-03	Potentially Nonconforming Hemyc and MT Fire Barrier Configurations	9.5.1.8 See Note a.
07-01	Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients.	17.6 See Note a.

(a) The design aspects of this topic are as stated in the AP1000 DCD.

Add the following section after DCD Section 1.9.

1.10 NUCLEAR POWER PLANTS TO BE OPERATED ON MULTI-UNIT SITES

STD SUP 1.10-1 The certification for the AP1000 is for a single unit. Dual siting of AP1000 is achievable, provided that the centerlines of the units are sufficiently separated. The primary consideration in setting this separation distance is the space needed to support plant construction via the use of a heavy-lift crane.

Security controls during construction and operation are addressed in the Physical Security Plan.

Management and administrative controls are established to identify potential hazards to structures, systems, and components (SSCs) of an operating unit as a result of construction activities at a unit under construction. Controls within this section are not required unless there is an operating unit on the site, i.e., a unit with fuel loaded into the reactor vessel. Advance notification, scheduling and planning allow site management to implement interim controls to reduce the potential for impact to SSCs.

This section presents an assessment of the potential impacts of construction of one unit on SSCs important to safety for an operating unit, in accordance with 10 CFR 52.79(a)(31). This assessment includes:

- Identification of potential construction activity hazards
- Identification of SSCs important to safety and limiting conditions for operation (LCOs) for the operating unit
- Identification of potentially impacted SSCs and LCOs
- Identification of applicable managerial and administrative controls

1.10.1 POTENTIAL CONSTRUCTION ACTIVITY HAZARDS

VCS SUP 1.10-1 The power blocks for Units 2 and 3 meet the minimum required separation of 800 feet between plant centerlines.

STD SUP 1.10-1 Construction activities may include site exploration, grading, clearing, and installation of drainage and erosion-control measures; boring, drilling, dredging, pile driving and excavating; transportation, storage and warehousing of equipment; and construction, erection, and fabrication of new facilities.

Construction activities and their representative hazards to an operating unit are shown in Table 1.10-201.

1.10.2 POTENTIALLY IMPACTED SSCS AND LIMITING CONDITIONS FOR OPERATION

The construction activities described above were reviewed for possible impact to operating unit SSCs important to safety.

VCS SUP 1.10-1

- VCSNS Unit 1 SSCs important to safety are described in Chapter 3 of the Unit 1 Updated Final Safety Analysis Report (UFSAR).
- Limiting conditions for operation of VCSNS Unit 1 are located in Appendix A of the Unit 1 Operating License (Technical Specifications).
- Units 2 and 3 SSCs important to safety are described in FSAR Chapter 3.
- As indicated in Chapter 16, the LCOs for Units 2 and 3 are located in Part 4 of the COL Application.

STD SUP 1.10-1 The initial assessment consisted of a review of individual SSCs and LCOs to determine whether an item is applicable, or may be eliminated due to either examination or being internal and specific to an operating unit. The assessment identified the SSCs that could reasonably be expected to be impacted by construction activities unless administrative and managerial controls are established. The results of the assessment are presented in Table 1.10-202.

Periodic assessment during construction is addressed in Appendix 13AA, Subsection 13AA.1.1.1.1.8.

1.10.3 MANAGERIAL AND ADMINISTRATIVE CONTROLS

To eliminate or mitigate construction hazards that could potentially impact operating unit SSCs important to safety, specific managerial and administrative controls have been identified as shown in Table 1.10-203.

Although not all of the managerial and administrative construction controls are necessary to protect the operating unit, the identified controls are applied to any operating unit as a conservative measure. This conservative approach provides reasonable assurance of protecting the identified SSCs from potential construction hazards and preventing the associated LCOs specified in the operating unit Technical Specifications from being exceeded as a result of construction activities, as discussed below.

The majority of the operating unit SSCs important to safety are contained and protected within safety-related structures. The managerial controls protect these internal SSCs from postulated construction hazards by maintaining the integrity and design basis of the safety-related structures and foundations. Heavy load drop controls, crane boom failure standoff requirements, ground vibration controls and construction generated missile(s) control are examples of managerial controls that provide this protection.

Other managerial controls support maintaining offsite power, control of hazardous materials and gases, and protection of cooling water supplies and safety system instrumentation. These managerial controls prevent or mitigate external construction impacts that could affect SSCs important to safety. These controls also prevent or mitigate unnecessary challenges to safety systems caused by plant construction hazards, such as disruption of offsite transmission lines or impact to plant cooling water supplies.

The above discussed controls to eliminate or mitigate construction hazards that could potentially impact operating unit SSCs important to safety are in place when there is an operating nuclear unit on the site. Additional controls may be established during construction as addressed in Appendix 13AA, Subsection 13AA.1.1.1.1.8.

STD SUP 1.10-1

Table 1.10-201 (Sheet 1 of 3)
Potential Hazards from Construction Activities

CONSTRUCTION ACTIVITY HAZARD	POTENTIAL IMPACT
Site Exploration, Grading, Clearing, Installation of Drainage and Erosion Control Measures	• Overhead Power Lines • Transmission Towers • Underground Conduits, Piping, Tunnels, Etc. • Site Access and Egress • Drainage Facilities and Structures • Onsite Transportation Routes • Slope Stability • Soil Erosion and Local Flooding • Construction-Generated Dust and Equipment Exhausts • Encroachment on Plant Control Boundaries • Encroachment on Structures and Facilities

Table 1.10-201 (Sheet 2 of 3)
STD SUP 1.10-1 **Potential Hazards from Construction Activities**

CONSTRUCTION ACTIVITY HAZARD	POTENTIAL IMPACT
Boring, Drilling, Pile Driving, Dredging, Demolition, Excavation	• Underground Conduits, Piping, Tunnels, Etc
	• Foundation Integrity
	• Structural Integrity
	• Slope Stability
	• Erosion and Turbidity Control
	• Groundwater and Groundwater Monitoring Facilities
	• Dewatering Structures, Systems and Components
	• Nearby Structures, Systems and Components
	• Vibratory Ground Motion
Equipment Movement, Material Delivery, Vehicle Traffic	• Overhead Power Lines
	• Transmission Towers
	• Underground Conduits, Piping, Tunnels
	• Crane Load Drops
	• Crane or Crane Boom Failures
	• Vehicle Accidents
	• Rail Car Derailments
Equipment and Material Laydown, Storage, Warehousing	• Releases of Flammable, Hazardous or Toxic Materials
	• Wind-Generated, Construction-Related Debris and Missiles

STD SUP 1.10-1

Table 1.10-201 (Sheet 3 of 3)
Potential Hazards from Construction Activities

CONSTRUCTION ACTIVITY HAZARD	POTENTIAL IMPACT
General Construction, Erection, Fabrication	• Physical Integrity of Structures, Systems and Components
	• Adjacent or Nearby Structures, Systems and Components
	• Instrumentation and Control Systems and Components
	• Electrical Systems and Components· Cooling Water Systems and Components
	• Waste Heat Environmental Controls and Parameters
	• Radioactive Waste Release Points and Parameters
	• Abandonment of Structures, Systems or Components
	• Relocation of Structures, Systems or Components
	• Removal of Structures, Systems or Components
Connection, Integration, Testing	• Instrumentation and Control Systems and Components
	• Electrical and Power Systems and Components
	• Cooling Water Systems and Components

STD SUP 1.10-1

Table 1.10-202 (Sheet 1 of 2)
Hazards During Construction Activities

CONSTRUCTION HAZARD	IMPACTED SSCs
Impact on Overhead Power Lines	• Offsite Power System
Impact on Transmission Towers	• Offsite Power System
Impact on Utilities, Underground Conduits, Piping, Tunnels, Tanks	• Fire Protection System • Service Water System[1]
Impact of Construction-Generated Dust and Equipment Exhausts	• Control Room Emergency HVAC Systems[1] • Diesel Generators
Impact of Vibratory Ground Motion	• Offsite Power System • Onsite Power Systems • Instrumentation and Seismic Monitors
Impact of Crane or Crane Boom Failures	• Safety-Related Structures
Impact of Releases of Flammable, Hazardous or Toxic Materials	• Control Room Emergency HVAC Systems[1]
Impact of Wind-Generated, Construction-Related Debris and Missiles	• Safety-Related Structures • Control Room Emergency HVAC Systems[1]
Impact on Electrical Systems and Components	• Offsite Power System • Onsite Power Systems
Impact on Cooling Water Systems and Components	• Service Water System[1] • Ultimate Heat Sink[1]

STD SUP 1.10-1

Table 1.10-202 (Sheet 2 of 2)
Hazards During Construction Activities

CONSTRUCTION HAZARD	IMPACTED SSCs
Impact on Radioactive Waste Release Points and Parameters	• Gaseous and Liquid Radioactive Waste Management Systems
Impact of Relocation of Structures, Systems or Components	• Fire Protection System • Service Water System[1]
Impact of Site Groundwater Depression and Dewatering	• Safety-Related Structures and Foundations
Impact of Equipment Delivery and Heavy Equipment Delivery	• Safety-Related Structures and Foundations
Impact of Local Flooding	• Safety-Related structures, systems, and components (SSCs)

[1] Not applicable to AP1000 operating units

STD SUP 1.10-1

Table 1.10-203 (Sheet 1 of 3)
Managerial and Administrative Construction Controls

CONSTRUCTION HAZARDS TO SSCs	MANAGERIAL CONTROL
Impact on Transmission Power Lines and Offsite Power Lines	• Safe standoff clearance distances are established for transmission power lines, including verification of standoff distance for modules, the reactor vessel and other equipment to be transported beneath energized electric lines to meet minimum standoff clearance requirements. • Physical warning or caution barriers and signage are erected along transport routes.
Impact on Transmission Towers	• Establish controls or physical barriers to avoid equipment collisions with electric transmission support towers
Impact on Utilities, Underground Conduits, Piping, Tunnels, Tanks	• Grading, excavation, and pile driving require location and identification of equipment or underground structures that must be relocated, removed, or left in place and protected prior to the work activity.
Impact of Construction-Generated Dust and Equipment Exhausts	• Fugitive dust and dust generation is controlled. Potentially affected system air intakes and filters are periodically monitored.
Impact of Vibratory Ground Motion	• Construction administrative procedures, methods, and controls are implemented to prevent exceeding ground vibration and instrumentation limit settings.
Impact of Crane or Crane Boom Failures	• Construction standoff distance controls prevent heavy load impacts from crane boom failures and crane load drops. Drop analyses may be substituted if minimum standoff distances are not practical.

STD SUP 1.10-1

Table 1.10-203 (Sheet 2 of 3)
Managerial and Administrative Construction Controls

CONSTRUCTION HAZARDS TO SSCs	MANAGERIAL CONTROL
Impact of Releases of Flammable, Hazardous or Toxic Materials and Missile Generation	• Environmental, safety and health controls limit transport, storage, quantities, type and use of flammable, hazardous, toxic materials and compressed gasses. Construction safety and storage controls maintain potential missile generation events from compressed gasses within the operating unit design basis.
Impact of Wind-Generated, Construction-Related Debris and Missiles	• Administrative controls address equipment, material storage and transport during high winds or high wind warnings. • Plant procedures are followed during severe weather conditions which may call for power reduction or shut down.
Impact on Electrical Systems and Components	• Affected operating unit electrical systems and components within the construction area are identified and isolated or relocated or otherwise protected.
Impact on Cooling Water Systems and Components	• Transport of heavy load equipment over buried cooling water piping is prohibited without evaluation.
Impact on Radioactive Waste Release Points and Parameters	• Engineering evaluation and managerial controls are implemented, as necessary, to prevent radioactive releases beyond the established limits due to construction activity.
Impact of Relocation of Structures, Systems or Components	• Administrative controls identify SSCs that require relocation. Temporary or permanent design changes are implemented if necessary.

Table 1.10-203 (Sheet 3 of 3)
STD SUP 1.10-1 **Managerial and Administrative Construction Controls**

CONSTRUCTION HAZARDS TO SSCs	MANAGERIAL CONTROL
Impact of Equipment Delivery and Heavy Equipment Delivery	• Rail transport speed limits and maximum rail loading weights onsite are established. • General equipment and heavy equipment movement controls and limitations are established.
Impact of Local Flooding	• Site grading and drainage provisions consider potential flooding impacts from local intense precipitation
Impact of Site Groundwater Dewatering	• Administrative controls address groundwater level monitoring

APPENDIX 1A
CONFORMANCE WITH REGULATORY GUIDES

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

STD COL 1.9-1 Appendix 1AA is provided to supplement the information in DCD Appendix 1A.

APPENDIX 1AA
CONFORMANCE WITH REGULATORY GUIDES

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
DIVISION 1 - Power Reactors			
Regulatory Guide 1.7, Rev. 3, 03/07 – Control of Combustible Gas Concentrations in Containment			
Conformance of the design aspects with Revision 2 of the Regulatory Guide is as stated in the DCD. Conformance with Revision 3 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
C.2		Conforms	
C.4		Conforms	
Regulatory Guide 1.8, Rev. 3, 5/00 – Qualification and Training of Personnel for Nuclear Power Plants			
C.1		Conforms	
C.2	Section 4 of ANSI/ANS-3.1-1993	Exception	Not able to meet Regulatory Guide 1.8, Rev. 3 qualification requirements for licensed personnel prior to operations.
Regulatory Guide 1.11, Rev. 1, 3/10 – Instrument Lines Penetrating the Primary Reactor Containment			
Conformance with the design aspects is as stated in the DCD. This guidance is completely within the scope of the DCD.			
Regulatory Guide 1.12, Rev. 2, 3/97 – Nuclear Power Plant Instrumentation for Earthquakes			
Conformance of the design aspects is as stated in the DCD. Conformance for programmatic and/or operational aspects is documented below.			
C.3		Conforms	
C.8		Conforms	
Regulatory Guide 1.13, Rev. 2, 03/07 - Spent Fuel Storage Facility Design Basis			
Conformance of the design aspects with Revision 1 of the Regulatory Guide is as stated in the DCD. Conformance with Revision 2 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
C.7		Conforms	

	Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
STD COL 1.9-1	**Regulatory Guide 1.20, Rev. 3, 3/07 – Comprehensive Vibration Assessment Program For Reactor Internals During Preoperational and Initial Startup Testing**			
	Conformance with Revision 2 of the Regulatory Guide is documented in the DCD. This guidance is completely within the scope of the DCD.			
	Regulatory Guide 1.21, Rev. 1, 6/74 – Measuring Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents From Light-Water-Cooled Nuclear Power Plants			
	Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
		C.1	Conforms	
		C.3-C.5	Conforms	
		C.6	Conforms	
		C.7-C.14	Conforms	
VCS COL 1.9-1	**Regulatory Guide 1.23, Rev. 1, 3/07 – Meteorological Monitoring Programs for Nuclear Power Plants**			
		General	Conforms	Plant operations phase program will conform.
STD COL 1.9-1	**Regulatory Guide 1.26, Rev. 4, 3/07 – Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants**			
	Conformance with Revision 3 of the Regulatory Guide for DCD scope of work is as stated in the DCD. Conformance with Revision 4 of this Regulatory Guide for remaining scope is documented below.			
		General	Conforms	
VCS COL 1.9-1	**Regulatory Guide 1.28, Rev. 0, 6/72 – Quality Assurance Program Requirements (Design and Construction)**			
	Design, procurement, and construction activities associated with VCSNS Units 2 and 3 that may occur before the COL is issued will be conducted in accordance with the existing SCE&G Unit 1 QA Program requirements (Regulatory Guide 1.28, Rev. 0). Design and construction activities that occur following COL issuance will be conducted in accordance with the QAPD submitted as Part 13 of the application and is the QAPD that was evaluated and discussed in Table 1.9-202 for conformance to SRP 17.1.			

	Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
STD COL 1.9-1				

VCS COL 1.9-1 **Regulatory Guide 1.28, Rev. 3, 8/85 – Quality Assurance Program Requirements (Design and Construction)**

Conformance for DCD scope of work is as stated in the DCD. Conformance for remaining scope is documented below.

General	Exception	Quality assurance requirements utilize the more recently NRC endorsed NQA-1-1994 in lieu of the identified outdated standards

STD COL 1.9-1 **Regulatory Guide 1.29, Rev. 4, 3/07 – Seismic Design Classification**

Conformance with Revision 3 of the Regulatory Guide for DCD scope of work is as stated in the DCD. Conformance with Revision 4 of this Regulatory Guide for remaining scope is documented below.

C.4	Conforms

Regulatory Guide 1.30, Rev. 0, 8/72 – Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment

Conformance for DCD scope of work is as stated in the DCD. Conformance for remaining scope is documented below.

General	Exception	Quality assurance requirements utilize the more recently NRC endorsed NQA-1 in lieu of the identified outdated standards.

Regulatory Guide 1.32, Rev. 3, 03/04 – Criteria for Power Systems for Nuclear Power Plants

Conformance of the design aspects with Revision 2 of the Regulatory Guide is as stated in the DCD. Conformance with Revision 3 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General	Conforms	

Regulatory Guide 1.33, Rev. 2, 2/78 – Quality Assurance Program Requirements (Operation)

C.1	Conforms	
C.2	Clarification	See separate conformance statement for each identified Regulatory Guide.
C.3-C.5	Conforms	

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

Regulatory Guide 1.37, Rev. 1, 3/07 – Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water Cooled Nuclear Power Plants

Conformance of the design aspects with Revision 0 of the Regulatory Guide is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General	Conforms	

Regulatory Guide 1.38, Rev. 2, 5/77 – Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants

Conformance for DCD scope of work is as stated in the DCD. Conformance for remaining scope is documented below.

General	Exception	Quality assurance requirements utilize the more recently NRC endorsed NQA-1 in lieu of the identified outdated standards.

Regulatory Guide 1.39, Rev. 2, 9/77 – Housekeeping Requirements for Water-Cooled Nuclear Power Plants

Conformance for DCD scope of work is as stated in the DCD. Conformance for remaining scope is documented below.

General	Exception	Quality assurance requirements utilize the more recently NRC endorsed NQA-1 in lieu of the identified outdated standards.

Regulatory Guide 1.45, Rev. 0, 5/73 – Reactor Coolant Pressure Boundary Leakage Detection Systems

Conformance of the design aspects is as stated in the DCD. Conformance with programmatic and/or operational aspects is documented below.

C.7	Conforms	

Regulatory Guide 1.52, Rev. 3, 6/01 – Design, Inspection and Testing Criteria for Air Filtration and Adsorption Units of Post-Accident Engineered-Safety-Feature Atmosphere Cleanup Systems in Light-Water-Cooled Nuclear Power Plants

Conformance with the design and operational aspects is as stated in the DCD.

Regulatory Guide 1.53, Rev. 2, 11/03 – Application of the Single-Failure Criterion to Safety Systems

Conformance of the design aspects with Revision 0 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

Regulatory Guide 1.54, Rev. 1, 7/00 – Service Level I, II, And III Protective Coatings Applied To Nuclear Power Plants

Conformance of the design aspects is as stated in the DCD. Conformance with programmatic and/or operational aspects is documented below.

General	Conforms	

Regulatory Guide 1.57, Rev. 1, 3/07 – Design Limits and Loading Combinations for Metal Primary Reactor Containment System Components

Conformance with Revision 0 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

Regulatory Guide 1.59, Rev. 2, 8/77 – Design Basis Floods for Nuclear Power Plants

General	Exception	Regulatory Guide 1.59, Appendix A indicates use of ANSI N170-1976 “Standards for Determining Design Basis Flooding at Power Reactor Sites.” In place of this standard, ANSI/ANS 2.8-1992 “Determining Design Basis Flooding at Power Reactor Sites” was used. ANSI/ANS 2.8-1992 was withdrawn on July 26, 2002. However, a replacement standard has not been issued. NUREG-0800 2.4.3 Revision 4, March 2007and 2.4.4 Revision 3, March 2007 include ANSI/ANS 2.8-1992 as a reference. ANSI/ANS 2.8-1992 is also specifically identified in the review procedures subsection of NUREG-0800 2.4.4.

Regulatory Guide 1.61, Rev. 1, 3/07 – Damping Values for Seismic Design of Nuclear Power Plants

Conformance with Revision 0 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

Regulatory Guide 1.65, Rev. 0, 10/73 – Materials and Inspections for Reactor Vessel Closure Studs

Conformance of the design aspects is as stated in the DCD. Conformance with programmatic and/or operational aspects is documented below.

C.3	Conforms	
C.4	Exception	ASME XI ISI criteria for reactor vessel closure stud examinations are applied in lieu of the ASME III NB 2545 and NB 2546 surface examinations. The volumetric examinations currently required by ASME XI provide improved (since 1973) detection of bolting degradation.

Regulatory Guide 1.68, Rev. 3, 3/07 – Initial Test Program for Water-Cooled Nuclear Power Plants

Conformance with Revision 2 of the Regulatory Guide is documented in the DCD. Conformance of the design aspects is as stated in the DCD. Conformance with Revision 3 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

C2-C.9	Conforms
Appendix B	Conforms
Appendix C	Conforms

Regulatory Guide 1.70, Rev. 3, 11/78, Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition)

General	Exception	The format and content of the FSAR follow Regulatory Guide 1.206 and the AP1000 Design Control Document as required by Appendix D of 10 CFR Part 52.

Regulatory Guide 1.71, Rev. 1, 3/07 – Welder Qualification for Areas of Limited Accessibility

Conformance of the design aspects with Revision 0 of the Regulatory Guide is as stated in the DCD. Conformance with Revision 1 of the Regulatory Guide during the operational phase (i.e., after the construction phase is completed per the DCD) is documented below.

General	Conforms

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

Regulatory Guide 1.75, Rev. 3, 2/05 – Criteria for Independence of Electrical Safety Systems

Conformance with Revision 2 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

Regulatory Guide 1.76, Rev. 1, 3/07 – Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants

Conformance with Revision 0 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

Regulatory Guide 1.78, Rev. 1, 12/01 – Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release

Conformance of the design aspects is as stated in the DCD. Conformance with programmatic and/or operational aspects is documented below.

General Conforms

Regulatory Guide 1.82, Rev. 3, 11/03 – Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident

Conformance with the design aspects is as stated in the DCD. Conformance with programmatic and/or operational aspects is documented below.

C.1.1.2 Conforms

C.1.1.5 Conforms

Regulatory Guide 1.83, Rev. 1, 7/75 - Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes

Conformance of the design aspects is as stated in the DCD. The programmatic and/or operational aspects are not applicable since this guidance was withdrawn by NRC (74 FR 58324, 11/12/2009).

Regulatory Guide 1.84, Rev. 33, 8/05 – Design, Fabrication, and Materials Code Case Acceptability, ASME Section III

Conformance with Revision 32 of the Regulatory Guide is as stated in the DCD.

Regulatory Guide 1.86, Rev. 0, 6/74 - Termination of Operating Licenses for Nuclear Reactors

This Regulatory Guide is outside the scope of the FSAR.

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

Regulatory Guide 1.91, Rev. 1, 2/78 – Evaluations of Explosions Postulated to Occur on Transportation Routes Near Nuclear Power Plants

Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General	Conforms	

Regulatory Guide 1.92, Rev. 2, 07/06 – Combining Modal Responses and Spatial Components in Seismic Response Analysis

Conformance with Revision 1 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

Regulatory Guide 1.94, Rev. 1, 4/76 – Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants

Conformance for DCD scope of work is as stated in the DCD. Conformance for remaining scope is documented below.

General	Exception	Quality assurance requirements utilize the more recently NRC endorsed NQA-1 in lieu of the identified outdated standards.

Regulatory Guide 1.97, Rev. 4, 6/06 – Criteria For Accident Monitoring Instrumentation For Nuclear Power Plants

Conformance with this Regulatory Guide for programmatic and/or operational aspects is documented below.

General	Exception	Portable equipment outside the DCD scope conforms to Revision 3 of this Regulatory Guide for consistency with DCD scope since Revision 4 indicates that partial implementation is not advised.

Regulatory Guide 1.101, Rev. 5, 6/05 – Emergency Response Planning and Preparedness for Nuclear Power Reactors

General	Exception	Rev. 5 is not applicable for this site. Rev. 3 and 4 are essentially the same except for endorsement of NEI 99-01 which is not directly applicable to the AP1000 passive design. The EP conforms to Rev. 3 and 4 with the exception that the EALs are written with necessary modifications to address the passive plant design.

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

Regulatory Guide 1.109, Rev. 1, 10/77 – Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I

Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General		Conforms

Regulatory Guide 1.110, Rev. 0, 3/76 – Cost-Benefit Analysis for Radwaste Systems for Light-Water-Cooled Nuclear Power Reactors

Conformance of the design aspects is as stated in the DCD. Conformance with Revision 0 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General		Conforms

Regulatory Guide 1.111, Rev. 1, 7/77 – Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors

General		Conforms

Regulatory Guide 1.112, Rev. 1, 3/07 – Calculation of Releases of Radioactive Materials in Gaseous and Liquid Effluents from Light-Water-Cooled Nuclear Power Reactors

Conformance of the design aspects with Revision 0-R of the Regulatory Guide is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General	ANSI 18.1-1999	Conforms

Regulatory Guide 1.113, Rev. 1, 4/77 – Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I

General		Conforms

Regulatory Guide 1.114, Rev. 2, 5/89 – Guidance to Operators at the Controls and to Senior Operators in the Control Room of a Nuclear Power Unit

General		Conforms

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

Regulatory Guide 1.115, Rev. 1, 7/77 – Protection Against Low-Trajectory Turbine Missiles

Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General		Conforms	

Regulatory Guide 1.116, Rev. 0-R, 5/77 – Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems

Conformance for DCD scope of work is as stated in the DCD. Conformance for remaining scope is documented below.

General		Exception	Quality assurance requirements utilize the more recently NRC endorsed NQA-1 in lieu of the identified outdated standards.

Regulatory Guide 1.124, Rev. 2, 02/07 – Service Limits and Loading Combinations for Class 1 Linear-Type Supports

Conformance with Revision 1 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

Regulatory Guide 1.128, Rev. 2, 2/07 – Installation Design and Installation of Vented Lead-Acid Storage Batteries for Nuclear Power Plants

Conformance with Revision 1 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

Regulatory Guide 1.129, Rev. 2, 2/07 – Maintenance, Testing, and Replacement of Vented Lead-Acid Storage Batteries for Nuclear Power Plants

General	IEEE Std. 450-2002	Exception	Approved Generic Technical Specifications are based on IEEE Std 450-1995.

Regulatory Guide 1.130, Rev. 2, 3/07 - Service Limits and Loading Combinations for Class 1 Plate-And-Shell-Type Supports

Conformance with Revision 1 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

VCS COL 1.9-1

Regulatory Guide 1.132, Rev. 2, 10/03 – Site Investigations for Foundations of Nuclear Power Plants

General		Conforms	
4.3		Exception	Only borings used for down-hole geophysical logging were surveyed for deviations (Section 4.3.1.2). Only color photographs of rock cores were taken-no soil sample photographs (Section 4.3.2). One or more borings for each major structure was not continuously sampled (Section 4.3.2.2).

STD COL 1.9-1

Regulatory Guide 1.133, Rev. 1, 5/81 – Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors

Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

C.2b		Conforms	Procedures are addressed in Section 13.5
C.3a		Conforms	Procedures are addressed in Section 13.5
C.4g		Conforms	Procedures are addressed in Section 13.5
C.4h		Conforms	Procedures are addressed in Section 13.5
C.4i		Conforms	ALARA is addressed in Chapter 12 and Section 13.5
C.4j		Conforms	Training is addressed in Section 13.2
C.6		Exception	Regulatory Guide 1.16 has been withdrawn. Event reporting is performed in accordance with 10 CFR 50.72 and 50.73 utilizing the guidance of NUREG-1022.

Regulatory Guide 1.134, Rev. 3, 3/98 – Medical Evaluation of Licensed Personnel at Nuclear Power Plants

General		Conforms	

Regulatory Guide 1.135, Rev. 0, 9/77 – Normal Water Level and Discharge at Nuclear Power Plants

Conformance of the design aspects is as stated in the DCD. The programmatic and/or operational aspects are not applicable since this guidance was withdrawn by NRC (74 FR 39349, 08/06/2009).

General		Conforms	

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Regulatory Guide 1.138, Rev. 2, 12/03 – Laboratory Investigations of Soils and Rocks for Engineering Analysis and Design of Nuclear Power Plants			
General		Conforms	
Regulatory Guide 1.139, Rev. 0, 5/78 – Guidance for Residual Heat Removal			
Conformance of the design aspects is as stated in the DCD. The programmatic and/or operational aspects are not applicable since this guidance was withdrawn by NRC (73 FR 32750, 06/10/2008).			
Regulatory Guide 1.143, Rev. 2, 11/01 – Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants			
Conformance of the design aspects is as stated in the DCD. Conformance with Revision 2 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
General		Conforms	
Regulatory Guide 1.145, Rev. 1, 11/82 (Revised 2/83 to correct page 1.145-7) – Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants			
General		Conforms	
Regulatory Guide 1.147, Rev. 14, 8/05 – Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1			
Conformance with Revision 12 of the Regulatory Guide is documented in the DCD. Conformance of the design aspects is as stated in the DCD. Conformance with Revision 14 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
General		Conforms	
Regulatory Guide 1.149, Rev. 3, 10/01 – Nuclear Power Plant Simulation Facilities for Use in Operator Training and License Examinations			
C.1		Conforms	During cold licensing, training is conducted using a simulator with limited scope in accordance with Appendix D of ANSI/ ANS-3.5-1998. Operator Licensing examinations are conducted on a simulator meeting the applicable requirements of ANSI/ANS-3.5-1998.

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

Regulatory Guide 1.150, Rev. 1, 2/83 – Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations

Conformance with the design aspects is as stated in the DCD. The programmatic and/or operational aspects are not applicable since this guidance was withdrawn by NRC (73 FR 7766, 02/11/2008).

Regulatory Guide 1.152, Rev. 2, 1/06 – Criteria for Use of Computers in Safety Systems of Nuclear Power Plants

Conformance of the design aspects with Revision 1 of the Regulatory Guide is as stated in the DCD. Conformance with Revision 2 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General	Exception	The Cyber Security Program is based on March 2009 revisions of the 10 CFR 73.54 regulations in lieu of Revision 2 of this Regulatory Guide.

Regulatory Guide 1.154, Rev. 0, 1/87 – Format and Content of Plant-Specific Pressurized Thermal Shock Safety Analysis Reports for Pressurized Water Reactors

General	Conforms	

Regulatory Guide 1.159, Rev. 1, 10/03 – Assuring the Availability of Funds for Decommissioning Nuclear Reactors

General	N/A	This Regulatory Guide is outside the scope of the FSAR.

Regulatory Guide 1.160, Rev. 2, 3/97 – Monitoring the Effectiveness of Maintenance at Nuclear Power Plants

General	Conforms	

Regulatory Guide 1.162, Rev. 0, 2/96 – Format and Content of Report for Thermal Annealing of Reactor Pressure Vessels

	N/A	This Regulatory Guide is outside the scope of the FSAR.

Regulatory Guide 1.163, Rev. 0, 9/95 – Performance-Based Containment Leak-Test Program

Conformance of the design aspects is as stated in the DCD. Conformance with Revision 0 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General	Conforms	

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Regulatory Guide 1.165, Rev. 0, 3/97 – Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion			
General		N/A	Seismic analysis performed in accordance with Regulatory Guide 1.208.
Regulatory Guide 1.166, Rev. 0, 3/97 – Pre-Earthquake Planning and Immediate Nuclear Power Plant Operator Postearthquake Actions			
General		Conforms	
Regulatory Guide 1.167, Rev. 0, 3/97 – Restart of a Nuclear Power Plant Shut Down by a Seismic Event			
General		Conforms	
Regulatory Guide 1.168, Rev. 1, 2/04 – Verification, Validation, Reviews, and Audits for Digital Computer Software Used in Safety Systems of Nuclear Power Plants			
Conformance of the design aspects with Revision 0 of the Regulatory Guide is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
General		Conforms	
Regulatory Guide 1.174, Rev. 1, 11/02 – An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis			
This Regulatory Guide is outside the scope of the FSAR.			
Regulatory Guide 1.175, Rev. 0, 8/98 – An Approach for Plant-Specific, Risk-Informed Decisionmaking: Inservice Testing			
Risk-informed inservice testing is not being utilized for this plant.			
Regulatory Guide 1.177, Rev. 0, 8/98 – An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications			
General		Conforms	
Regulatory Guide 1.178, Rev. 1, 9/03 – An Approach for Plant-Specific Risk-Informed Decisionmaking for Inservice Inspection of Piping			
Risk-informed inservice testing is not being utilized for this plant.			

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Regulatory Guide 1.179, Rev. 0, 1/99 – Standard Format and Content of License Termination Plans for Nuclear Power Reactors			
		N/A	This Regulatory Guide is outside the scope of the FSAR.
Regulatory Guide 1.180, Rev. 1, 10/03 – Guidelines for Evaluating Electromagnetic and Radio-Frequency Interference in Safety-Related Instrumentation and Control Systems			
Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
General		Conforms	Exclusion zones are established through administrative controls to prohibit the activation of portable EMI/RFI emitters (e.g., welders and transceivers) in areas where safety-related I&C systems are installed.
Regulatory Guide 1.181, Rev. 0, 9/99 – Content of the Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e)			
General		Conforms	
Regulatory Guide 1.182, Rev. 0, 5/00 – Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants			
General		Conforms	
Regulatory Guide 1.184, Rev. 0, 7/00 – Decommissioning of Nuclear Power Reactors			
		N/A	This Regulatory Guide is outside the scope of the FSAR.
Regulatory Guide 1.185, Rev. 0, 7/00 – Standard Format and Content for Post-shutdown Decommissioning Activities Report			
		N/A	This Regulatory Guide is outside the scope of the FSAR.
Regulatory Guide 1.186, Rev. 0, 12/00 – Guidance and Examples for Identifying 10 CFR 50.2 Design Bases			
		N/A	This Regulatory Guide is outside the scope of the FSAR.

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Regulatory Guide 1.187, Rev. 0, 11/00 – Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments			
General		Conforms	
Regulatory Guide 1.188, Rev. 1, 9/05 – Standard Format and Content for Applications To Renew Nuclear Power Plant Operating Licenses			
		N/A	This Regulatory Guide is outside the scope of the FSAR.
Regulatory Guide 1.189, Rev. 1, 3/07 – Fire Protection for Nuclear Power Plants			
Conformance with Revision 0 of the Regulatory Guide is documented in the DCD. Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
General		Conforms	
Regulatory Guide 1.191, Rev. 0, 5/01 – Fire Protection Program for Nuclear Power Plants During Decommissioning and Permanent Shutdown			
		N/A	This Regulatory Guide is outside the scope of the FSAR.
Regulatory Guide 1.192, Rev. 0, 6/03 – Operation and Maintenance Code Case Acceptability, ASME OM Code			
General		Conforms	
Regulatory Guide 1.193, Rev. 1, 8/05 – ASME Code Cases Not Approved for Use			
General		Conforms	
Regulatory Guide 1.194, Rev. 0, 6/03 – Atmospheric Relative Concentrations for Control Room Radiological Habitability Assessments at Nuclear Power Plants			
General		Conforms	
Regulatory Guide 1.195, Rev. 0, 5/03 – Methods and Assumptions for Evaluating Radiological Consequences of Design Basis Accidents at Light-Water Nuclear Power Reactors			
This Regulatory Guide is not applicable to the AP1000 certified design.			

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions

Regulatory Guide 1.196, Rev. 1, 1/07 – Control Room Habitability at Light-Water Nuclear Power Reactors

Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below. This Regulatory Guide is not applicable to the AP1000 certified design.

General Conforms

Regulatory Guide 1.197, Rev. 0, 5/03 – Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors

Conformance with the design aspects is as stated in the DCD. Conformance with programmatic and/or operational aspects is documented below.

General Conforms

Regulatory Guide 1.198, Rev. 0, 11/03 – Procedures and Criteria for Assessing Seismic Soil Liquefaction at Nuclear Power Plant Sites

General Conforms

Regulatory Guide 1.199, Rev. 0, 11/03 – Anchoring Components and Structural Supports in Concrete

Conformance with Revision 0 of the Regulatory Guide is as stated in the DCD. This guidance is completely within the scope of the DCD.

Regulatory Guide 1.200, Rev. 1, 1/07 – An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities

General Conforms

Regulatory Guide 1.201, Rev. 1, 5/06 – Guidelines for Categorizing Structures, Systems, and Components in Nuclear Power Plants According to Their Safety Significance

This Regulatory Guide is not applicable to the AP1000 certified design.

Regulatory Guide 1.202, Rev. 0, 2/05 – Standard Format and Content of Decommissioning Cost Estimates for Nuclear Power Reactors

This Regulatory Guide is outside the scope of the FSAR.

Regulatory Guide 1.203, Rev. 0, 12/05 – Transient and Accident Analysis Methods

This Regulatory Guide is not applicable to the AP1000 certified design.

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Regulatory Guide 1.204, Rev. 0, 11/05 – Guidelines for Lightning Protection of Nuclear Power Plants			
General		Conforms	
Regulatory Guide 1.205, Rev. 0, 5/06 – Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants			
This Regulatory Guide is not applicable to the AP1000 certified design.			
Regulatory Guide 1.206, Rev. 0, 6/07 – Combined License Applications for Nuclear Power Plants (LWR Edition)			
General	Format	Conforms	
General	Content	Exception	Exceptions to content are identified in Table 1.9-202.
Regulatory Guide 1.207, Rev. 0, 3/07 – Guidelines for Evaluating Fatigue Analyses Incorporating the Life Reduction of Metal Components Due to the Effects of the Light-Water Reactor Environment for New Reactors			
This Regulatory Guide is not applicable to the AP1000 certified design.			
Regulatory Guide 1.208, Rev. 0, 3/07 – A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion			
General		Conforms	
Appendix C, Section C.3		Exception 3.4	Exception is taken to requirement that 0.05 and 0.95 fractile hazard curves be provided. These were not run. Hazard curves were run at 0.15 and 0.85th percentile instead of 0.16 and 84th as they are very close approximations (+/- 1 sigma).
Regulatory Guide 1.209, Rev. 0, 3/07 – Guidelines for Environmental Qualification of Safety-Related Computer-Based Instrumentation and Control Systems in Nuclear Power Plants			
This Regulatory Guide is not applicable to the AP1000 certified design.			
DIVISION 4 – Environmental and Siting			
Regulatory Guide 4.7 Rev. 2, 4/98 – General Site Suitability Criteria for Nuclear Power Stations			
General		Conforms	

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Regulatory Guide 4.15 Rev. 2, 7/07 – Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) – Effluent Streams and the Environment			
		Exception	The Guidance of Rev. 1, February 1979 will be followed as per the justification provided in FSAR Subsection 11.5.3.

DIVISION 5 – Materials and Plant Protection

The plant-specific physical security plans include no substantive deviations from the NRC-endorsed template in NEI 03-12, Rev. 6. Therefore, the degree of conformance with Division 5 regulatory guides for the Physical Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan is consistent with the degree of conformance of NEI 03-12, Rev. 6.

Regulatory Guide 5.9 Rev. 2, 12/83 – Guidelines for Germanium Spectroscopy Systems for Measurement of Special Nuclear Material			
		N/A	This Regulatory Guide is outside the scope of the FSAR.

Regulatory Guide 5.12, Rev. 0, 11/73 – General Use of Locks in the Protection and Control of Facilities and Special Nuclear Materials			
Conformance of the design aspects is as stated in the DCD.			
		N/A	This Regulatory Guide is outside the scope of the FSAR.

Regulatory Guide 5.65, Rev. 0, 9/86 – Vital Area Access Controls, Protection of Physical Security Equipment, and Key and Lock Controls			
Conformance of the design aspects is as stated in the DCD.			
		N/A	This Regulatory Guide is outside the scope of the FSAR.

Regulatory Guide 5.71, Rev. 0, 1/10 – Cyber Security Programs for Nuclear Facilities			
Conformance with regulatory positions C.1 through C.5 of Regulatory Guide 5.71, Rev. 0, is as stated in the Cyber Security Plan (CSP), with exceptions to the guidance as noted in Attachment A of the CSP.			

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
DIVISION 8 – Occupational Health			
Regulatory Guide 8.2, Rev. 0, 2/73 – Guide for Administrative Practices in Radiation Monitoring			
General	10 CFR Part 20; ANSI 13.2-1969	Exception	The reference to 10 CFR 20.401 is no longer valid in the current version of 10 CFR Part 20. ANSI N13.2-1969 was reaffirmed in 1988.
Regulatory Guide 8.4, Rev. 0, 2/73 - Direct-Reading and Indirect-Reading Pocket Dosimeters			
General	10 CFR Part 20 ANSI N13.5-1972	Exception	The reference to 10 CFR 20.202 (a) and 20.401 is no longer valid in the current version of 10 CFR Part 20. ANSI N13.5-1972 was reaffirmed in 1989. The two performance criteria specified in Regulatory Guide 8.4 (accuracy and leakage) for these devices are met using acceptance standards in ANSI N322-1997 "American National Standard Inspection, Test, Construction, and Performance Requirements for Direct Reading Electrostatic/Electroscope Type Dosimeters".
Regulatory Guide 8.5, Rev. 1, 3/81 - Criticality and Other Interior Evacuation Signals			
General		Conforms	
Regulatory Guide 8.6, Rev. 0, 5/73 - Standard Test Procedure for Geiger-Muller Counters			
General		Exception	Instrument calibration program is based upon criteria in ANSI N323A-1997 (with 2004 Correction Sheet) “Radiation Protection Instrumentation Test and Calibration, Portable Survey Instruments.” The ANSI 42.3-1969 Standard is no longer recognized as sufficient for calibration of modern instruments.

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Regulatory Guide 8.7, Rev. 2, 11/05 - Instructions for Recording and Reporting Occupational Radiation Dose Data			
General		Conforms	
Regulatory Guide 8.8, Rev. 3, 6/78 – Information Relevant to Ensuring That Occupational Radiation Exposures at Nuclear Power Stations Will Be As Low As Is Reasonably Achievable			
Conformance of the design aspects is as stated in the DCD. Conformance with Revision 3 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
C.1		Conforms	
C.3.a		Conforms	
C.3.b		Exception	Regulatory Guide 1.16 C.1.b.(3) data is no longer reported. Reporting per C.1.b(2) is also no longer required.
C.3.c		Conforms	
C.4.b-C.4.d	ANSI Z-88.2, Regulatory Guide 8.15, NUREG-0041	Conforms	Conformance is with the latest revision of NUREG-0041.
Regulatory Guide 8.9, Rev. 1, 7/93 – Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program			
General		Conforms	
Regulatory Guide 8.10, Rev. 1-R, 5/77 – Operating Philosophy For Maintaining Occupational Radiation Exposures as Low as is Reasonably Achievable			
General		Conforms	
Regulatory Guide 8.13, Rev. 3, 6/99 – Instruction Concerning Prenatal Radiation Exposure			
General		Conforms	
Regulatory Guide 8.15, Rev. 1, 10/99 – Acceptable Programs for Respiratory Protection			
General		Conforms	

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Regulatory Guide 8.27, Rev. 0, 3/81 – Radiation Protection Training for Personnel at Light-Water-Cooled Nuclear Power Plants			
General		Conforms	
Regulatory Guide 8.28, Rev. 0, 8/81 – Audible-Alarm Dosimeters			
General	ANSI N13.27-1981	Conforms	
Regulatory Guide 8.29, Rev. 1, 2/96 – Instruction Concerning Risks from Occupational Radiation Exposure			
General		Conforms	
Regulatory Guide 8.34, Rev. 0, 7/92 – Monitoring Criteria and Methods To Calculate Occupational Radiation Doses			
General		Conforms	
Regulatory Guide 8.35, Rev. 0, 6/92 – Planned Special Exposures			
General		Conforms	
Regulatory Guide 8.36, Rev. 0, 7/92 – Radiation Dose to the Embryo/Fetus			
General		Conforms	
Regulatory Guide 8.38, Rev. 1, 5/06 – Control of Access to High and Very High Radiation Areas in Nuclear Power Plants			
Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
General		Conforms	

Note a. Above stated general alternatives regarding the use of previous revisions of the Regulatory Guide for design aspects as stated in the DCD is provided to preserve the finality of the certified design. Further, each stated conformance with the programmatic and/or operational aspects is only to the extent that a design change or departure from the approved DCD is not required to implement those programmatic and/or operational aspects. As the operational and programmatic aspects become more fully defined (for example, during the preparation, approval, or initial implementation of plant procedures), there exists a potential that a conflict could be identified between the design as certified in the DCD and the programmatic and/or operational aspects of the guidance. In such cases, the design certification (rule) becomes the controlling factor, and the design conformance to the Regulatory Guide is per the revision stated in the DCD.

Note b. A “Criteria Section” entry of “General” indicates a scope for the conformance statement of “all regulatory guide positions related to programmatic and/or operational aspects.” Thus, an associated conformance statement of “Conforms” indicates that the applicant “complies with all regulatory guide positions related to programmatic and/or operational aspects.”

APPENDIX 1B
SEVERE ACCIDENT MITIGATION DESIGN ALTERNATIVES

STD SUP 1B-1 DCD Appendix 1B is not incorporated into this FSAR. Rather, the severe accident mitigation design alternatives are addressed in the Environmental Report. As indicated in 10 CFR Part 52, Appendix D, Section III.B, "...the evaluation of severe accident mitigation design alternatives in appendix 1B of the generic DCD are not part of this appendix."