CHAPTER 1

INTRODUCTION AND GENERAL DESCRIPTION OF THE PLANT

TABLE OF CONTENTS

TABLE CONTENTS (Continued)

LIST OF TABLES

LIST OF FIGURES

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 paragraphs 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 16 including any supplemental material as identified in Table 1.6-201. Unless otherwise specified, reference to the DCD refers to Tier 2 information.

HAR SUP 1.1-1

This FSAR is hereby submitted under Section 103 of the Atomic Energy Act by Progress Energy Carolinas, Inc. (PEC) to the Nuclear Regulatory Commission (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 52 Subpart C.

1.1.1 PLANT LOCATION

Add the following text at the beginning of DCD Subsection 1.1.1:

HAR COL 2.1-1

Shearon Harris Nuclear Power Plant, Units 2 and 3 (HAR 2 and 3) are located in the extreme southwest corner of Wake County, North Carolina, and the southeast corner of Chatham County, North Carolina. The city of Raleigh, North Carolina, is approximately 16 miles northeast and the city of Sanford, North Carolina, is about 15 miles southwest.

Figure 2.1.1-201 identifies the site location. Figure 1.1-201 identifies the plant arrangement within the site.

1.1.5 SCHEDULE

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

The estimated completion and commercial operation dates for HAR 2 and 3 are:

HAR COL 1.1-1

HAR 2	
Construction Completion/Fuel Load	December 2017
Commercial Operation	June 2018
HAR 3	
Construction Completion/Fuel Load	December 2018
Commercial Operation	June 2019

A site-specific construction plan and startup schedule will be provided to the NRC after issuance of the COLA.

1.1.6.1 Regulatory Guide 1.70

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

STD DEP 1.1-1

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 united to the end of DCD Subsection 1.1.6.6.

HAR SUP 1.1-5

Table 1.1-201 provides a list of acronyms and abbreviations used in the HAR 2 and 3 FSAR in addition to the acronyms identified in DCD Table 1.1-1 and system designation 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.

HAR COL 1.1-1

This COL Item is addressed in Subsection 1.1.5.

HAR SUP 1.1-5

Table 1.1-201 (Sheet 1 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
ºC	degrees Celsius
°F	degrees Fahrenheit
µm	Micrometer
µCi/cm^3	microcuries per cubic centimeter
µCi/g	microcuries per gram
µrem/hr	microrem per hour
µCi/ml	microcuries per milliliter
2-D	two dimensional
3-D	three-dimensional
$^{87}Sr/^{86}Sr$	strontium isotope ratios
7Q10	7-day, 10-year
AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ac.	acre
ac.-ft.	acre-feet
AE	Architect-Engineer
AGI	American Geological Institute
aka	also known as
AMS	American Meteorological Society
amsl	above mean sea level

HAR SUP 1.1-5

Table 1.1-201 (Sheet 2 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
ANSS	Advanced National Seismic System
AP1000	Westinghouse's AP1000 Reactor
ASOS	Automated Surface Observing System
Au	Augusta Series fine sandy loam
BAT	Barton Aerial Technologies
BEC	Bechtel
bgs	below ground surface
B&PVP	Boiler and Pressure Vessel Code
BRP	Blue Ridge-Piedmont
BTOC	below top of casing
Btu/hr	British Thermal Units per hour
BWR	boiling water reactor
C-I	seismic Category I
C-II	seismic Category II
CAM	Continuous Air Monitors
CAV	cumulative absolute velocity
CCTV	Closed Circuit Television
CDE	Committed Dose Equivalent
CECC	Central Emergency Control Center
CEDE	Committed Effective Dose Equivalent
CEO	Chief Executive Officer

HAR SUP 1.1-5

Table 1.1-201 (Sheet 3 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
CEUS	central and eastern United States
cfs	cubic feet per second
CGIA	Center for Geographic Information and Analysis
Chi/Q	atmospheric dilution factors
CLRT	Containment Leakage Rate Test
cm	centimeter
cm/sec	centimeters per second
cm^2/sec	square centimeters per second
CNO	Chief Nuclear Officer
CO	carbon monoxide
Co-58	cobalt isotope 58
Co-68	cobalt isotope 68
COCORP	Consortium for Continental Reflection Profiling
COL	Combined License
COLA	Combined License Application
CP&L	Carolina Power and Light
CPS	Computerized Procedure System
Cr-51	chromium isotope 51
CrB	Creedmoor sandy loam on slopes of 2 to 6 percent
CrB2	Creedmoor sandy loam on slopes of 2 to 6 percent, eroded

HAR SUP 1.1-5

Table 1.1-201 (Sheet 4 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
CrC	Creedmoor sandy loam on slopes of 6 to 10 percent
CrE	Creedmoor sandy loam on slopes of 10 to 20 percent
CS	Creedmoor segment
CtB	Creedmoor silt loam on slopes of 2 to 6 percent
CtC	Creedmoor silt loam on slopes of 6 to 10 percent
CU	consolidated-undrained
d	distance from airport in kilometers (miles)
DAC	Derived Air Concentration
DAC-hr	Derived Air Concentration-hr
DAM	Dames & Moore
DE	deaggregation earthquake
DEH	high-magnitude deaggregation earthquake
DEL	low-magnitude deaggregation earthquake
DEM	middle-magnitude deaggregation earthquake
DFL	Durham Fall Line
d_{max}	maximum required depth for engineering purposes
Dominion	Dominion Nuclear North Anna, LLC
DS	Durham segment
D/Q	Relative Deposition Factor
DRAP	Reliability Assurance Program for the design phase
E_{pmt}	rock pressuremeter test modulus

HAR SUP 1.1-5

Table 1.1-201 (Sheet 5 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
EAB	exclusion area boundary
EAL	Emergency Action Level
ECFS	East Coast fault system
ECFS-C	central segment of the East Coast fault system
ECFS-N	northern segment of the East Coast fault system
ECFS-S	southern segment of the East Coast fault system
ECL	effective concentration limit
ECS	Emergency Communications System
EDIS	Economic Development Information System
EnC	Enon fine sand loam occurs on slopes of 6 to 10 percent
ENS	Emergency Notification System
EOC	Emergency Operations Centers
EOF	Emergency Operations Facility
EOP	Emergency Operating Procedure
EPC	engineering, procurement, and construction
EPRI-SOG	Electric Power Research Institute-Seismic Owners Group
EPZ	Emergency Planning Zone
EP-ITAAC	Emergency Planning-ITAAC
EQ	Environmental Qualification
EQMEL	Environmental Qualification Master Equipment List
ERDS	Emergency Response Data System

HAR SUP 1.1-5

Table 1.1-201 (Sheet 6 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
ERO	Emergency Response Organization
ERTS	Earth Resources Technology Satellite
ESP	Early Site Permit
ESRI	Environmental Systems Research Institute
EST	earth science team
ESW	Electro-slag Weld
ETE	Evacuation Time Estimate
ETSZ	East Tennessee seismic zone
E-W or EW	east-west
EWD	Engineering Weather Data
FA	Fault A
FAC	flow accelerated corrosion
FAA	Federal Aviation Administration
FB	Fault B
FC	Fault C
Fe-55	iron isotope 55
Fe-59	iron isotope 59
FERC	Federal Energy Regulatory Commission
FFD	Fitness for Duty
FICR	Foundation Interface Conditions report
FIPS	Federal Information Processing Standards
FPL	fire pond lineament

HAR SUP 1.1-5

Table 1.1-201 (Sheet 7 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
fps	feet per second
FS	factor of safety
FSAR	Final Safety Analysis Report
FSER	Final Safety Evaluation Report
ft.	foot/feet
ft^2	square feet
ft/day	feet per day
ft^2/day	square feet per day
ft^3/day	cubic feet per day
ft/sec or f/s	feet per second
FTS	Federal Telephone System
g	gram
g/cm^3	grams per cubic centimeter
gal.	gallon
GAO	U.S. Government Accountability Office
GCVSZ	Giles County, Virginia, seismic zone
GG&S	Geotechnical, Geological, and Seismological
GI-LLI	gastrointestinal tract-lower large intestine (ingestion pathway organ)
GIS	Geographic Information System
GMAW	Gas Metal Arc Welding
GMRS	ground motion response spectrum

HAR SUP 1.1-5

Table 1.1-201 (Sheet 8 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
GMT	Greenwich Mean Time
gpd	gallons per day
gpm or gal/min	gallons per minute
gpm/ft	gallons per minute per foot
GS	grab soil samples
GSI	geologic strength index
GTAW	Gas Tungsten Arc Welding
Gu	gullied land
h or hr.	hour
ha	hectare
HAR 2	Shearon Harris Nuclear Power Plant, Unit 2
HAR 3	Shearon Harris Nuclear Power Plant, Unit 3
HAR 2 and 3	Shearon Harris Nuclear Power Plant, Units 2 and 3
HazMat	hazardous materials
Harris fault	also known as the Site fault
Harris Lake	also known as Shearon Harris Storage Reservoir System
Harris Reservoir	also known as the Main Reservoir
HCLPF	high confidence, low probability of failure
HEC-HMS	Hydrologic Engineering Center-Hydrologic Modeling System
HE&EC	Harris Energy and Environmental Center

HAR SUP 1.1-5

Table 1.1-201 (Sheet 9 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
Hg	mercury
HiRAT	High Resolution Acoustic Televiewer probe
HLA	Harding Lawson Associates
HMR	Hydrometeorological Report
HNP	Shearon Harris Nuclear Power Plant, Unit 1
HPN	Health Physics Network
HSS	Holly Springs segment
H:V	horizontal to vertical
HV	high voltage
Hz	Hertz
I_{50}	point load index
in.	inch
in./hr	inches per hour
in./yr	inches per year
INPO	Institute of Nuclear Power Operations
ISO	Independent System Operator
ISRM	International Society of Rock Mechanics
ITA	inspections, tests, or analyses
ITP	Initial Test Plan
JFT	Joint Frequency Tables
JIC	Joint Information Center

HAR SUP 1.1-5

Table 1.1-201 (Sheet 10 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
JPM	job performance measures
JTG	Joint Test Group
JTWG	Joint Testing Working Group
K/Ar	potassium-argon
ka	thousand years before present
kcf	kips per cubic foot
kg	kilogram
kg/m^2	kilograms per square meter
kg/yr	kilograms per year
kip	kilopound (1000 pounds)
km	kilometer
km^2	square kilometers
km/h	kilometers per hour
kPa	kilopascals
kPa/sec	kilopascals per second
ksf	kips per square foot
ksi	kips per square inch
KTTA	Sanford-Lee County Regional Airport
kV	kilovolt
kVA	kilovoltampere
l or L	liter

HAR SUP 1.1-5

Table 1.1-201 (Sheet 11 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
l/day or L/day	liters per day
l/min or L/min	liters per minute
l/yr or L/yr	liters per year
LAN	Local Area Network
LAW	Law Engineering
LCO	Limiting Conditions for Operations
LF	low-frequency, nominally 1 to 2.5 Hz
LiDAR	light detection and ranging
LLNL	Lawrence Livermore National Laboratory
LLRW	low-level radioactive waste
lb.	pound
LCD	local climatological data
LER	licensing event report
LLW	Low Noise Level
lpd	liters per day
LPG	liquefied petroleum gas
LSI	Liquefaction Severity Index
LWSP	Local Water Supply Plan
m	meter
M	moment magnitude
m/day	meters per day
m/s or m/sec	meters per second

HAR SUP 1.1-5

Table 1.1-201 (Sheet 12 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
m^2	square meters
m^2/day	square meters per day
m^3	cubic meters
m^3/s	cubic meters per second
m_b	body-wave magnitude
Md	duration magnitude
M_I	intensity magnitude (considered equivalent to **M**)
M_{max}	maximum magnitude
Ma	million years before present
Main Reservoir	also known as Harris Reservoir
MASW	multi-channel analysis of surface waves
Mb	millibars
MCL	Management Counterpart Link
mGal	milligal
Mgd	million gallons per day
mi.	mile
$mi.^2$	square miles
min	minute
Mg	milligram
Ml	milliliter
ml/g	milliliters per gram
Mn-54	manganese isotope 54

HAR SUP 1.1-5

Table 1.1-201 (Sheet 13 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
Mn-56	manganese isotope 56
Mm	millimeter
MM	Modified Mercalli
Mm/h	millimeters per hour
Mm/yr	millimeters per year
MMI	Modified Mercalli Intensity
MMWG	Multiregional Modeling Working Group
MPa	megaPascal
mph	miles per hour
MPSSZ	Middleton Place-Summerville seismic zone
MSHA	Mine Safety and Health Administration
msl	mean seal level
MSPI	mitigating systems performance indicators
mrad	millirad
mrem/yr	millirem per year
MVA	megavoltampere
m.y.	million years
N	SPT blowcount
NA, N/A	not applicable
Na	not available
NAAQS	national ambient air quality standards
NAMAG	North American Magnetic Anomaly Group

HAR SUP 1.1-5

Table 1.1-201 (Sheet 14 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
NCCGIA	North Carolina Center for Geographic Information and Analysis
NCDC	National Climatic Data Center
NCDENR	North Carolina Department of Environment and Natural Resources
NCDOC	North Carolina Department of Commerce
NCDOT	North Carolina Department of Transportation
NCDWR	North Carolina Department of Water Resources
NCEDC	Northern California Earthquake Data Center
NCEER	National Center for Earthquake Engineering Research
NCGS	North Carolina Geological Survey
NCWRC	North Carolina Wildlife Resources Commission
ND	no data available/ no data recorded for parameter
NDE	non-destructive examination
NERC	North American Reliability Electric Council
NESC	National Electric Safety Code
NFL	Nutbush Fall Line
NGA	Next Generation Attenuation
NGD&C	Nuclear Generation Development and Construction
NGG	Nuclear Generation Group
NGVD29	National Geodetic Vertical Datum of 1929
NHVRy	New Hope Valley Railway

HAR SUP 1.1-5

Table 1.1-201 (Sheet 15 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NLO	non-licensed operator
N-m	Newton-meter
NMSZ	New Madrid Seismic Zone
NOAA	National Oceanic and Atmospheric Administration
N.O.S	not otherwise specified
NRCS	U.S. Department of Agriculture, Natural Resources Conservation Service
N-S	north-south
NS	Non-seismic
NSA	Nuclear Safety Assurance
NVLAP	National Voluntary Laboratory Accreditation Program
NWS	National Weather Service
OBE	Operating Basis Earthquake
OCL	Operational Counterpart link
OCL	Operations Center line
ODCM	Off-Site Dose Calculation Manual
OJT	on-the-job training
OM	Operations and Maintenance
OSC	Operations Support Center

HAR SUP 1.1-5

Table 1.1-201 (Sheet 16 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
PABX	Private Automatic Branch Exchange
PBX	Private Branch Exchange
PAW	Plasma Arc Welding
pcf	pounds per cubic foot
PCP	Process Control Program
PE&RAS	Performance Evaluation and Regulatory Affairs Section
PEC	Progress Energy Carolinas, Inc.
PGA	peak ground acceleration
PGN	Progress Energy, Inc.
PGP	Procedure Generation Package
PLT	point-load test
$PM_{2.5}$	particulate matter of 2.5 µm and smaller
PM_{10}	particulate matter of 10 µm and smaller
PMCL	Protective Measures Counterpart Link
PMF	probable maximum flood
PMH	probable maximum hurricane
PMT	pressure meter test
PMWP	probable maximum winter precipitation
POR	period of record
ppsm	people per square mile
psf	pounds per square foot
PS-ITAAC	Physical Security-ITAAC

HAR SUP 1.1-5

Table 1.1-201 (Sheet 17 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
PSHA	probabilistic seismic hazard analysis
psi	pounds per square inch
psi/sec	pounds per square inch per second
PTAC	Plant Transmission Activities Coordinator
PTRWA	Piedmont Triad Regional Water Authority
PT&O	Plant Test and Operation
pu	per unit
PZR	Presurizer
Qal	Quaternary alluvium
QAPD	Quality Assurance Program Description
QAPP	Quality Assurance Project Plan
QC	Quality Control
QMS	Quality Management System
R0	extremely weak rock
R1	very weak rock
R2	weak rock
R3	medium weak rock
R4	strong rock
RAT	Reserve Auxiliary Transformer
Rb-Sr	rubidium-strontium
RCA	Radiological Controlled Area
RCP	reactor coolant pump

HAR SUP 1.1-5

Table 1.1-201 (Sheet 18 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
RDU	Raleigh-Durham International Airport
RE	reference (controlling) earthquake
RIS	Regulatory Issue Summary
RIS	reservoir-induced seismicity
RMR	Rock Mass Rating
RMS	root-mean-square
RND	Rondout Associates
RO	Reactor Operator
RP	radiation protection
RPT	Radiation Protection Technician
RQD	rock quality designation
RSCL	Reactor Safety Counterpart Link
RSO	Release for System Operation
RT	radiography techniques
RTDP	Revised Thermal Design Procedure
RTH	Rock Testing Handbook
RTNSS	Regulatory Treatment of Non-Safety Systems
RTP	Research Triangle Park
RTO	Regional Transmission Organization
RWP	Radiation Work Permit
S_{hmax}	maximum horizontal stress axis

HAR SUP 1.1-5

Table 1.1-201 (Sheet 19 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
S_{hmin}	minimum horizontal stress axis
S-SO	Superintendent – Shift Operations
SAMDA	Severe Accident Mitigation Design Alternatives
SAMG	Severe Accident Management Guidance
SAMSON	Solar and Meteorological Surface Observation Network
SAW	Submerged Arc Welding
SASW	spectral analysis of surface waves
SBPF	South Borrow Pit fault
SCBA	self-contained breathing apparatus
SC DOT	South Carolina Department of Transportation
sec/m^3	seconds per cubic meter
scfs	standard cubic feet per second
SCO	State Climate Office of North Carolina
SCR	stable continental region
SCS	Sanford composite segment
SDP	Significance Determination Process
SEI/ASCE	Structural Engineering Institute/American Society of Civil Engineers
SERC	Southeastern Electric Reliability Corporation
Site fault	also known as Harris fault
SIWP	Site Investigation Workplan

HAR SUP 1.1-5

Table 1.1-201 (Sheet 20 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
SGMP	Steam Generator Management Program
SLAR	side-looking airborne radar
SM	Shift Manager
SMAW	Shielded Metal Arc Welding
SNC	Southern Nuclear Company
SO_2	sulphur dioxide
SOG	Seismic Owners Group
SPN	shotpoint number
SPT	standard penetration testing
sq. ft.	square foot
SR1134	Shearon Harris Road, NC State Road 1134
SRO	Senior Reactor Operator
SRTM	Shuttle Radar Topography Mission
SSC	Structures, Systems, and Components
SSHAC	Senior Seismic Hazard Analysis Committee
SS-ITAAC	Site-Specific ITAAC
SSS	Selective Signaling System
STA	Shift Technical Advisor
SWAP	Source Water Assessment Program
TE	equivalent period of completeness
TEDE	Total Effective Dose Equivalent

HAR SUP 1.1-5

Table 1.1-201 (Sheet 21 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
TFI	Technical/Facilitator/Integrator
TIP	Trial Implementation Program
TLD	thermoluminescent dosimeter
TNT	Trinitrotoluene
TOC	top of casing
Trcc	conglomerate
Trcs	sandstone
Trcs/c	sandstone with interbedded conglomerate
Trcs/s	siltstone with interbedded sandstone
Trcs/si1	sandstone and interbedded siltstone
Trcs/si2	sandstone with interbedded siltstone
Trcsc	pebbly sandstone
Trcsi/s	Siltstone w/interbedded sandstone (finer grained and more bioturbated than Trcs/s)
TSO	Transmission System Operator
TSP	Transmission System Provider
TVA	Tennessee Valley Authority
TWTT	two-way travel time
UC	unconfined compression
UCS	unconfined compressive strength
UCSS	updated Charleston seismic source
UHRS	uniform hazard response spectrum

HAR SUP 1.1-5

Table 1.1-201 (Sheet 22 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
TSO	Transmission System Operator
TSP	Transmission System Provider
TVA	Tennessee Valley Authority
TWTT	two-way travel time
UC	unconfined compression
UCS	unconfined compressive strength
UCSS	updated Charleston seismic source
UHRS	uniform hazard response spectrum
U-Pb	uranium-lead
UHS	ultimate heat sink
USACE	U.S. Army Corps of Engineers
USBR	U.S. Department of the Interior, Bureau of Reclamation
USCS	Unified Soil Classification System
USDA	U. S. Department of Agriculture
USGS	U. S. Geological Survey
UT	ultrasonic techniques
UU	unconsolidated-undrained
V/H	vertical to horizontal
V	Volt
V_P	compressional wave velocity
V_S	shear wave velocity

HAR SUP 1.1-5

Table 1.1-201 (Sheet 23 of 23)
Acronyms and Abbreviations Used in the FSAR

Acronym/Abbreviation	Definition
VACAR	Virginia-Carolinas Reliability Subregion
V&V	Verification and Validation
VP-NP&C	Vice President – Nuclear Projects and Construction
w	Water
WAC	Waste Acceptance Criteria
WCC	Woodward-Clyde Consultants
WEC	Westinghouse Electric Company
Westinghouse	Westinghouse Electric Company, LLC
WGC	Weston Geophysical
Wo	open water
WsB	White Store sandy loam on slopes of 2 to 6 percent
WsC	White Store sandy loam on slopes of 6 to 10 percent
WsC2	White Store sandy loam on slopes of 6 to 10 percent is eroded
WsE	White Store sandy loam occurs on slopes of 10 to 20 percent
WUS	western United States
Wy	Worsham sandy loam
ZRA	zone of river anomalies
ZRA-C	central zone of river anomalies
ZRA-N	northern zone of river anomalies
ZRA-S	southern 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 FSAR Table 1.8-201, 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 1.8-201, 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

Margin Notation	Margin Notation
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.

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.

Site Plan

HAR SUP 1.2-1

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.

The site plan for HAR 2 and 3 is shown on Figure 1.1-201. Principal structures and facilities, parking areas, and roads are illustrated. Orientation of the two AP1000 units is such that "plant north" faces 65 degrees east from true north. Unless otherwise noted, directions in this FSAR are based on true north. Similarly, design plant grade in the DCD is 100’-0”, whereas the nominal plant grade elevation for design is NGVD 29 Elevation 261’-0”; therefore, DCD elevations are to be increased by 161 ft. to be actual site elevations. The nominal plant grade floor elevation for design is NGVD 29 Elevation 261’-0” and corresponds to DCD Elevation 100’-0”. The actual plant grade floor elevation will vary to accommodate floor slope and layout requirements.

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 building, the shield building, and the auxiliary building, all of which are constructed on a common basemat.

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.

Each of the two main cooling tower-circulating water pump complexes consist of a natural draft cooling tower, a pump basin, circulating water pumps, and associated piping. The cooling towers are located northeast of the reactors. The circulating pumps are located near each cooling tower. The pumps circulate the cooling water from the pump basin to the main condensers and back to the respective cooling tower.

The raw water pump house is located on the Thomas Creek branch of the Harris Reservoir east of HAR 2 and 3.

Road access to the site is from the north.

Railway access to the plant is provided by a Progress Energy rail spur that connects to the CSX Railroad (Subsection 2.2.2.6).

During construction, a heavy lift crane is used to place major pieces of equipment such as the turbine-generator, the reactor vessel, the steam generators, containment ring sections, large structural modules, and other large or heavy equipment modules.

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

Add the following paragraphs as the first two paragraphs in DCD Subsection 1.4.1.

HAR SUP 1.4-1

Progress Energy Carolinas, Inc., (PEC) is the applicant for Combined Licenses for Shearon Harris Nuclear Power Plant Units 2 and 3 (HAR 2 and 3) and will own and operate HAR 2 and 3. PEC is a subsidiary of Progress Energy, Inc., (PGN), and an energy company based in Raleigh, North Carolina. PEC provides electricity and related services in portions of North Carolina and South Carolina. The company serves more than 1.4 million customers in the region.

Carolina Power & Light Company (CP&L), now doing business as PEC began building nuclear power plants in the 1960's and has operated nuclear power plants since 1971. Currently, PGN has four nuclear sites consisting of five operating units (three sites operated by PEC and one site operated by Progress Energy Florida, Inc.).

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

Contractors participating in the preparation of the COL Application are addressed in Subsection 1.4.2.8.

HAR SUP 1.4-2

Not all participants have been identified at this time. Changes to this section are required to identify additional participants, principal consultants, outside service organizations, or contractors for design, construction, and operation of HAR 2 and 3. To address the identification of additional participants, a Combined License Condition is presented in a separate document submitted as part of this application.

Add the following new subsection after DCD Subsection 1.4.2.7:

HAR SUP 1.4-3

1.4.2.8 Other Contractors

Contractual relationships have been established with specialized consulting firms to assist in preparing the COL Application for HAR 2 and 3.

1.4.2.8.1 CH2M Hill, Inc.

CH2M Hill, Inc. is a full-service engineering, consulting, construction, and operations firm. They have experience in providing services in siting, licensing, site safety analysis reports, environmental reports, and emergency plans. CH2M Hill has demonstrated expertise with all aspects of nuclear facility development.

CH2M Hill, Inc has provided siting, environmental, emergency planning, site redress, geotechnical field investigation, geological, and seismological services to prepare the COL application for PEC.

1.4.2.8.2 Geomatrix Consultants, Inc.

Geomatrix Consultants, Inc. is a diversified technical consulting and engineering firm. They provide a full range of geotechnical engineering and geological services. Geomatrix Consultants, Inc has provided services to a wide range of clients for site exploration, characterization, soil testing, and analysis of geologic hazards.

Geomatrix Consultants, Inc. has performed geological and seismological investigations in support of the COL application for PEC. This includes performing a probabilistic seismic hazards analysis.

1.4.2.8.3 Sargent & Lundy, LLC

Sargent & Lundy, LLC is a full-service architect-engineering firm with considerable nuclear plant expertise. The firm has demonstrated and proven capabilities in the design and licensing of nuclear plants both domestically and overseas. Sargent & Lundy, LLC has engineered, designed, planned, evaluated, and managed large, complex nuclear projects including 30 nuclear units.

Sargent & Lundy, LLC has provided engineering, management, and consulting services to prepare the COL application for PEC. This included project management and engineering services, developing Final Safety Analysis Report sections, developing the security plan, and preparing the COL application.

1.4.2.8.4 WorleyParsons Resources and Energy

WorleyParsons Resources and Energy is a full-service engineering firm with considerable nuclear plant expertise. The firm has demonstrated and proven capabilities in the design and licensing of nuclear plants both domestically and overseas. WorleyParsons Resources and Energy has engineered, designed, planned, evaluated, and managed large, complex nuclear projects including 16 nuclear units and been involved in the development of an early site permit.

WorleyParsons Resources and Energy has provided engineering and consulting services to prepare the COL application for PEC. This included project

management and engineering services, developing Final Safety Analysis Report sections, and preparing the COL application.

1.5 REQUIREMENTS FOR FURTHER TECHNICAL INFORMATON

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	16	All	May 2007	ML071580939
Westinghouse / APP-GW-GLR-134	AP1000 DCD Impacts to Support COLA Standardization	3	All	January 2008	TBD
NEI 07-08	Generic FSAR Template Guidance for Ensuring That Occupational Radiation Exposures Are As Low As Is Reasonably Achievable (ALARA)	0	12.1	September 2007	ML072600383
NEI 07-03	Generic FSAR Template Guidance for Radiation Protection Program Description	3	Appendix 12AA	October 2007	ML072780410
NEI 06-13A	Technical Report on a Template for an Industry Training Program Description	0	13.2	October 2007	ML072920293
NEI 07-02	Generic FSAR Template Guidance for Maintenance Rule Program Description for Plants Licensed Under 10 CFR Part 52	3	17.6	September 2007	ML072700564

a) (-A) Denotes NRC approved document. Other listed documents are under NRC review.

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.

HAR 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.

HAR SUP 1.7-1

Table 1.7-201
AP1000 System Designators and System Diagrams

Designator	System	FSAR Section	FSAR Figure
CWS	Circulating Water System	10.4.5	10.4-201
RWS	Raw Water System	9.2.11	10.4-201, 10.4-202
ZBS	Transmission Switchyard and Off-Site Power System	8.2	8.2-201, 8.2-202, 8.2-203, 8.2-204
HLMWS	Harris Lake Makeup Water System	9.2.12	Described in text.

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.

HAR 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.

HAR 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.

HAR 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.	1.1.6.1, 2.0, 2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.3.4, 2.3.5, 2.4.1, 2.4.2, 2.4.3, 2.4.4, 2.4.5, 2.4.6, 2.4.7, 2.4.8, 2.4.9, 2.4.10, 2.4.11, 2.4.12, 2.4.13, 2.4.14, 2.4.15, 2.5, 2.5.0, 2.5.1, 2.5.3, 2.5.4, 2.5.5, 2.5.6, Appendix 2AA, Appendix 2BB, 9.2.11, 9.2.12, 9.2.13, 9.2.14, 9.5.1.8, 9.5.1.9, 13.1, 13.1.1, 13.1.2, 13.1.3, 13.1.4, 13.5, 13.5.1, 13.5.2, 13.5.3, 13.7, 13.8, 17.5, 17.6, 17.7, 17.8

HAR SUP 1.8-2

Table 1.8-202 (Sheet 1 of 20)
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	2.1	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 2.3.6.1	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 2 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
2.3-2	Local Meteorology	2.3.6.2	2.3.2 2.3.6.2	A
2.3-3	Onsite Meteorological Measurements Program	2.3.6.3	2.3.3 2.3.6.3	A
2.3-4	Short-Term Diffusion Estimates	2.3.6.4	2.3.4 2.3.6.4 15.6.5.3.7.3 15A.3.3	A
2.3-5	Long-Term Diffusion Estimates	2.3.6.5	2.3.5 2.3.6.5	A
2.4-1	Hydrological Description	2.4.1.1	2.4.1.2 2.4.15.1	A
2.4-2	Floods	2.4.1.2	2.4.2 2.4.3 2.4.4 2.4.5 2.4.6 2.4.15.2	A
2.4-3	Cooling Water Supply	2.4.1.3	2.4.1 2.4.15.3	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 3 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
2.4-4	Groundwater	2.4.1.4	2.4.12 2.4.15.4	A
2.4-5	Accidental Release of Liquid Effluents into Ground and Surface Water	2.4.1.5	2.4.13 2.4.15.5	A
2.4-6	Flood Protection Emergency Operation Procedures	2.4.1.6	2.4.10 2.4.14 2.4.15.6	A
2.5-1	Basic Geologic and Seismic Information	2.5.1	2.5.1 2.5.4 2.5.4.1 2.5.6.1 Appendix 2AA Appendix 2BB	A
2.5-2	Site Seismic and Tectonic Characteristics Information	2.5.2.1	2.5.2 2.5.4 2.5.4.7 2.5.4.9 2.5.6.2 Appendix 2AA	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 4 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
2.5-3	Geoscience Parameters	2.5.2.3	2.5.2.6 2.5.4 2.5.4.11 2.5.6.3	A
2.5-4	Surface Faulting	2.5.3	2.5.3 2.5.6.4	A
2.5-5	Site and Structures	2.5.4.6.1	2.5.4 2.5.4.1 2.5.4.3 2.5.6.5 Appendix 2BB	A
2.5-6	Properties of Underlying Materials	2.5.4.6.2	2.5.4 2.5.4.2 2.5.4.3 2.5.4.4 2.5.4.6 2.5.4.7 2.5.4.10.2 2.5.6.6 Appendix 2BB	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 5 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
2.5-7	Excavation and Backfill	2.5.4.6.3	2.5.4 2.5.4.5 2.5.4.10.4 2.5.4.12 2.5.6.7	A
2.5-8	Ground Water Conditions	2.5.4.6.4	2.5.4 2.5.4.6 2.5.6.8	A
2.5-9	Liquefaction Potential	2.5.4.6.5	2.5.4 2.5.4.8 2.5.6.9	A
2.5-10	Bearing Capacity	2.5.4.6.6	2.5.4 2.5.4.10 2.5.6.10	A
2.5-11	Earth Pressures	2.5.4.6.7	2.5.4 2.5.4.10.4 2.5.4.11 2.5.6.11	A

Table 1.8-202 (Sheet 6 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
2.5-12	Static and Dynamic Stability of Facilities	2.5.4.6.9	2.5.4 2.5.4.10.3 2.5.6.12	A
2.5-13	Subsurface Instrumentation	2.5.4.6.10	2.5.4 2.5.4.10.3.7 2.5.6.13	A
2.5-14	Stability of Slopes	2.5.5	2.5.5 2.5.6.14	A
2.5-15	Embankments and Dams	2.5.6	2.4.4 2.5.5 2.5.6.15	A
2.5-16	Settlement of Nuclear Island	2.5.4.6.11	2.5.4 2.5.4.10.3 2.5.4.6.16	A
3.3-1	Wind and Tornado Site Interface Criteria	3.3.3	3.3.1.1 3.3.2.1 3.3.2.3 3.3.3	A
3.4-1	Site-Specific Flooding Hazards Protective Measures	3.4.3	3.4.1.3 3.4.3	A

Table 1.8-202 (Sheet 7 of 20)
COL Item Tabulation

HAR SUP 1.8-2

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
3.5-1	External Missile Protection Requirements	3.5.4	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	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
3.7-2	Post-Earthquake Procedures	3.7.5.2	3.7.4.4 3.7.4.5 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
3.9-2	Design Specification and Reports	3.9.8.2	3.9.8.2	H

HAR SUP 1.8-2

Table 1.8-202 (Sheet 8 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
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 3.9.6.2.4 3.9.8.4	A
3.9-5	Surge Line Thermal Monitoring	3.9.8.5	3.9.3.1.2	A
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	4.4.7	H
5.2-1	ASME Code and Addenda	5.2.6.1	5.2.1.1 5.2.6.1	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 9 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
5.2-2	Plant Specific Inspection Program	5.2.6.2	5.2.4 5.2.4.1 5.2.4.3.1 5.2.4.3.2 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
5.3-1	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 5.3.6.2	A
5.3-4	Reactor Vessel Materials Properties Verification	5.3.6.4.1	5.3.6.4.1	H
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

Table 1.8-202 (Sheet 10 of 20)
COL Item Tabulation

HAR SUP 1.8-2

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
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
6.3-2	Verification of Water Sources for Long-Term Recirculation Cooling Following a LOCA	6.3.8.2	6.3.8.2	H
6.4-1	Local Hazardous Gas Services and Monitoring	6.4.7	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 6.6.9.1	A
6.6-2	Construction Activities	6.6.9.2	6.6.2 6.6.9.2	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 11 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
8.2-1	Offsite Electrical Power	8.2.5	8.2.1 8.2.1.1 8.2.1.1.1 8.2.1.1.2 8.2.1.1.3 8.2.1.2 8.2.1.3 8.2.1.4 8.2.5	A
8.2-2	Technical Interfaces	8.2.5	8.2.1.2.1 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

HAR SUP 1.8-2

Table 1.8-202 (Sheet 12 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
9.1-6	Radiation Monitor	9.1.6.6	9.1.4.3.8 9.1.5.3 9.1.6	A
9.2-1	Potable Water	9.2.11.1	9.2.5.2.1 9.2.5.3 9.2.13.1	A
9.2-2	Waste Water Retention Basins	9.2.11.2	9.2.9.2.1 9.2.9.2.2 9.2.13.2	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	9.4.1.4 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 9.5.1.9.1 13.1.1.2.10 13.1.2.1.3.9	A
9.5-2	Fire Protection Analysis Information	9.5.1.8.2	9.5.1.9.2 9A.3.3.1 through 9A.3.3.8	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 13 of 20)
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	9.5.1.8.8 9.5.1.8.1.1 9.5.1.8.9 9.5.1.9.3 9A.3.3	A
9.5-4	NFPA Exceptions	9.5.1.8.4	9.5.1.9.4 9.5.1.8.1.1	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	9.5.1.9.7 9.5.1.8.1.2.a.3.vi	A
9.5-9	Offsite Interfaces	9.5.2.5.1	9.5.2.2.3.1 9.5.2.5.1	A
9.5-10	Emergency Offsite Communications	9.5.2.5.2	9.5.2.2.3.2 9.5.2.5.2	A
9.5-11	Security Communications	9.5.2.5.3	9.5.2.5.3 Physical Security Plan	A
9.5-13	Fuel Degradation Protection	9.5.4.7.2	9.5.4.5.2 9.5.4.7	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 14 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
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	10.4.5.2.1 10.4.12.3	A
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	11.2.3.5 11.2.5.2	A
11.3-1	Cost Benefit Analysis of Population Doses	11.3.5.1	11.3.3.4 11.3.5.1	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 15 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
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)	11.5.7	11.5.7	A
11.5-2	Effluent Monitoring and Sampling	11.5.7	11.5.2.4 11.5.4.1 11.5.4.2 11.5.6.5 11.5.7	A
11.5-3	10 CFR 50, Appendix I	11.5.7	11.2.3.5 11.3.3.4 11.5.7	A
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	Appendix 12AA 12.3.5.1	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 16 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
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 12AA.5.4.13 Appendix 12AA	A
12.3-4	Record of Operational Events of Interest for Decommissioning	12.3.5.4	12.3.5.4 12AA.5.4.14 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 Appendix 13AA	A
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 Emergency Plan	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 17 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
13.3-2	Activation of Emergency Operations Facility	13.3.1	13.3 13.3.1 Emergency Plan	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 13.5.2 13.5.3	A
13.6-1	Security	13.6	13.6	A
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
14.4-4	Review and Evaluation of Test Results	14.4.4	14.2.3.2 14.4.4	H
14.4-5	Testing Interface Requirements	14.4.5	14.2.9.4.15 14.2.9.4.22 to 14.2.9.4.28 14.2.10.4.29 14.4.5	A

HAR SUP 1.8-2

Table 1.8-202 (Sheet 18 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
14.4-6	First-Plant-Only and Three-Plant-Only Tests	14.4.6	14.4.6	B
15.7-1	Consequences of Tank Failure	15.7.6	15.7.3 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	17.1 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

HAR SUP 1.8-2

Table 1.8-202 (Sheet 19 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
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
18.6-1	Plant Staffing	18.6.1	18.6 18.6.1 13.1.3 13.1.1.4	A
18.10-1	Training Program Development	18.10.1	13.1.1.3.2.4 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

HAR SUP 1.8-2

Table 1.8-202 (Sheet 20 of 20)
COL Item Tabulation

COL Item	Subject	DCD Subsection	FSAR Section(s)	COL Applicant (A), Holder (H), Or Both (B)
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	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	Develop and Implement Severe Accident Management Guidance	19.59.10.5	19.59.10.5	A
19.59.10-5	Equipment Survivability	19.59.10.5	19.59.10.5	H

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

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 the Physical Security Plan and the topics are addressed in the Physical Security Plan. Three Division 5 Regulatory Guides are addressed in Appendix 1AA.

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. 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. 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 the Physical Security Plan and the topics are addressed in the Physical Security Plan. Appendix 1AA provides an evaluation of the degree of compliance with Division 5 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. The cross-referenced sections contain descriptive information applicable to the regulatory guide positions found in Appendix 1AA.

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. 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

Add the following text in DCD Subsection 1.9.4.2.3, following the AP1000 Position for Issue 185.

STD COL 1.9-3

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 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 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 in 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.

1.9.5.2.15 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.

Table 1.9-201 (Sheet 1 of 9)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[(a)]
	Division 1 Regulatory Guides		
HAR COL 1.9-1	1.8	Qualification and Training of Personnel for Nuclear Power Plants (Rev. 3, May 2000)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03) 13.1.1.4 13.1.3.1 13BB.2.1.3 (NEI 06-13A) 13BB.2.1.3.2
STD COL 1.9-1	1.12	Nuclear Power Plant Instrumentation for Earthquakes (Rev. 2, March 1997)	3.7.4.1
	1.16	Reporting of Operating Information – Appendix A Technical Specifications (Rev. 4, August 1975)	14.2.3.2
HAR 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)	12.3.4
	1.23	Meteorological Monitoring Program for Nuclear Power Plants (Rev. 1, March 2007)	2.3 2.3.2 2.3.2.1.1 2.3.2.1.7 2.3.3 2.3.3.1 2.3.3.1.2 2.3.3.1.5 2.3.3.1.6 2.3.4.1 Table 2.3.3-202
	1.27	Ultimate Heat Sink for Nuclear Power Plants (Rev. 2, January 1976)	2.3.1.2.5

Table 1.9-201 (Sheet 2 of 9)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
STD COL 1.9-1	1.31	Control of Ferrite Content in Stainless Steel Weld Metal (Rev. 3, April 1978)	6.1.1.2
	1.44	Control of the Use of Sensitized Stainless Steel (Rev. 0, May 1973)	6.1.1.2
	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
HAR COL 1.9-1	1.70	Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition) (Rev. 3, November 1978)	1.1.6.1 2.3.1.2.3
	1.76	Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants (Rev. 1, March 2007)	2.3.1.2.2 Table 2.0-201
	1.78	Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release (Rev. 1, December 2001)	6.4.4.2
	1.91	Evaluations of Explosions Postulated To Occur on Transportation Routes Near Nuclear Power Plants (Rev. 1, February 1978)	3.5.1.5
STD COL 1.9-1	1.97	Criteria For Accident Monitoring Instrumentation For Nuclear Power Plants (Rev. 4, June 2006)	Appendix 12AA (NEI 07-03)
	1.101	Emergency Response Planning and Preparedness for Nuclear Power Reactors (Rev. 5, June 2005)	9.5.1.8.2.2 Table 9.5-201

Table 1.9-201 (Sheet 3 of 9)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[(a)]
HAR COL 1.9-1	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)	2.3.5.1 11.2.3.5 11.3.3.4 11.3.3.4.1
	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
	1.113	Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I (Rev. 1, April 1977)	11.2.3.4
	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)	13.1.2.1.2.6
STD COL 1.9-1	1.115	Protection Against Low-Trajectory Turbine Missiles (Rev. 1, July 1977)	3.5.1.3
	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

Table 1.9-201 (Sheet 4 of 9)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
HAR COL 1.9-1	1.132	Site Investigations for Foundations of Nuclear Power Plants (Rev. 2, October 2003)	2.5.0.4 2.5.4.2 2.5.4.2.1.1 2.5.4.2.1.1.1 2.5.4.2.1.1.2 2.5.4.2.1.1.3
	1.138	Laboratory Investigations of Soils and Rocks for Engineering Analysis and Design of Nuclear Power Plants (Rev. 2, December 2003)	2.5.0.4 2.5.4.2 2.5.4.2.1.1 2.5.4.2.1.6 2.5.4.2.1.6.1
STD COL 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
	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
HAR COL 1.9-1	1.145	Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants (Rev. 1, November 1982)	2.3.4.2
	1.149	Nuclear Power Plant Simulation Facilities for Use in Operator Training and License Examinations (Rev. 3, October 2001)	13BB.2.1.3.4
STD COL 1.9-1	1.155	Station Blackout (Rev. 0, August 1998)	Table 8.1-201

Table 1.9-201 (Sheet 5 of 9)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[(a)]
STD COL 1.9-1	1.160	Monitoring the Effectiveness of Maintenance at Nuclear Power Plants (Rev. 2, March 1997)	17.6 (NEI 07-02)
	1.163	Performance-Based Containment Leak-Test Program (Rev. 0, September 1995)	6.2.5.1 6.2.5.2.2
HAR COL 1.9-1	1.165	Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion (Rev. 0, March 1997)	2.5.0.2 2.5.2 2.5.2.2 2.5.2.3 2.5.2.4 2.5.2.4.1.1.2 2.5.2.4.3 2.5.2.4.4.2 2.5.3.5 2.5.3.8
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
	1.182	Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants (Rev. 0, May 2000)	17.6 (NEI 07-02)
HAR 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 13.1.2.1.3.9
	1.194	Atmospheric Relative Concentrations for Control Room Radiological Habitability Assessments at Nuclear Power Plants (Rev. 0, June 2003)	2.3.4.4

Table 1.9-201 (Sheet 6 of 9)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
STD COL 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
	1.200	An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities (Rev. 1, January 2007)	19.59.10.6
HAR COL 1.9-1	1.204	Guidelines for Lightning Protection of Nuclear Power Plants (Rev. 0, November 2005)	Table 8.1-201 8.3.1.1.8
	1.206	Combined License Applications for Nuclear Power Plants (LWR Edition) (Rev. 0, June 2007)	1.1.6.1 2.0 2.4.3 2.5 2.5.4 2.5.4.1.3 2.5.4.3 13BB.2.1.3.1 14.3.2.3.1 14.3.2.3.2 Table 8.1-201

Table 1.9-201 (Sheet 7 of 9)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
HAR COL 1.9-1	1.208	A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion (Rev. 0, March 2007)	2.5.0.1.2 2.5.0.2 2.5.0.2.6 2.5.1 2.5.1.2.4 2.5.2 2.5.2.4.4.2 2.5.2.5.1.1 2.5.2.5.1.5 2.5.2.5.3.4 2.5.2.6.1 2.5.3 2.5.3.6 2.5.4.1.3 2.5.4.3
	Division 4 Regulatory Guides		
STD COL 1.9-1	4.15	Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) - Effluent Streams and the Environment (Rev. 2, July 2007)	11.5.1.2 11.5.3 11.5.4 11.5.6.5
	Division 8 Regulatory Guides		
	8.2	Guide for Administrative Practices in Radiation Monitoring (Rev. 0, February 1973)	12.1 (NEI 07-08) 12.3.4 Appendix 12AA Appendix 12AA (NEI 07-03)
	8.4	Direct-Reading and Indirect-Reading Pocket Dosimeters (Rev. 0, February 1973)	Appendix 12AA Appendix 12AA (NEI 07-03)
	8.5	Criticality and Other Interior Evacuation Signals (Rev. 1, March 1981)	Appendix 12AA Appendix 12AA (NEI 07-03)

Table 1.9-201 (Sheet 8 of 9)
Regulatory Guide/FSAR Section Cross-References

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
STD COL 1.9-1	8.6	Standard Test Procedure for Geiger-Muller Counters (Rev. 0, May 1973)	Appendix 12AA Appendix 12AA (NEI 07-03)
	8.7	Instructions for Recording and Reporting Occupational Radiation Exposure Data (Rev. 2, November 2005)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)
HAR 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 07-08) 12.3.4 Appendix 12AA Appendix 12AA (NEI 07-03) 13.1.2.1.2 13.1.2.1.2.6
STD COL 1.9-1	8.9	Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program (Rev. 1, July 1993)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)
HAR 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 07-08) 12.3.4 Appendix 12AA Appendix 12AA (NEI 07-03) 13.1.2.1.2 13.1.2.1.2.6
STD COL 1.9-1	8.13	Instruction Concerning Prenatal Radiation Exposure (Rev. 3, June 1999)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)
	8.15	Acceptable Programs for Respiratory Protection (Rev. 1, October 1999)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)
	8.27	Radiation Protection Training for Personnel at Light-Water-Cooled Nuclear Power Plants (Rev. 0, March 1981)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)

STD COL 1.9-1

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

	Regulatory Guides	FSAR Chapter, Section, or Subsection[a]
8.28	Audible-Alarm Dosimeters (Rev. 0, August 1981)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)
8.29	Instruction Concerning Risks from Occupational Radiation Exposure (Rev. 1, February 1996)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)
8.34	Monitoring Criteria and Methods To Calculate Occupational Radiation Doses (Rev. 0, July 1992)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)
8.35	Planned Special Exposures (Rev. 0, June 1992)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)
8.36	Radiation Dose to the Embryo/Fetus (Rev. 0, July 1992)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)
8.38	Control of Access to High and Very High Radiation Areas of Nuclear Plants (Rev. 1, May 2006)	12.1 (NEI 07-08) Appendix 12AA Appendix 12AA (NEI 07-03)

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

Table 1.9-202 (Sheet 1 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]		Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
STD SUP 1.9-1	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	
HAR SUP 1.9-1	2.1.3	Population Distribution		Exception	The population density projected for the HAR site at the time of initial site approval and 5 years thereafter will exceed 500 ppsm but is not well in excess of this value, as discussed in Section 2.1 and Environmental Report Chapter 9.
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	.

STD SUP 1.9-1

Table 1.9-202 (Sheet 2 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
2.3.3	Onsite Meteorological Measurements Programs		Acceptable	
2.3.4	Short-term Dispersion Estimates for Accidental Atmospheric Releases		Acceptable	
2.3.5	Long-Term Diffusion Estimates		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 Flooding		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	
2.4.11	Low Water Considerations		Acceptable	
2.4.12	Groundwater		Acceptable	
2.4.13	Accidental Releases of Liquid Effluents in Ground and Surface Waters		Acceptable	
2.4.14	Technical Specifications and Emergency Operation Requirements		Acceptable	

Table 1.9-202 (Sheet 3 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]		Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
STD SUP 1.9-1	2.5.1	Basic Geologic and Seismic Information, Rev.4, 03/2007		Acceptable	
HAR SUP 1.9-1	2.5.2	Vibratory Ground Motion, Rev. 4, 03/2007		Acceptable	
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 System		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.
	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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 4 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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 System Analysis			See Notes d and e.
3.7.2	Seismic System Analysis Acceptable		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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 5 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
3.8.2	Steel Containment, Rev. 2, 03/2007			See Notes d and e.
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, Components, and Equipment			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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 6 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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.
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.

Table 1.9-202 (Sheet 7 of 28)[a]
Conformance with SRP Acceptance Criteria

STD SUP 1.9-1

Criteria Section[b]		Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
5.3.2	Pressure-Temperature Limits 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	Components 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.
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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 8 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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, Draft Rev. 3, 06/1996			See Notes d and e.
6.2.1.1.C	Pressure-Suppression Type BWR Containments, Rev. 7, 03/2007			See Notes d and e.
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.
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		Acceptable	See Notes d, e, and f.

STD SUP 1.9-1

Table 1.9-202 (Sheet 9 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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		Acceptable	See Notes d, e, and f.
6.2.1.1.A	PWR Dry Containments, Including Subatmospheric Containments			See Notes d and e.
6.2.1.1.B	Ice Condenser Containments, Draft Rev. 3, 06/1996			See Notes d and e.
6.2.1.1.C	Pressure-Suppression Type BWR Containments, Rev. 7, 03/2007			See Notes d and e.
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.
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		Acceptable	See Notes d, e, and f.

STD SUP 1.9-1

Table 1.9-202 (Sheet 10 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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		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.
6.5.4	Ice Condenser as a Fission Product Cleanup System, Draft Rev. 4, 06/1996		N/A	
6.5.5	Pressure Suppression Pool as a Fission Product Cleanup System, Rev. 1, 03/2007		N/A	
6.6	Inservice Inspection 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), Draft Rev. 3, 06/1996		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.
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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 11 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 12 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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.
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.
9.2.3	Demineralized Water Makeup System, Draft Rev. 3, 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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 13 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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.
9.5.2	Communications Systems Acceptable		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 Acceptable 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			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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 14 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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		Exception	See Notes d, e, and f. The Liquid Tank Failure Analysis is presented in FSAR 2.4.13 to maintain consistency with the SRP.
11.3	Gaseous Waste Management Systems		Acceptable	See Notes d, e, and f.
11.4	Solid Waste Management Systems		Acceptable	See Notes d, e, and f.
11.5	Process and Effluent Radiological Monitoring Instrumentation and Sampling Systems, Rev. 4, 03/2007		Acceptable	See Notes d, e, and f.

STD SUP 1.9-1

Table 1.9-202 (Sheet 15 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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 RD 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 16 of 28)[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 17 of 28)[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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 18 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
				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.
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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 19 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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, Technical Report on a 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 20 of 28)[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		Acceptable	See notes d and e.

STD SUP 1.9-1

Table 1.9-202 (Sheet 21 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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.
14.3	Inspections, Tests, Analyses, and Acceptance Criteria		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, 03/07			See Notes d and e.

STD SUP 1.9-1

Table 1.9-202 (Sheet 22 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
14.3.6	Electrical Systems - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/07			See Notes d and e.
14.3.7	Plant Systems - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/07		Acceptable	See Notes d, e, and f.
14.3.8	Radiation Protection - Inspections, Tests, Analyses, and Acceptance Criteria, Initial Issuance, 03/07			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.
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	Accident Analysis - Introduction			See Notes d and e.
15.0.1	Radiological Consequence Analyses Using Alternative Source Terms, Rev. 0, 07/2000			See Notes d and e.

STD SUP 1.9-1

Table 1.9-202 (Sheet 23 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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.
15.1.5.A	Radiological Consequences of Main Steam Line Failures Outside Containment of a PWR, Draft Rev. 3, 04/1996			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 24 of 28)[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)			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. 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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 25 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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)			See Notes d and e.
15.4.9.A	Radiological Consequences of Control Rod Drop Accident (BWR), Draft Rev. 3, 06/1996			See Notes d and e.
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.
15.6.2	Radiological Consequences of the Failure of Small Lines Carrying Primary Coolant Outside Containment, Draft Rev. 3, 04/1996			See Notes d and e.
15.6.3	Radiological Consequences of Steam Generator Tube Failure, Draft Rev. 3, 04/1996			See Notes d and e.
15.6.4	Radiological Consequences of Main Steam Line Failure Outside Containment (BWR), Draft Rev. 3, 04/1996			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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 26 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
15.6.5.A	Radiological Consequences of a Design Basis Loss-of-Coolant Accident Including Containment Leakage Contribution, Draft Rev. 2, 04/1996			See Notes d and e.
15.6.5.B	Radiological Consequences of a Design Basis Loss-of-Coolant Accident: Leakage From Engineered Safety Feature Components Outside Containment, Draft Rev. 2, 04/1996			See Notes d and e.
15.6.5.D	Radiological Consequences of a Design Basis Loss-of-Coolant Accident: Leakage From Main Steam Isolation Valve Leakage Control System (BWR) , Draft Rev. 2, 04/1996			See Notes d and e.
15.7.4	Radiological Consequences of Fuel Handling Accidents, Draft Rev. 2, 04/1996			See Notes d and e.
15.7.5	Spent Fuel Cask Drop Accidents, Draft Rev. 3, 04/1996			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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 27 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
17.1	Quality Assurance During the Design and Construction Phases, Rev. 2, 07/1981		Acceptable	See Notes d, e, and f.
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.
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 07-02
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.

STD SUP 1.9-1

Table 1.9-202 (Sheet 28 of 28)[a]
Conformance with SRP Acceptance Criteria

	Criteria Section[b]	Reference Criteria	FSAR Position[c]	Comments/Summary of Exceptions
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		Acceptable	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.

h) General Design Criteria 17.

STD COL 1.9-3

Table 1.9-203 (Sheet 1 of 17)
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

STD COL 1.9-3

Table 1.9-203 (Sheet 2 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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
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

STD COL 1.9-3

Table 1.9-203 (Sheet 3 of 17)
Listing of Unresolved Safety Issues and GenericSafety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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
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

STD COL 1.9-3

Table 1.9-203 (Sheet 4 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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 Damages 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
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

STD COL 1.9-3

Table 1.9-203 (Sheet 5 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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
II.K.1(6)	Review Containment Isolation Initiation Design and Procedures	f	Resolved per NUREG-0933

STD COL 1.9-3

Table 1.9-203 (Sheet 6 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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 7 of 17)
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

STD COL 1.9-3

Table 1.9-203 (Sheet 8 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
III.C.2(2)	Provide Training for Member 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
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
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

STD COL 1.9-3

Table 1.9-203 (Sheet 9 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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
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

STD COL 1.9-3

Table 1.9-203 (Sheet 10 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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 11 of 17)
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

STD COL 1.9-3

Table 1.9-203 (Sheet 12 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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.
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
B-64	Decommissioning of Reactors	f	Resolved per NUREG-0933.
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

STD COL 1.9-3

Table 1.9-203 (Sheet 13 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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
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

STD COL 1.9-3

Table 1.9-203 (Sheet 14 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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
184	Endangered Species	d	Not applicable to new plants

STD COL 1.9-3

Table 1.9-203 (Sheet 15 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
185	Control of Recriticality following Small-Break LOCA in PWRs	h (High)	Not applicable to new plants
186	Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants	Continue	9.1.5.3, 1.9.4.2.3
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
193	BWR ECCS Suction Concerns	Continue	Not applicable to the AP1000.
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			
HF1.1	Shift Staffing	f	13.1.2.1.4 18.6
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

STD COL 1.9-3

Table 1.9-203 (Sheet 16 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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
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

STD COL 1.9-3

Table 1.9-203 (Sheet 17 of 17)
Listing of Unresolved Safety Issues and Generic Safety Issues

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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
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).

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

	Number	Title	Comment
	BULLETIN		
STD COL 1.9-2	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
HAR COL 1.9-2	80-15	Possible Loss of Emergency Notification System (ENS) with Loss of Offsite Power (6/80)	9.5.2.2.3.1 9.5.2.2.3.2.3 9.5.2.5.1
STD COL 1.9-2	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	13.6.
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 Emergency Plan
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

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

	Number	Title	Comment
STD COL 1.9-2	81-02	Analysis, Conclusions and Recommendations Concerning Operator Licensing (1/81)	13.2
	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
HAR COL 1.9-2	82-12	Nuclear Power Plant Staff Working Hours (6/82)	13.1.2.1.3.2 13.1.2.1.3.4 13.1.2.1.2.6 13.1.2.1.2.7 13.1.2.1.2.8 13.1.2.1.4 13.1.2.1.5
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 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.

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

STD COL 1.9-2

Number	Title	Comment
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
84-10	Administration of Operating Tests Prior to Initial Criticality (10 CFR 55.25) (5/84)	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)	5.2.4.9 See Note a.
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

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

	Number	Title	Comment
STD COL 1.9-2	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 PAR Plants (3/88)	5.2.4 See Note a.
HAR COL 1.9-2	88-14	Instrument Air Supply System Problems Affecting Safety-Related Equipment (8/88)	9.3.7
STD COL 1.9-2	88-18	Plant Record Storage on Optical Disk (10/88)	17
	89-07	Power Reactors Safeguards Contingency Planning for Service Vehicle Bombs (4/89)	13.6
	89-07 S1	Power Reactor Safeguards Contingency Planning for Surface Vehicle Bombs	13.6
HAR COL 1.9-2	89-08	Erosion/Corrosion-Induced Pipe Wall Thinning (5/89)	10.1.3.1
STD COL 1.9-2	89-12	Operator Licensing Examinations (7/89)	13.2
	89-15	Emergency Response Data System (8/ 89)	9.5.2.2.3.2.3 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)	9.5.2.2.3.2.3 13.3
	91-16	Licensed Operator and Other Nuclear Facility Personnel Fitness for Duty (10/91)	13.7

STD COL 1.9-2

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

Number	Title	Comment
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.
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 Technical Specifications 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 Subsection 1.9.6.

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

HAR SUP 1.10-1

HAR 2 and 3 will be located in an area north of the existing unit, as shown on Figure 1.1-201. The power blocks for HAR 2 and 3 have a minimum separation of at least 290 meters (950 feet) between plant centerlines while the centroids for the power block pair are separated from the existing unit by more than 427 meters (1400 feet). The significant separation of the existing unit from the new units reduces the potential for construction impacts upon the existing unit SSCs. Conversely, close proximity of the new units presents a more likely potential for construction impact for the first completed new unit from the remaining unit under construction.

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.

HAR SUP 1.10-1

- HNP SSCs important to safety are described in Chapter 3 of the HNP FSAR.
- LCOs for HNP are located in the HNP Technical Specifications.
- HAR 2 and 3 SSCs important to safety are described in HAR FSAR Chapter 3.
- As indicated in Chapter 16, the LCOs for HAR 2 and 3 are located in Part 4 of the COL Application.

STD SUP 1.10-1

This assessment identified administrative and managerial controls to avoid impacts to SSCs from construction. The results of the assessment are presented in Table 1.10-202.

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 off-site 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 off-site transmission lines or impact to plant cooling water supplies.

STD SUP 1.10-1

Table 1.10-201 (Sheet 1 of 2)
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 • On-Site 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
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 Stored Flammable, Hazardous or Toxic Materials • Wind-Generated, Construction-Related Debris and Missiles

STD SUP 1.10-1

Table 1.10-201 (Sheet 2 of 2)
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	• Off-Site Power System
Impact on Transmission Towers	• Off-Site Power Systems
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	• Off-Site Power System • On-Site 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 Air Intake(1)
Impact on Electrical Systems and Components	• Off-Site Power System • On-Site Power Systems
Impact on Cooling Water Systems and Components	• Service Water System(1) • Ultimate Heat Sink(1)
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

STD SUP 1.10-1

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

Construction Hazard	Impacted SSCs
Impact of Equipment Delivery and Heavy Equipment Delivery	• Safety-Related Structures and Foundations

[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 Off-Site 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.

STD SUP 1.10-1

Table 1.10-203 (Sheet 3 of 3)
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 on-site are established. • General equipment and heavy equipment movement controls and limitations are established.

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 1B SEVERE ACCIDENT MITIGATION DESIGN ALTERNATIVES

DCD Appendix 1B is not incorporated into this FSAR. Rather, the severe accident mitigation design alternatives will be discussed 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."

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 with Revision 2 of the Regulatory Guide is documented in the DCD.			
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 1.12, Rev. 2, 3/97 – Nuclear Power Plant Instrumentation for Earthquakes.			
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.			
C.8		Conforms	
Regulatory Guide 1.13, Rev. 2, 03/07 - Spent Fuel Storage Facility Design Basis			
Conformance with Revision 1 of the Regulatory Guide is documented in the DCD.			
Regulatory Guide 1.16, Rev. 4, 8/75 – Reporting of Operating Information – Appendix A Technical Specifications			
C.1.a		Conforms	
C.1.b, c		Exception	The annual operating report and monthly operating report are submitted in accordance with the Technical Specifications
C.2, C.4		Exception	Event reporting is performed in accordance with 10 CFR 50.72 and 50.73 utilizing the guidance of NUREG-1022.

	Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
STD COL 1.9-1	C.3		Exception	Technical Specification reporting requirements are implemented, as required.

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.

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	Exception	ANSI N13.1-1999 is used.
	C.7-C.14	Conforms	

Regulatory Guide 1.23, Rev. 1, 3/07 –Meteorological Monitoring Programs for Nuclear Power Plants

HAR COL 1.9-1	Section B	Exception	RG 1.23, Rev. 1 states that COLs should use consecutive 24 months of data as long as the data are “defendable, representative and complete” and not more than 10 years old at time of COLA submittal. Meteorological data provided are for the 5-year period from March 1, 1994 to February 28, 1999.
	C.2.1, C.2.2	Exception	RG 1.23, Rev. 1 states that measurements (wind speed and direction and vertical temperature difference) should be made at 10 m and 60 m. HNP/HAR Measurements are

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
			made at 12 m and 61 m.
C.2.3-C.2.5		Conforms	
C.3-C.5		Conforms	
C.6, Table 3		Exception	RG 1.23, Rev.1 states that the on-site wind data should be compiled into annual joint frequency tables (JFTs). The RG provides Table 3 as a "suitable format for data compilation and reporting." JFTs (Tables 2.3.2-201 through 2.3.2-252) were prepared using a similar format, but with the speed categories recommended by RG 1.23, Rev. 0.
C.7-C.9		Conforms	

STD COL 1.9-1

Regulatory Guide 1.26, Rev. 4, 3/07 – Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containment Components of Nuclear Power Plants

Conformance with Revision 3 of the Regulatory Guide is documented in the DCD.

Regulatory Guide 1.28, Rev. 3, 8/85 – Quality Assurance Program Requirements (Design and Construction)

	Exception	Quality assurance is in accordance with the quality assurance program document (QAPD).

Regulatory Guide 1.29, Rev. 4, 3/07 – Seismic Design Classification

Conformance with Revision 3 of the Regulatory Guide is documented in the DCD.

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

	Exception	Quality assurance is in accordance with the QAPD.

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

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

Conformance with Revision 2 of the Regulatory Guide is documented in the DCD.

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

STD COL 1.9-1

Exception — Quality assurance is in accordance with the QAPD.

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 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.

Exception — Quality assurance is in accordance with the QAPD.

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 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.

Exception — Quality assurance is in accordance with the QAPD.

Regulatory Guide 1.39, Rev. 2, 9/77 – Housekeeping Requirements for 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.

Exception — Quality assurance is in accordance with the QAPD.

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

Conformance with Revision 0 of the Regulatory Guide is documented in the DCD.

Conforms

Regulatory Guide 1.54, Rev. 1, 7/00 – Service Level I, II, And III Protective

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
	Coatings Applied To Nuclear Power Plants		
STD COL 1.9-1	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.		
		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 documented in the DCD.		
		Conforms	
	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 2007 and 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 documented in the DCD.		
	Regulatory Guide 1.68, Rev. 3, 3/07 – Initial Test Program for Water-Cooled Nuclear Power Plants		

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

STD COL 1.9-1

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.

C.2-C.9 Appendix B 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 with Revision 0 of the Regulatory Guide is documented in the DCD.

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

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

C.1 C.2 C.3.1 C.3.3 C.4.1	Conforms	

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

C.5

STD COL 1.9-1

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

Conformance with Revision 2 of the Regulatory Guide is documented in the DCD.

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

Conformance with Revision 31 of the Regulatory Guide is documented 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.

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.

Conforms

Regulatory Guide 1.92, Rev. 2, 7/06 – Combining Modal Responses and Spatial Components in Seismic Response Analysis

Conformance with Revision 1 of the Regulatory Guide is documented in 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

Exception — Quality assurance is in accordance with the QAPD.

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

Conformance with Revision 3 of the Regulatory Guide is documented in the DCD.

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

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
General		N/A	

STD COL 1.9-1

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 with Revision 0-R of the Regulatory Guide is documented in the DCD.

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

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

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

STD COL 1.9-1

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. O-R, 5/77 – Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems

		Exception	Quality assurance is in accordance with the QAPD.

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

Conformance with Revision 1 of the Regulatory Guide is documented in 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 documented in 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. 450-1975	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 documented in the DCD.

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

General		Conforms	

Reg. 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

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
	Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.		
	C.3a	Conforms	
STD COL 1.9-1	C.6	Conforms	

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. Conformance with Revision 0 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

General	Conforms	

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. Conformance with Revision 0 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

C.7	Exception	Quality assurance is in accordance with the QAPD.

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

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Assessments at Nuclear Power Plants			
	General	Conforms	
STD COL 1.9-1			

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.

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

Conformance with Revision 1 of the Regulatory Guide is documented in the DCD. 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	Exception	Conformance is to Revision 1 of Regulatory Guide 1.152.

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

	Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
	General	N/A		This Regulatory Guide is outside the scope of the FSAR.

STD COL 1.9-1 **Regulatory Guide 1.160, Rev. 2, 3/97 – Monitoring the Effectiveness of Maintenance at Nuclear Power Plants**

General	Conforms	

Regulatory Guide 1.161, Rev. 0, 6/95 – Evaluation of Reactor Pressure Vessels with Charpy Upper-Shelf Energy Less Than 50 Ft-Lb.

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 1.162, 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	

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

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

STD COL 1.9-1

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 with Revision 0 of the Regulatory Guide is documented in the DCD.

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

General	Conforms	

Regulatory Guide 1.175, Rev. 0, 7/98 – An Approach for Plant-Specific, Risk-Informed Decisionmaking: Inservice Testing

General	Conforms	

Regulatory Guide 1.176, Rev. 0, 8/98 – An Approach for Plant-Specific, Risk-Informed Decisionmaking: Graded Quality Assurance

General	Conforms	

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

General	Conforms	

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 with Revision 0 of the Regulatory Guide is documented in the DCD.

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

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

STD COL 1.9-1

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

Reg. 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.

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

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
	Integrity at Nuclear Power Reactors		
	General	Conforms	
STD COL 1.9-1	**Reg. 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		
		N/A	This Regulatory Guide is not applicable to the AP1000 certified design.
	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.		
	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		

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Protection for Existing Light-Water Nuclear Power Plants			
	This Regulatory Guide is not applicable to the AP1000 certified design.		
STD COL 1.9-1	**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	

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
STD COL 1.9-1	**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.
	DIVISION 5 – Materials and Plant Protection		
	Regulatory Guide 5.9 Rev. 2, 12/83 – Guidelines for Germanium Spectroscopy Systems for Measurements 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 Controls 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.
	Reguatory 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.
	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		

	Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
	Pocket Dosimeters			
STD COL 1.9-1	General	10 CFR Part 20 ANSI N 13.5-1972	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 N323-1978 (R1993) “Radiation Protection Instrumentation and Calibration.”

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.

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

STD COL 1.9-1

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	

Regulatory Guide 8.27, Rev. 0, 8/81 – 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 N13.7-1981	Conforms	ANSI N13.7-1981 was reaffirmed in 1992.

Regulatory Guide 8.29, Rev. 1, 1/96 – Instruction Concerning Risks from Occupational Radiation Exposure

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

STD COL 1.9-1

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	