CHAPTER 1

INTRODUCTION AND GENERAL PLANT DESCRIPTION

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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 at the end of DCD Section 1.1.

STD SUP 1.1-1 This 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 Corporation, 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.

Appendix D to 10 CFR Part 52 is hereby incorporated by reference into the COL application. Unless otherwise specified, reference to the DCD refers to Tier 2 information.

WLS SUP 1.1-2 This Final Safety Analysis Report (FSAR) is hereby submitted under Section 103 of the Atomic Energy Act by Duke Energy Carolinas LLC to the NRC as part of the application for two Class 103 combined licenses (COLs) to construct and operate two nuclear power plants under the provisions of 10 CFR 52 Subpart C.

1.1.1 PLANT LOCATION

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

WLS COL 2.1-1 Lee Nuclear Station Units 1 and 2 are located in the eastern portion of Cherokee County in north central South Carolina, approximately 35 miles southwest of Charlotte, North Carolina, approximately 25 miles northeast of Spartanburg, South Carolina, and approximately 7.5 miles southeast of Gaffney, South Carolina (Reference 201).

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

1.1.5 SCHEDULE

Place the following text at the end of DCD Subsection 1.1.5:

WLS COL 1.1-1 Reference 1 to DCD Chapter 1 discusses the generic construction plan and startup schedule for the AP1000. The overall schedule for site preparation and construction of the two AP1000 reactors at the Lee Nuclear Site is shown in Table 1.1-203. The schedule presented in Table 1.1-203 is influenced by the following factors:

1. Duke Energy economic evaluations,
2. The State schedule for issuance of the Certificate of Environmental Compatibility and Public Convenience and Necessity and various environmental permits,
3. The Federal schedule for issuing Corps of Engineers and FERC construction permits, and
4. The Federal licensing and adjudicatory process schedule.

Duke Energy's 2007 Annual Plan reflects a commercial operation date of 2018 for the first unit of the Lee Nuclear Station. The Annual Plan is sensitive to assumptions made for various factors such as market conditions, commodity costs, environmental compliance costs, customer growth, and customer usage patterns. The precision with which these factors can be predicted diminishes as the forecast period increases. Although the current optimal timeframe for commercial operations is 2018, this plan will be updated annually, increasing the precision of this forecast as the licensing process progresses. It is assumed that the NRC licensing and adjudicatory process will result in the issuance of a license as early as 2010. The construction schedule in Table 1.1-203 provides for completion of the plant in a timeframe that would support commercial operation beginning in 2016. Such scheduling ensures that an adequate planning window exists between 2016 and 2018 in order to accommodate changes due to uncertainties in the Federal and State regulatory process, construction schedule, availability of critical components, and market forces. The construction of Unit-2 is nominally planned to follow Unit-1 by two years. The actual schedule will be influenced by many of the same factors discussed above.

1.1.6.1 Regulatory Guide 1.70

Add the following paragraphs at the end of DCD Section 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 at 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 at 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 Information Summary (RIS) 2005-026. Such material is clearly marked and the withheld material is separately provided for NRC review.

1.1.6.6 Acronyms

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

WLS SUP 1.1-5 Table 1.1-201 provides a list of acronyms used in the Lee Nuclear Station Units 1 and 2 FSAR in addition to the acronyms identified in the DCD Table 1.1-1, and the system designators 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.

WLS COL 1.1-1 This COL Item is addressed in Subsection 1.1.5.

1.1.8 REFERENCES

Add the following text to the end of DCD Subsection 1.1.8.

201. United States Geological Survey (USGS), 1971, Blacksburg South Quadrangle, South Carolina, 7.5 Minute Series Topographic Map.

WLS SUP 1.1-2

TABLE 1.1-201 (Sheet 1 of 7)
ACRONYMS USED IN THE FSAR

ACCRONYM	DEFINITION
AE	Architect Engineer
AHP	Auxiliary Holding Pond
API	Antecedent Precipitation Index
ARI	Air Conditioning and Refrigeration Institute
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigeration and Air-Conditioning Engineers
ASME	American Society of Mechanical Engineers
AST	Aboveground Storage Tank
BHTV	Borehole Televiewer
CAM	Continuous Air Monitor
CBA	Cost Benefit Analysis
CDF	Core Damage Frequency
CECC	Central Emergency Control Center
CEDE	Committed Effectitve Dose Equivalent
CEO	Chief Executive Officer
CG	Cloud-to-Ground
CNO	Chief Nuclear Officer
CNS	Catawba Nuclear Station
COL	Combined License
COLA	Combined License Application
CPS	Computerized Procedure System
CPT	Cone Penetrometer Test
DAC	Derived Air Concentration
DDE	Deep Dose Equivalent

WLS SUP 1.1-2

TABLE 1.1-201 (Sheet 2 of 7)
ACRONYMS USED IN THE FSAR

ACCRONYM	DEFINITION
DRS	Design Response Spectra
EAB	Exclusion Area Boundary
EHOT	Effluent Holdup Tank
ENS	Emergency Notification System
EOF	Emergency Operations Facility
EOP	Emergency Operating Procedures
EPC	Engineering, Procurement & Construction
EP-ITAAC	Emergency Planning ITAAC
EQ	Environmental Qualification
EQMEL	EQ Master Equipment List
ERDS	Emergency Response Data System
ERO	Emergency Response Organization
ES&H	Environment Safety & Health
ESW	ESW - Electro-slag Weld
FAC	Flow Accelerated Corrosion
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHA	Fire Hazards Analysis
FIRS	Foundation Input Response Spectra
FSAR	Final Safety Analysis Report
FTS	Federal Telephone System
GMAW	Gas Metal Arc Welding
GMRS	Ground Motion Response Spectrum
GSI	Geological Strength Index

WLS SUP 1.1-2

TABLE 1.1-201 (Sheet 3 of 7)
ACRONYMS USED IN THE FSAR

ACCRONYM	DEFINITION
GSU	Main Step-up Transformer
GTAW	Gas Tungsten Arc Welding
GTS	Generic Technical Specfications
HCLPF	High Confidence, Low Probability of Failure
HiRAT	Hi-Resolution Acoustic Televiewer
HMR	Hydrometeorological Report
HPN	Health Physics Network
HV	High Voltage
IDLH	Immediately Dangerous to Life and Health
ITA	Inspections, Tests, Analyses
ITP	Initial Test Program
JTWG	Joint Test Working Group
LAN	Local Area Network
LER	Licensee Event Report
LGIP	Large Generator Interconneciton Procedure
LL	Liquid Limit
LLW	Low Level Waste
LOPP	Loss of Preferred Power
MCL	Management Counterpart Link
MDD	Standard Proctor Maximum Dry Density
NCDC	National Climatic Data Center
NDE	Non-destructive Examination
NERC	North American Electric Reliability Corporation
NGD	Nuclear Generation Department

WLS SUP 1.1-2

TABLE 1.1-201 (Sheet 4 of 7)
ACRONYMS USED IN THE FSAR

ACCRONYM	DEFINITION
NIOSH	National Institute for Occupational Safety and Health
NLDN	National Lightning Detection Network
NOAA	National Oceanographic and Atmospheric Administration
NSA	Nuclear Safety Assurance
OBE	Operating Basis Earthquake
OCL	Operations Center Local Area Network
ODCM	Offsite Dose Calculation Manual
OM	Operations and Maintenance
OMC	Standard Proctor Optimum Moisture Content
OPTV	Optical Televiewer
OSC	Operations Support Center
PAW	Plasma Arc Welding
PCB	Power Circuit-Breakers
PCP	Process Control Program
PD	Power Delivery
PGO	Planning and Grid Operations
PGP	Procedure Generation Package
PI	Plasticity Index
PMCL	Protective Measures Counterpart Link
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation
PSHA	Probabilistic Seismic Hazard Analysis
PS-ITAAC	Physical Security ITAAC
PSO	Power System Operations

WLS SUP 1.1-2

TABLE 1.1-201 (Sheet 5 of 7)
ACRONYMS USED IN THE FSAR

ACCRONYM	DEFINITION
PT&O	Plant Test and Operations
PVC	Polyvinyl Chloride
PZR	Pressurizer
QAPD	Quality Assurance Program Description
QC	Quality Control
QMS	Quality Management System
RAT	Reserve Auxiliary Transformer
RCA	Radiological Controlled Area
RCP	Reactor Coolant Pump
RCTS	Resonant Column / Torsional Shear
RHR	Residual Heat Removal
RIS	Regulatory Issue Summary
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
RTD	Resistance Temperature Detector
RTDP	Revised Thermal Design Procedure
SAMDA	Severe Accident Mitigation Design Alternatives
SAMG	Severe Accident Management Guidance
SAW	Submerged Arc Welding

WLS SUP 1.1-2

TABLE 1.1-201 (Sheet 6 of 7)
ACRONYMS USED IN THE FSAR

ACCRONYM	DEFINITION
SCADA	Supervisory Control and Data Acquisition
SCBA	Self Contained Breathing Apparatus
SCPT	Seismic Cone Penetrometer Test
SERC	Southeastern Electric Reliability Council
SGMP	Steam Generator Management Program
SLA	Service Level Agreement
SMAW	Shielded Metal Arc Welding
SOC	System Operation Center
SOCH	Simulated Open Channel Hydraulics
SPT	Standard Penetration Test
SRO	Senior Reactor Operator
SSC(s)	Structure(s), System(s), and Component(s)
SS-ITAAC	Site-Specific ITAAC
STA	Shift Technicial Advisor
TC	Thermocouple
TEDE	Total Effective Dose Equivalent
TGA	Thermogravimetric Analysis
TSO	Transmission System Operator
TSP	Transmission System Provider
TSS	Total Suspended Solids
UAT	Unit Auxiliary Transformer
UCS	Unconfined Compressive Strength
USDA	U. S. Department of Agriculture
UST	Underground Storage Tank

WLS SUP 1.1-2

TABLE 1.1-201 (Sheet 7 of 7)
ACRONYMS USED IN THE FSAR

ACCRONYM	DEFINITION
UT	Ultrasonic Techniques
V & V	Verification and Validation
VACAR	Virginia-Carolinas (Sub-region of SERC)
WAC	Waste Acceptance Criteria
WCSC	Waterborne Commerce Statistics Center
WEC	Westinghouse Electric Company
WHUT	Waste Holdup Tank
WLS	William States Lee III Nuclear Station

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 1.8-202, e.g., STD COL 4.4-1, or STD COL 19.59.10.5-1
NPP COL X.Y-#	FSAR information that addresses a DCD Combined License Information item and is plant specific. NPP is replaced with a plant specific identifier. Each COL item is numbered as identified in DCD Table 1.8-2 and FSAR Table 1.8-202, e.g., NPP COL 4.4-1, or NPP COL 19.59.10.5-1
NPP CDI or STD CDI	FSAR information that addresses DCD Conceptual Design Information (CDI). Replacement design information is generally plant specific; however, some may be common to other applicants. NPP is replaced with a plant specific identifier. STD is used if it is common. CDI information replacements are not numbered.

STD SUP 1.1-3

TABLE 1.1-202 (Sheet 2 of 2)
LEFT MARGIN ANNOTATIONS

STD SUP X.Y-#	FSAR information that supplements the material in the DCD and is common to other COL applicants. Each SUP item is numbered separately at an appropriate subsection level, e.g., STD SUP 1.10-1, or STD SUP 9.5.1-1
NPP SUP X.Y-#	FSAR information that supplements the material in the DCD and is plant specific. NPP is replaced with a plant specific identifier. Each SUP item is numbered separately at an appropriate subsection level, e.g., NPP SUP 3.10-1, or NPP SUP 9.2.5-1
DCD	FSAR information that duplicates material in the DCD. Such information from the DCD is repeated in the FSAR only in instances determined necessary to provide contextual clarity.

TABLE 1.1-203
ANTICIPATED SCHEDULE FOR CONSTRUCTION AND OPERATION OF TWO AP1000 REACTORS AT THE LEE NUCLEAR SITE

WLS COL 1.1-1

Activity	Start	Finish	Duration
Unit 1			
Site Preparations	3rd Q 2008	1st Q 2012	44 mo.
First Concrete	1st Q 2012		
Site Construction to Fuel Load	1st Q 2012	1st Q 2016	45 mo.
Fuel Load – Start Up	1st Q 2016	2nd Q 2016	6 mo.
Commercial Operation	2nd Q 2016	2056	40 yr.
Unit 2			
First Concrete	2nd Q 2013		
Site Construction to Fuel Load	2nd Q 2013	2nd Q2016	36 mo.
Fuel Load – Start Up	3rd Q 2016	1st Q 2017	6 mo.
Commercial Operation	1st Q 2017	2057	40 yr.

Q - Quarter.

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

WLS COL 2.1-1 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 Lee Nuclear Station is shown on Figure 1.1-202. Principal structures and facilities, parking areas, roads, and transmission lines are illustrated. Orientation of the two AP1000 units is such that "plant north" faces 168 degrees from true north. Unless otherwise noted, directions in this subsection are based on true north. Similarly, design plant grade for the DCD is defined as 100 feet, whereas design plant grade for the Lee Nuclear Station Units 1 and 2 is 590 feet; therefore, DCD elevations are to be increased by 490 feet to be actual site elevations.

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. The power block complex for both units is within a common perimeter fence. Also contained within the perimeter fence is the maintenance support building, which is located south of the operating units, and the warehouses / testing labs, located north of Unit 2. Access to the fenced area is accomplished through the plant access portal south of the maintenance building.

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 three mechanical-draft cooling towers, a pump basin, circulating water pumps and associated piping. The Unit 1 cooling towers are located west of the perimeter fence, while the Unit 2 cooling towers are located east of the perimeter fence. The circulating pumps are located in separate buildings located near each cooling tower. The pumps circulate the cooling water from the pump basin to the main

condensers and back to the unit's cooling towers. Each complex uses a pre-cast concrete supply pipe and return pipe, both of which are below grade. North of the Unit 1 cooling towers is the raw water intake structure.

The transformer area is located immediately adjacent to and south of the turbine building. The unit auxiliary transformers, the reserve auxiliary transformer and the main step-up transformers are located in this area. The main switchyard area is located south of the fenced perimeter.

An administrative building is located outside of the perimeter fence south of the maintenance support building. This building houses management, administration and support functions for the site. The training and simulator buildings are located southwest of the switchyard area.

The gatehouse at the main gate controls ingress and egress to and from the site. Parking facilities are provided adjacent to the administrative building, east of the switchyard, and adjacent to the simulator / training facility.

Road access to the site is from the south. The access road connects to McKown Mountain Road. Other on-site roads are provided, as necessary, to support plant operation, maintenance, security and other activities.

Rail access to the site is from the northwest. A spur line connects the site to the Norfolk Southern railway system in Gaffney. Additional lines are provided on-site as necessary to allow movement of equipment and materials.

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.

1.2.3 PLANT ARRANGEMENT DESCRIPTION

Building Definition

Add the following information at the end of DCD Subsection 1.2.3.

WLS DEP 18.8-1 Figure 1.2-201 replaces DCD Figure 1.2-18 to reflect the relocation of the Operations Support Center.

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 at the beginning of DCD Subsection 1.4.1.

WLS SUP 1.4-1 Duke Energy Carolinas, LLC (a subsidiary of Duke Energy Corporation) is the applicant for Combined Licenses for the William States Lee III Nuclear Station, Units 1 and 2, hereafter referred to as the Lee Nuclear Station. Duke Energy Carolinas, LLC (Duke) will own and operate the Lee Nuclear Station. Duke has over 45 years of experience in the design, construction and operation of nuclear power stations, and currently has seven nuclear operating units that generate over 7000 megawatts of electricity.

Duke Energy Corp., one of the largest electric power companies in the United States, supplies and delivers energy to approximately 3.9 million U.S. customers. The company has nearly 37,000 megawatts of electric generating capacity in the Midwest and the Carolinas.

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

WLS SUP 1.4-2 Contractors participating in the preparation of the COL Application are addressed in Subsection 1.4.2.8.

Not all participants have been identified at this time. Additional participants may be required. Changes to this subsection are required to identify additional participants, principal consultants, outside service organizations, or contractors for the design, construction, and operation of Lee Nuclear Station. Changes are also required to delineate the division of responsibility among the certified plant designer, architect-engineer, constructor, and plant operator as appropriate.

Add the following new subsection and associated subsections between DCD Subsection 1.4.2.7 and DCD Subsection 1.4.3:

1.4.2.8 Other Contractors

WLS SUP 1.4-3 Contractual relationships have been established with specialized consulting firms to assist in preparing the COL Application for Lee Nuclear Station.

1.4.2.8.1 MACTEC Engineering and Consulting, Inc.

MACTEC Engineering and Consulting, Inc. is a leader in the engineering, environmental, and remedial construction industries and provides a full range of engineering consulting services to clients worldwide. These services include site development, planning and engineering design, construction phase services, environmental services, and facilities operations and maintenance services.

MACTEC Engineering and Consulting, Inc. has performed geotechnical field investigations and laboratory testing in support of the COL Application for Lee Nuclear Station. This includes performing standard penetration tests, obtaining core samples and rock cores, and installing groundwater observation wells.

1.4.2.8.2 William Lettis & Associates, Inc.

William Lettis & Associates, Inc. is a consulting firm specializing in applied earth sciences and has extensive experience in earthquake-related services, engineering geology, and geotechnical services. The firm has conducted earth science investigations for a wide spectrum of clients and provides a range of services including detailed site characterization, assessment of capable tectonic features, seismic source zones, and probabilistic seismic hazard assessment studies.

William Lettis & Associates, Inc. has performed the investigations and analyses required to prepare the geology, seismology, and geotechnical engineering section of the COL Application for the Lee Nuclear Station. This includes investigating the subsurface materials present at the site, performing a comprehensive geotechnical exploration, and performing geophysical surveys to assess the dynamic response of soil and rock.

1.4.2.8.3 Enercon Services, Inc.

Enercon Services, Inc. is a diversified, multi-disciplined engineering services firm with extensive experience in providing services to the United States commercial nuclear power industry. The firm's capabilities and expertise includes design engineering, regulatory compliance, environmental management, and management services.

Enercon Services, Inc. has provided engineering, management, and consulting services to prepare the COL Application for the Lee Nuclear Station. This included providing project management and engineering services, developing selected COL Application sections, and preparing the COL Application.

1.4.2.8.4 Burns & Roe Enterprises, Inc.

Burns & Roe Enterprises, Inc. is an architect-engineering firm with considerable nuclear expertise. The firm has provided design, construction management, and modernization services to a wide variety of domestic and foreign operating utilities. Burns & Roe Enterprises, Inc. contributed to the design and installation of

a number of commercial nuclear power plants. The firm has also been involved with the development of advanced light water reactors since their inception.

Burns & Roe Enterprises, Inc. has participated in document development, including preparation of the FSAR for the COL Application for WLS. This includes preparing topical reports and performing technical reviews of COL Application documents.

1.4.2.8.5 The Shaw Group, Inc (Stone & Webster)

Shaw (Stone & Webster) has more than 60 years expertise in the nuclear industry, including a pioneering history of firsts. These firsts included the design and construction of the Y-12 facility in Oak Ridge, Tennessee, and the engineering and design of Shippingport, the first commercial nuclear power plant in the United States. Shaw was also the original engineer / designer for 17 U. S. nuclear power plants, developed the first U. S. Nuclear Regulatory Commission-approved Nuclear Quality Assurance Program, and completed the first license application for a spent fuel dry storage facility. Shaw has provided services to 95 percent of all U. S. nuclear plants. Shaw is part of the AP1000 Consortium with Westinghouse Electric Company, which is 20 percent owned by Shaw. This consortium was selected by the People's Republic of China State Nuclear Power Technology Company to build four new nuclear power plants using Westinghouse's AP1000 technology.

Shaw has performed conceptual design engineering in support of the COL Application for the Lee Nuclear Station.

1.5 REQUIREMENTS FOR FURTHER TECHNICAL INFORMATION

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

1.6 MATERIAL REFERENCED

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

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

STD SUP 1.6-1

TABLE 1.6-201
ADDITIONAL MATERIAL REFERENCED

Author / Report Number	Title	Revision	FSAR Section	Document Transmittal Date	ADAMS Accession Number
Westinghouse / APP-GW-GL-700	AP1000 Design Control Document	16	All	May 2007	
Westinghouse / APP-GW-GLR-134	AP1000 DCD Impacts to Support COLA Standardization	1	All	December 2007	
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	
NEI 06-13-A	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	

(-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 paragraphs at the end of DCD Section 1.7.2.

WLS 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.

WLS SUP 1.7-1

TABLE 1.7-201
AP1000 SYSTEM DESIGNATORS AND SYSTEM DRAWINGS

Designator	System	FSAR Section	FSAR Figure
CWS	Circulating Water System	10.4.5	10.4-201
RWS	Raw Water System	9.2.11	9.2-201 9.2-202 9.2-203 9.2-204 9.2-205
ZBX	Transmission Switchyard and Offsite Power System	8.2.1	8.2-201 8.2-202

1.8 INTERFACES FOR STANDARD DESIGN

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

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

WLS 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.

WLS 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 this document. Completion of the COL Holder items is the subject of a Combined License Condition as prescribed in a separate document submitted as part of this COL application.

WLS 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 2.1.1 2.1.4 2.2.1 2.2.4 2.4.1 2.4.15 2.5 2.5.6 9.2.11 9.2.12 9.2.13 9.5.1.8 9.5.1.9 13.1 13.5 13.7 17.5 17.6 17.7 17.8
WLS DEP 18.8-1	At the Lee Nuclear Station, the Technical Support Center (TSC) is not located in the central suport area (CSA) as identified in the DCD Subsection 18.8.3.5; the TSC location is as described in the Emergency Plan. Additionally, the Operations Support Center (OSC) is also being moved from the location identified in DCD Subsections 18.8.3.6 and 12.5.2.2 and as identified on DCD Figures in Subsections 1.2 and 12.3, and Appendix 9A; the OSC location is as described in the Emergency Plan.	1.2.3 9A.2.1 12.3.1.2 12.5.2.2 18.8

WLS SUP 1.8-1

TABLE 1.8-202 (Sheet 1 of 16)
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 1AA	A
1.9-2[(a)]	Bulletins and Generic Letters	1.9.5.5	1.9.5.5	A
1.9-3[(a)]	Unresolved Safety Issues and Generic Safety Issues	Table 1.9-2 1.9.4.1	1.9.4.1 1.9.4.2.3	A
2.1-1	Geography and Demography	2.1.1	1.1.1 1.2.2 2.1	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
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

WLS SUP 1.8-1

TABLE 1.8-202 (Sheet 2 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
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 2.4.15.1	A
2.4-2	Floods	2.4.1.2	2.4.2 2.4.3 2.4.4 2.4.5 2.4.6 2.4.7 2.4.10 2.4.15.2	A
2.4-3	Cooling Water Supply	2.4.1.3	2.4.8 2.4.9 2.4.11.5 2.4.15.3	A
2.4-4	Groundwater	2.4.1.4	2.4.12 2.4.12.5 12.4.15.4	A

WLS SUP 1.8-1

TABLE 1.8-202 (Sheet 3 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
2.4-5	Accidental Release of Liquid Effluents into Ground and Surface Water	2.4.1.5	2.4.12.2.3 2.4.12.2.4 2.4.12.3 2.4.12.4 2.4.13 2.4.15.5	A
2.4-6	Flood Protection Emergency Operation Procedures	2.4.1.6	2.4.14 2.4.15.6	A
2.5-1	Basic Geologic and Seismic Information	2.5.1	2.5.1 2.5.4.1 2.5.4.3 2.5.4.8 2.5.6.1	A
2.5-2	Site Seismic and Tectonic Characteristics Information	2.5.2.1	2.5.2 2.5.4.3.3 2.5.6.2	A
2.5-3	Geoscience Parameters	2.5.2.3	2.5.4.3.3 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	2.5.4.1 2.5.4.3.5 2.5.4.5 2.5.6.5	A

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TABLE 1.8-202 (Sheet 4 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
2.5-6	Properties of Underlying Materials	2.5.4.6.2	2.5.4.2 2.5.4.2.1 2.5.4.4 2.5.4.5.1 2.5.4.5.2 2.5.4.5.3 2.5.4.7 2.5.4.9 2.5.6.6	A
2.5-7	Excavation and Backfill	2.5.4.6.3	2.5.4.5.1 2.5.4.5.2 2.5.4.5.3 2.5.6.7	A
2.5-8	Groundwater Conditions	2.5.4.6.4	2.5.4.5.4 2.5.4.6 2.5.6.8	A
2.5-9	Liquefaction Potential	2.5.4.6.5	2.5.4.8 2.5.6.9	A
2.5-10	Bearing Capacity	2.5.4.6.6	2.5.4.10.1 2.5.6.10	A
2.5-11	Earth Pressures	2.5.4.6.7	2.5.4.10.3 2.5.4.11 2.5.4.12 2.5.6.11	A

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TABLE 1.8-202 (Sheet 5 of 16)
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	2.5.4.10.2 2.5.6.12	A
2.5-13	Subsurface Instrumentation	2.5.4.6.10	2.5.4.10 2.5.4.11 2.5.4.12 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	2.5.5 2.5.6.15	A
2.5-16	Settlement of Nuclear Island	2.5.4.6.11	2.5.6.16	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
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

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TABLE 1.8-202 (Sheet 6 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
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 3.7.5.2	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
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 3.9.6.2.5 3.9.6.3 3.9.8.4	A
3.9-5	Surge Line Thermal Monitoring	3.9.8.5	3.9.3.1.2 3.9.8.5	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

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TABLE 1.8-202 (Sheet 7 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
5.2-1	ASME Code and Addenda	5.2.6.1	5.2.1.1 5.2.6.1	A
5.2-2	Plant Specific Inspection Program	5.2.6.2	5.2.4 5.2.4.1 5.2.4.3.1 5.2.4.3.2 5.2.4.4 5.2.4.5 5.2.4.6 5.2.4.7 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 5.3.2.6.3 5.3.6.2	A
5.3-4	Reactor Vessel Materials Properties Verification	5.3.6.4.1	5.3.6.4.1	H
5.4-1	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

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TABLE 1.8-202 (Sheet 8 of 16)
COL ITEM TABULATION

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
6.4-1	Local Hazardous Gas Services and Monitoring	6.4.7	2.2.3.1.3.1 6.4.4.2 6.4.7	A
6.4-2	Procedures for Training for Control Room Habitability	6.4.7	6.4.3 6.4.7	A
6.6-1	Inspection Programs	6.6.9.1	6.6 6.6.1 6.6.3 6.6.4 6.6.6 6.6.9.1	A
6.6-2	Construction Activities	6.6.9.2	6.6.2 6.6.9.2	A
8.2-1	Offsite Electrical Power	8.2.5	8.2.1 8.2.1.1 8.2.1.2 8.2.1.3 8.2.1.4 8.2.5	A

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TABLE 1.8-202 (Sheet 9 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
8.2-2	Technical Interfaces	8.2.5	8.2.1.2.2 8.2.2 8.2.5	A
8.3-1	Grounding and Lightning Protection	8.3.3	8.3.1.1.7 8.3.1.1.8 8.3.3	A
8.3-2	Onsite Electrical Power Plant Procedures	8.3.3	8.3.1.1.2.4 8.3.1.1.6 8.3.2.1.4 8.3.3	A
9.1-5	Inservice Inspection Program of Cranes	9.1.6.5	9.1.4.4 9.1.5.4 9.1.6	A
9.1-6	Radiation Monitor	9.1.6.6	9.1.4.3.8 9.1.5.3 9.1.6	A
9.2-1	Potable Water	9.2.11.1	9.2.5.2.1 9.2.5.3 9.2.6.2.1 9.2.12.1	A
9.2-2	Waste Water Retention Basins	9.2.11.2	9.2.9.2.2 9.2.12.2	A
9.3-1	Air Systems (NUREG-0933 Issue 43)	9.3.7	9.3.7	A

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TABLE 1.8-202 (Sheet 10 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
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 9.5.1.8.1 9.5.1.8.2 9.5.1.8.3 9.5.1.8.4 9.5.1.8.5 9.5.1.8.6 9.5.1.8.7 9.5.1.9.1 13.1.1.2.10 13.1.2.1.2.9	A
9.5-2	Fire Protection Analysis Information	9.5.1.8.2	9.5.1.9.2 9A.3.3	A
9.5-3	Regulatory Conformance	9.5.1.8.3	9.5.1.8.8 9.5.1.9.3 9A.3.3	A
9.5-4	NFPA Exceptions	9.5.1.8.4	9.5.1.8.1.1 9.5.1.9.4	A
9.5-6	Verification of Field Installed Fire Barriers	9.5.1.8.6	9.5.1.8.6 9.5.1.9.6	H

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TABLE 1.8-202 (Sheet 11 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
9.5-8	Establishment of Procedures to Minimize Risk for Fire Areas Breached During Maintenance	9.5.1.8.7	9.5.1.8.1.2.a.3.vi 9.5.1.9.7	A
9.5-9	Offsite Interfaces	9.5.2.5.1	9.5.2.2.3.1 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	A
9.5-13	Fuel Degradation Protection	9.5.4.7.2	9.5.4.5.2 9.5.4.7	A
10.1-1	Erosion-Corrosion Monitoring	10.1.3	10.1.3.1	A
10.2-1	Turbine Maintenance and Inspection	10.2.6	10.2.6	H
10.4-1	Circulating Water Supply	10.4.12.1	10.4.5.2.1 10.4.5.2.2 10.4.5.5 10.4.12.1	A
10.4-2	Condensate, Feedwater and Auxiliary Steam System Chemistry Control	10.4.12.2	10.4.7.2.1 10.4.12.2	A
10.4-3	Potable Water	10.4.12.3	10.4.12.3	A
11.2-1	Liquid Radwaste Processing by Mobile Equipment	11.2.5.1	11.2.1.2.5.2 11.2.5.1	A
11.2-2	Cost Benefit Analysis of Population Doses	11.2.5.2	11.2.3.3 11.2.3.5 11.2.5.2	A

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TABLE 1.8-202 (Sheet 12 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
11.3-1	Cost Benefit Analysis of Population Doses	11.3.5.1	11.3.3.4 11.3.5.1	A
11.4-1	Solid Waste Management System Process Control Program	11.4.6	11.4.6	A
11.5-1	Plant Offsite Dose Calculation Manual (ODCM)	11.5.7	11.5.7	A
11.5-2	Effluent Monitoring and Sampling	11.5.7	11.5.1.2 11.5.2.4 11.5.3 11.5.4 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

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TABLE 1.8-202 (Sheet 13 of 16)
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 Appendix 12AA	A
12.3-4	Record of Operational Events of Interest for Decommissioning	12.3.5.4	12.3.5.4 Appendix 12AA	A
12.5-1	Radiological Protection Organization and Procedures	12.5.5	12.5.5 Appendix 12AA	A
13.1-1	Organizational Structure of Combined License Applicant	13.1.1	13.1 Appendix 13AA	A
13.2-1	Training Program for Plant Personnel	13.2.1	13.2 13.2.1 Appendix 13BB	A
13.3-1	Emergency Planning and Communications	13.3.1	13.3 13.3.1	A
13.3-2	Activation of Emergency Operations Facility	13.3.1	13.3 13.3.1	A
13.4-1	Operational Review	13.4.1	13.4 13.4.1	A
13.5-1	Plant Procedures	13.5.1	13.5 13.5.3	A
13.6-1	Security	13.6	13.6	A

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TABLE 1.8-202 (Sheet 14 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
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 14.2.9.4.23 14.2.9.4.24 14.2.9.4.25 14.2.9.4.26 14.2.9.4.27 14.2.10.4.29 14.4.5	A
14.4-6	First-Plant-Only and Three-Plant-Only Tests	14.4.6	14.4.6	B
15.7-1	Consequences of Tank Failure	15.7.6	2.4.13 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

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TABLE 1.8-202 (Sheet 15 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
17.5-2	Quality Assurance for Procurement, Fabrication, Installation, Construction and Testing	17.5.2	17.5 17.7	A
17.5-4	Quality Assurance Program for Operations	17.5.4	17.5 17.7	A
17.5-8	Operational Reliability Assurance Program Integration with Quality Assurance Program	17.5.8	17.5 17.7	A
18.2-2	Design of the Emergency Operations Facility	18.2.6.2	18.2.1.3 18.2.6.2	A
18.6-1	Plant Staffing	18.6.1	13.1.1.4 13.1.3.1 18.6 18.6.1	A
18.10-1	Training Program Development	18.10.1	13.1.1.3.2.5 18.10 18.10.1	A
18.14-1	Human Performance Monitoring	18.14	18.14	A
19.59.10-1	As-Built SSC HCLPF Comparison to Seismic Margin Evaluation	19.59.10.5	19.59.10.5	H
19.59.10-2	Evaluation of As-Built Plant Versus Design in AP1000 PRA and Site-Specific PRA External Events	19.59.10.5	19.59.10.5	B
19.59.10-3	Internal Fire and Internal Flood Analyses	19.59.10.5	19.59.10.5	H
19.59.10-4	Develop and Implement Severe Accident Management Guidance	19.59.10.5	19.59.10.5	A

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TABLE 1.8-202 (Sheet 16 of 16)
COL ITEM TABULATION

COL ITEM	SUBJECT	DCD SUBSECTION	FSAR SECTION(S)	COL APPLICANT (A), HOLDER (H) OR BOTH (B)
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

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

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

Discussion:

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

FSAR Position:

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

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

Discussion:

This issue concerns the early containment failure probability for ice condenser and BWR MARK III containments given the relatively

low containment free volume and low containment strength in these designs.

FSAR Position:

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

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

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

Discussion:

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

FSAR Position:

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

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

Issue 196 Boral Degradation

Discussion:

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

FSAR Position:

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

1.9.5.2.15 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 7)
REGULATORY GUIDE/FSAR SECTION CROSS-REFERENCES

	Regulatory Guides		FSAR Chapter, Section, or Subsection[a]
	Division 1 Regulatory Guides		
STD 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 13.2 (NEI 06-13-A)
	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
	1.21	Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents From Light-Water-Cooled Nuclear Power Plants (Rev.1, June 1974)	2.3.3.2.3 11.5.4.1 12.3.4
	1.23	Meteorological Monitoring Program for Nuclear Power Plants (Rev. 1, March 2007)	2.3.3.2 2.3.4.2 2.3.4.3
	1.27	Ultimate Heat Sink for Nuclear Power Plants (Rev. 2, January 1976)	2.4.11.6
	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

TABLE 1.9-201 (Sheet 2 of 7)
REGULATORY GUIDE/FSAR SECTION CROSS-REFERENCES

	Regulatory Guides	FSAR Chapter, Section, or Subsection[a]
1.59	Design Basis Floods for Nuclear Power Plants (Rev. 2, August 1977)	2.4.2.2 2.4.3 2.4.4 2.4.4.1 2.4.5
1.70	Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants (LWR Edition) (Rev. 3, November 1978)	1.1.6.1
1.76	Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants (Rev. 1, March 2007)	2.3.1.4
1.78	Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release (Rev. 1, December 2001)	2.2.3.1.3 6.4.4.2
1.91	Evaluations of Explosions Postulated To Occur on Transportation Routes Near Nuclear Power Plants (Rev. 1, February 1978)	2.2.3.1.1 2.2.3.2 3.5.1.5
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
1.109	Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I (Rev. 1, October 1977)	11.2.3.5 11.3.3.4 12.4.1.9.3 Table 12.4-201

TABLE 1.9-201 (Sheet 3 of 7)
REGULATORY GUIDE/FSAR SECTION CROSS-REFERENCES

	Regulatory Guides	FSAR Chapter, Section, or Subsection[a]
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 12.4.1.9.3
1.113	Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I (Rev. 1, April 1977)	11.2.3.3
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 13.1.2.1.3
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
1.132	Site Investigations for Foundations of Nuclear Power Plants (Rev. 2, October 2003)	2.5.4.2.1 2.5.4.4
1.138	Laboratory Investigations of Soils and Rocks for Engineering Analysis and Design of Nuclear Power Plants (Rev. 2, December 2003)	2.5.4.2.1
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

TABLE 1.9-201 (Sheet 4 of 7)
REGULATORY GUIDE/FSAR SECTION CROSS-REFERENCES

	Regulatory Guides	FSAR Chapter, Section, or Subsection[a]
1.143	Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light-Water-Cooled Nuclear Power Plants (Rev. 2, November 2001)	11.2.1.2.5.2 11.2.3.6 11.3.3.6 11.4.5 11.4.6.2
1.145	Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants (Rev. 1, November 1982)	2.3.4.1 2.3.4.2
1.155	Station Blackout (Rev. 0, August 1998)	Table 8.1-201
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
1.165	Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion (Rev. 0, March 1997)	2.5.2.4.4 2.5.2.4.4.5 2.5.2.6.1
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)

TABLE 1.9-201 (Sheet 5 of 7)
REGULATORY GUIDE/FSAR SECTION CROSS-REFERENCES

	Regulatory Guides	FSAR Chapter, Section, or Subsection[a]
1.189	Fire Protection for Nuclear Power Plants (Rev. 1, March 2007)	9.5.1.8.1.1 9.5.1.8.2.2 Appendix 9A 13.1.2.1.2.9
1.194	Atmospheric Relative Concentrations for Control Room Radiological Habitability Assessments at Nuclear Power Plants (Rev. 0, June 2003)	2.3.4.3
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
1.204	Guidelines for Lightning Protection of Nuclear Power Plants (Rev. 0, November 2005)	Table 8.1-201
1.206	Combined License Applications for Nuclear Power Plants (LWR Edition) (Rev. 0, June 2007)	See Appendix 1AA. 1.1.6.1 2.0 2.5 2.5.1 2.5.4 14.3.2.3.1 14.3.2.3.2 Table 8.1-201
1.208	A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion (Rev. 0, March 2007)	2.5.1 2.5.2 2.5.3 2.5.4

TABLE 1.9-201 (Sheet 6 of 7)
REGULATORY GUIDE/FSAR SECTION CROSS-REFERENCES

	Regulatory Guides	FSAR Chapter, Section, or Subsection[a]
Division 4 Regulatory Guides		
4.15	Quality Assurance for Radiological Monitoring Programs (Inception through Normal Operations to License Termination) – Effluent Streams and the Environment (Rev.1, February 1979)	11.5.1.2 11.5.3 11.5.4 11.5.6.5
Division 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)
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)
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) 13.1.2.1.1 13.1.2.1.1.5
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)

TABLE 1.9-201 (Sheet 7 of 7)
REGULATORY GUIDE/FSAR SECTION CROSS-REFERENCES

	Regulatory Guides	FSAR Chapter, Section, or Subsection[a]
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) 13.1.2.1.1 13.1.2.1.1.5
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)
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.

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TABLE 1.9-202 (Sheet 1 of 35)[a]
CONFORMANCE WITH SRP ACCEPTANCE CRITERIA

Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
1	Introduction and Interfaces, Initial Issuance, 03/2007		N/A	No specific acceptance criteria associated with these general requirements.
2.0	Site Characteristics and Site Parameters, Initial Issuance, 03/2007		N/A	No specific acceptance criteria are identified.
2.1.1	Site Location and Description		Acceptable	
2.1.2	Exclusion Area Authority and Control		Acceptable	
2.1.3	Population Distribution		Exception	For consistency between the ER and the FSAR, population calculations are based upon distance units of kilometers rather than miles.
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	

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TABLE 1.9-202 (Sheet 2 of 35)[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	

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TABLE 1.9-202 (Sheet 3 of 35)[a]
CONFORMANCE WITH SRP ACCEPTANCE CRITERIA

Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
2.4.11	Low Water Considerations		Acceptable	
2.4.12	Groundwater		Acceptable	
2.4.13	Accidental Releases of Liquid Effluents in Ground and Surface Waters		Acceptable	
2.4.14	Technical Specifications and Emergency Operation Requirements		Acceptable	
2.5.1	Basic Geologic and Seismic Information, Rev.4, 03/2007		Acceptable	

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TABLE 1.9-202 (Sheet 4 of 35)[a]
CONFORMANCE WITH SRP ACCEPTANCE CRITERIA

Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
2.5.2	Vibratory Ground Motion, Rev. 4, 03/2007		Exception	Exception is taken to the guidance in RG 1.206 (C.III.1-2.5.2.4) 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 0.84th as they are very close approximations (+/- 1 sigma). 100Hz amplitude frequencies for mean and fractile rock UHS were not run; instead 0.5Hz was run.
			Exception	Exception is taken to the guidance in RG 1.206 (C.III.1-2.5.2.5) for providing a table showing frequencies ranging from 0.1 to 100 Hertz. The table is not provided because site response of bedrock was not run and is insignificant.
2.5.3	Surface Faulting, Rev. 4, 03/2007		Acceptable	

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TABLE 1.9-202 (Sheet 5 of 35)[a]
CONFORMANCE WITH SRP ACCEPTANCE CRITERIA

Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
2.5.4	Stability of Subsurface Materials and Foundations		Acceptable	
2.5.5	Stability of Slopes		Acceptable	
3.2.1	Seismic Classification, Rev. 2, 03/2007			See Notes d and e.
3.2.2	System Quality Group Classification, Rev. 2, 03/2007			See Notes d and e.
3.3.1	Wind Loadings		Acceptable	See Notes d, e, and f.
3.3.2	Tornado Loadings		Acceptable	See Notes d, e, and f.
3.4.1	Internal Flood Protection for Onsite Equipment Failures		Acceptable	See Notes d, e, and f.
3.4.2	Analysis Procedures			See Notes d and e.
3.5.1.1	Internally Generated Missiles (Outside Containment)			See Notes d and e.
3.5.1.2	Internally Generated Missiles (Inside Containment)			See Notes d and e.
3.5.1.3	Turbine Missiles		Acceptable	See Notes d, e, and f.
3.5.1.4	Missiles Generated by Tornadoes and Extreme Winds			See Notes d and e.

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TABLE 1.9-202 (Sheet 6 of 35)[a]
CONFORMANCE WITH SRP ACCEPTANCE CRITERIA

Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
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	See Notes d, e, and f.

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TABLE 1.9-202 (Sheet 7 of 35)[a]
CONFORMANCE WITH SRP ACCEPTANCE CRITERIA

Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
3.7.3	Seismic Subsystem Analysis			See Notes d and e.
3.7.4	Seismic Instrumentation, Rev. 2, 03/2007		Acceptable	See Notes d, e, and f.
3.8.1	Concrete Containment, Rev. 2, 03/2007			See Notes d and e.
3.8.2	Steel Containment, Rev. 2, 03/2007			See Notes d and e.
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.

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
3.9.6	Functional Design, Qualification, and Inservice Testing Programs for Pumps, Valves, and Dynamic Restraints		Acceptable	See Notes d, e, and f.
3.9.7	Risk-Informed Inservice Testing, Rev. 0, 08/1998		N/A	
3.9.8	Risk-Informed Inservice Inspection of Piping, Rev.0, 09/2003		N/A	
3.10	Seismic and Dynamic Qualification of Mechanical and Electrical Equipment			See Notes d and e.
3.11	Environmental Qualification of Mechanical and Electrical Equipment		Acceptable	See Notes d, e, and f.
3.12	ASME Code Class 1, 2, and 3 Piping Systems, Piping Components and their Associated Supports, Initial Issuance, 03/2007			See Note g.
3.13	Threaded Fasteners - ASME Code Class 1, 2, and 3, Initial Issuance, 03/2007			See Note g.
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.

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
4.5.1	Control Rod Drive Structural Materials			See Notes d and e.
4.5.2	Reactor Internal and Core Support Structure Materials			See Notes d and e.
4.6	Functional Design of Control Rod Drive System, Rev. 2, 03/2007			See Notes d and e.
5.2.1.1	Compliance with the Codes and Standards Rule, 10 CFR 50.55a		Acceptable	See Notes d, e, and f.
5.2.1.2	Applicable Code Cases			See Notes d and e.
5.2.2	Overpressure Protection			See Notes d and e.
5.2.3	Reactor Coolant Pressure Boundary Materials		Acceptable	See Notes d, e, and f.
5.2.4	Reactor Coolant Pressure Boundary Inservice Inspection and Testing, Rev. 2, 03/2007		Acceptable	See Notes d, e, and f.
5.2.5	Reactor Coolant Pressure Boundary Leakage Detection, Rev. 2, 03/2007			See Notes d and e.
5.3.1	Reactor Vessel Materials, Rev. 2, 03/2007			See Notes d and e.
5.3.2	Pressure-Temperature Limits 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.

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

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	Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
6.1.1	Engineered Safety Features Materials, Rev. 2, 03/2007		Exception	See Notes d, e, and f. The AP1000 design does not include a safety related containment spray system. The simplified containment spray system was added at the request of the NRC to provide additional severe accident management capability. The staff believes that a single short-term actuation of the spray system will suffice for these severe accident issues because pH control measures in the containment sump should prevent revolatilization (SECY-97-044). The sprays will be used for aerosol fission product removal. The sprays would be expected to mix the containment atmosphere following a severe accident to mitigate the concentration of non-condensable gases.

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
				Containment pressure can be reduced for a short time with short term injections. All of these severe accident issues are addressed using short duration operation of this nonsafety-related system. No special provisions are requested by the NRC in SECY-97-044 to address the introduction of contaminants that may be incompatible with ESF systems. The use of short duration actuation of this nonsafety system for severe accident management is consistent with not needing any additional requirements such as those identified by the comment.
6.1.2	Protective Coating Systems (Paints) – Organic Materials		Acceptable	See Notes d, e, and f.

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

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
6.2.4	Containment Isolation System			See Notes d and e.
6.2.5	Combustible Gas Control in Containment		Acceptable	See Notes d, e, and f.
6.2.6	Containment Leakage Testing		Acceptable	See Notes d, e, and f.
6.2.7	Fracture Prevention of Containment Pressure Boundary, Rev. 1, 03/2007			See Notes d and e.
6.3	Emergency Core Cooling System		Acceptable	See Notes d, e, and f.
6.4	Control Room Habitability System		Acceptable	See Notes d, e, and f.
6.5.1	ESF Atmosphere Cleanup Systems			See Notes d and e.
6.5.2	Containment Spray as a Fission Product Cleanup System, Rev. 4, 03/2007			See Notes d and e.
6.5.3	Fission Product Control Systems and Structures			See Notes d and e.
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.

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

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
7.2	Reactor Trip System, Rev. 5, 03/2007			See Notes d and e.
7.3	Engineered Safety Features Systems, Rev. 5, 03/2007			See Notes d and e.
7.4	Safe Shutdown Systems, Rev. 5, 03/2007			See Notes d and e.
7.5	Information Systems Important to Safety, Rev. 5, 03/2007			See Notes d and e.
7.6	Interlock Systems Important to Safety, Rev. 5, 03/2007			See Notes d and e.
7.7	Control Systems, Rev. 5, 03/2007			See Notes d and e.
7.8	Diverse Instrumentation and Control Systems, Rev. 5, 03/2007			See Notes d and e.
7.9	Data Communication Systems, Rev. 5, 03/2007			See Notes d and e.
8.1	Electric Power – Introduction		N/A	No specific acceptance criteria associated with these general requirements.
8.2	Offsite Power System, Rev. 4, 03/2007		Acceptable	See Notes d, e, and f.
8.3.1	A-C Power Systems (Onsite)		Acceptable	See Notes d, e, and f.

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
8.3.2	D-C Power Systems (Onsite)		Acceptable	See Notes d, e, and f.
8.4	Station Blackout, Initial Issuance, 03/2007			See Note g.
9.1.1	Criticality Safety of Fresh and Spent Fuel Storage and Handling			See Notes d and e.
9.1.2	New and Spent Fuel Storage, Rev. 4, 03/2007			See Notes d and e.
9.1.3	Spent Fuel Pool Cooling and Cleanup System, Rev. 2, 03/2007			See Notes d and e.
9.1.4	Light Load Handling System (Related to Refueling)		Acceptable	See Notes d, e, and f.
9.1.5	Overhead Heavy Load Handling Systems, Rev. 1, 03/2007		Acceptable	See Notes d, e, and f.
9.2.1	Station Service Water System, Rev. 5, 03/2007		Acceptable	See Notes d, e, and f.
9.2.2	Reactor Auxiliary Cooling Water Systems, Rev. 4, 03/2007			See Notes d and e.
9.2.3	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.

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
9.2.6	Condensate Storage Facilities		Acceptable	See Notes d, e, and f.
9.3.1	Compressed Air System, Rev. 2, 03/2007		Acceptable	See Notes d, e, and f.
9.3.2	Process and Post-accident Sampling Systems			See Notes d and e.
9.3.3	Equipment and Floor Drainage System			See Notes d and e.
9.3.4	Chemical and Volume Control System (PWR) (Including Boron Recovery System)			See Notes d and e.
9.3.5	Standby Liquid Control System (BWR)		N/A	
9.4.1	Control Room Area Ventilation System		Acceptable	See Notes d, e, and f.
9.4.2	Spent Fuel Pool Area Ventilation System			See Notes d and e.
9.4.3	Auxiliary and Radwaste Area Ventilation System			See Notes d and e.
9.4.4	Turbine Area Ventilation System			See Notes d and e.
9.4.5	Engineered Safety Feature Ventilation System			See Notes d and e.
9.5.1	Fire Protection Program, Rev. 5, 03/2007		Acceptable	See Notes d, e, and f.
9.5.2	Communications Systems		Acceptable	See Notes d, e, and f.
9.5.3	Lighting Systems			See Notes d and e.

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
9.5.4	Emergency Diesel Engine Fuel Oil Storage and Transfer System		Acceptable	See Notes d, e, and f.
9.5.5	Emergency Diesel Engine Cooling Water System			See Notes d and e.
9.5.6	Emergency Diesel Engine Starting System			See Notes d and e.
9.5.7	Emergency Diesel Engine Lubrication System			See Notes d and e.
9.5.8	Emergency Diesel Engine Combustion Air Intake and Exhaust			See Notes d and e.
10.2	Turbine Generator		Acceptable	See Notes d, e, and f.
10.2.3	Turbine Rotor Integrity, Rev. 2, 03/2007		Acceptable	See Notes d, e, and f.
10.3	Main Steam Supply System, Rev. 4, 03/2007		Acceptable	See Notes d, e, and f.
10.3.6	Steam and Feedwater System Materials		Acceptable	See Notes d, e, and f.
10.4.1	Main Condensers			See Notes d and e.
10.4.2	Main Condenser Evacuation System		Acceptable	See Notes d, e, and f.
10.4.3	Turbine Gland Sealing System			See Notes d and e.
10.4.4	Turbine Bypass System			See Notes d and e.

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

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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 RG 8.20 and RG 8.26 as “outdated” and recommends the methods of RG 8.9 R1. RG 8.25 states it is not applicable to nuclear facilities licensed under 10 CFR Part 50, and, by extension, to 10 CFR Part 52. An exception is taken to RG 8.8 C.3.b. RG 1.16 C.1.b (3) data is no longer reported. Reporting per C.1.b (2) is also no longer required.

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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.

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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 13A, 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.

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
13.1.2 - 13.1.3	Operating Organization, Rev. 6, 03/2007		Exception	See Notes d, e, and f. The SRP requires resumes of personnel holding plant managerial and supervisory positions to be included in the FSAR. Current industry practice is to have the resumes available for review by the regulator when requested but not be kept in the FSAR. Additionally, at time of COLA, most positions are unfilled.

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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 06-13-A, 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 06-13-A, 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 06-13-A. Level of detail is consistent with NEI 06-13-A.

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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 06-13-A.
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.

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
13.6.1	Physical Security - Combined License Review Responsibilities, Initial Issuance, 03/2007		Acceptable	See Security Plan developed in accordance with NEI 03-12
13.6.2	Physical Security - Design Certification, Initial Issuance, 03/2007			See notes d and e.
13.6.3	Physical Security - Early Site Permit, Initial Issuance, 03/2007		N/A	
14.2	Initial Plant Test Program - Design Certification and New License Applicants		Exception	See Notes d, e, and f. The level of detail is consistent with DCD section content addressing nonsafety-related systems.
14.2.1	Generic Guidelines for Extended Power Uprate Testing Programs, Initial Issuance, 08/2006		N/A	No power uprate is sought.
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.

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

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

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

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Criteria Section [b]		Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
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.
15.4.7	Inadvertent Loading and Operation of a Fuel Assembly in an Improper Position, Rev. 2, 03/2007			See Notes d and e.
15.4.8	Spectrum of Rod Ejection Accidents (PWR)			See Notes d and e.
15.4.8.A	Radiological Consequences of a Control Rod Ejection Accident (PWR) , Rev. 1, 07/1981			See Notes d and e.

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TABLE 1.9-202 (Sheet 32 of 35)[a]
CONFORMANCE WITH SRP ACCEPTANCE CRITERIA

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

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TABLE 1.9-202 (Sheet 33 of 35)[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.

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TABLE 1.9-202 (Sheet 34 of 35)[a]
CONFORMANCE WITH SRP ACCEPTANCE CRITERIA

	Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
16.1	Risk-informed Decision Making: Technical Specifications, Rev. 1, 03/2007		N/A	This SRP applies to the Technical Specifications change process.
17.1	Quality Assurance During the Design and Construction Phases, Rev. 2, 07/1981		Acceptable	See Notes d, e, and f.
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 06-14.

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TABLE 1.9-202 (Sheet 35 of 35)[a]
CONFORMANCE WITH SRP ACCEPTANCE CRITERIA

	Criteria Section [b]	Reference Criteria	FSAR Position [c]	Comments/Summary of Exceptions
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.
19.1	Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities, Rev. 2, 06/2007		Acceptable	See Notes d, e, and f.
19.2	Review of Risk Information Used to Support Permanent Plant-Specific Changes to the Licensing Basis: General Guidance, Initial Issuance, 06/2007			See Note g.

a) This table is provided as a one-time aid to facilitate NRC review. This table becomes historical information and need not be updated

b) If no revision or date is specified, it is Rev. 3, 03/2007.

c) Consult the AP1000 Design Control Document (DCD) Appendix 1A and Appendix 1AA to determine extent of conformance with Regulatory Guides (except Regulatory Guide 1.206).

d) Conformance with a previous revision of this SRP is documented in AP1000 Design Control Document (Section 1.9.2 and WCAP-15799)

e) Conformance with the design aspects of this SRP is as stated in the AP1000 DCD.

f) Conformance with the plant or site-specific aspects of this SRP is as stated under “FSAR Position.”

g) This SRP is not applicable to the AP1000 certified design.

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TABLE 1.9-203 (Sheet 1 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

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

TABLE 1.9-203 (Sheet 2 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

STD COL 1.9-3

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

TABLE 1.9-203 (Sheet 3 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

STD COL 1.9-3

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

TABLE 1.9-203 (Sheet 4 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

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

TABLE 1.9-203 (Sheet 5 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

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

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TABLE 1.9-203 (Sheet 6 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

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

TABLE 1.9-203 (Sheet 7 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

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

TABLE 1.9-203 (Sheet 8 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

STD COL 1.9-3

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

TABLE 1.9-203 (Sheet 9 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

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

TABLE 1.9-203 (Sheet 10 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

STD COL 1.9-3

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
B-43	Value of Aerial Photographs for Site Evaluation	d	Not applicable to new plants
B-44	Forecasts of Generating Costs of Coal and Nuclear Plants	d	Not applicable to new plants
B-49	Inservice Inspection Criteria and Corrosion Prevention Criteria for Containments	d	Not applicable to new plants
B-59	(N-1) Loop Operation in BWRs and PWRs	d	Not applicable to new plants
B-64	Decommissioning of Reactors	f	Resolved per NUREG-0933.
B-72	Health Effects and Life Shortening from Uranium and Coal Fuel Cycles	d	Not applicable to new plants
C-4	Statistical Methods for ECCS Analysis	d	Not applicable to new plants
C-5	Decay Heat Update	d	Not applicable to new plants
C-6	LOCA Heat Sources	d	Not applicable to new plants
New Generic Issues			
43.	Reliability of Air Systems	f, j	Resolved per NUREG-0933.
59.	Technical Specification Requirements for Plant Shutdown when Equipment for Safe Shutdown is Degraded or Inoperable	d	Not applicable to new plants
67.2.1	Integrity of Steam Generator Tube Sleeves	d	Not applicable to new plants
67.5.1	Reassessment of Radiological Consequences	d	Not applicable to new plants
67.5.2	Reevaluation of SGTR Design Basis	d	Not applicable to new plants
67.10.0	Supplement Tube Inspections	d	Not applicable to new plants
99.	RCS/RHR Suction Line Valve Interlock on PWRs	f	Resolved per NUREG-0933.
111.	Stress Corrosion Cracking of Pressure Boundary Ferritic Steels in Selected Environments	d	Not applicable to new plants
112.	Westinghouse RPS Surveillance Frequencies and Out-of-Service Times	d	Not applicable to new plants

TABLE 1.9-203 (Sheet 11 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

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

TABLE 1.9-203 (Sheet 12 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

STD COL 1.9-3

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
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
185	Control of Recriticality following Small-Break LOCA in PWRs	h	Not applicable to new plants
186	Potential Risk and Consequences of Heavy Load Drops in Nuclear Power Plants	Continue	1.9.4.2.3 9.1.5.3
189	Susceptibility of Ice Condenser and Mark III Containments to Early Failure from Hydrogen Combustion During a Severe Accident Description	Continue	Not applicable to the AP1000.
191	Assessment Of Debris Accumulation On PWR Sump Performance	h (High)	See DCD Subsections 6.3.2.2.7 and 1.9.4.2.3, item 191
199	Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern United States	Issue to be Prioritized by NRC in the Future	2.5
Human Factors Issues			
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

TABLE 1.9-203 (Sheet 13 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

STD COL 1.9-3

Action Plan Item/Issue No.	Title	Applicable Screening Criteria	Notes
HF3.1	Develop Job Knowledge Catalog	d	Not applicable to new plants
HF3.2	Develop License Examination Handbook	d	Not applicable to new plants
HF3.5	Develop Computerized Exam System	d	Not applicable to new plants
HF4.2	Procedures Generation Package Effectiveness Evaluation	d	Not applicable to new plants
HF7.1	Human Error Data Acquisition	d	Not applicable to new plants
HF7.2	Human Error Data Storage and Retrieval	d	Not applicable to new plants
HF7.3	Reliability Evaluation Specialist Aids	d	Not applicable to new plants
HF7.4	Safety Event Analysis Results Applications	d	Not applicable to new plants
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

TABLE 1.9-203 (Sheet 14 of 14)
LISTING OF UNRESOLVED SAFETY ISSUES AND GENERIC SAFETY ISSUES

STD COL 1.9-3

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
WLS COL 1.9-2	80-15	Possible Loss of Emergency Notification System (ENS) with Loss of Offsite Power (6/80)	9.5.2.2.3.2.2 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.
	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.

TABLE 1.9-204 (Sheet 2 of 6)
GENERIC COMMUNICATIONS ASSESSMENT

Number	Title	Comment
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
80-099	Technical Specification Revisions for Snubber Surveillance (11/80)	Snubbers no longer in generic Tech Specs See Note a.
80-108	Emergency Planning (12/80)	13.3
81-02	Analysis, Conclusions and Recommendations Concerning Operator Licensing (1/81)	13.2
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

TABLE 1.9-204 (Sheet 3 of 6)
GENERIC COMMUNICATIONS ASSESSMENT

Number	Title	Comment
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
82-12	Nuclear Power Plant Staff Working Hours (6/82)	13.1.2.1.2.4 – 13.1.2.1.2.8 13.1.2.1.3 13.1.2.1.4
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.
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

TABLE 1.9-204 (Sheet 4 of 6)
GENERIC COMMUNICATIONS ASSESSMENT

Number	Title	Comment
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
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.
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

TABLE 1.9-204 (Sheet 5 of 6)
GENERIC COMMUNICATIONS ASSESSMENT

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

TABLE 1.9-204 (Sheet 6 of 6)
GENERIC COMMUNICATIONS ASSESSMENT

Number	Title	Comment
06-01	Steam Generator Tube Integrity and Associated Technical Specifications	5.4.2.5 16.1 See Note a.
06-02	Grid Reliability and the Impact on Plant Risk and the Operability of Offsite Power	8.2.1.1 8.2.2 See Note a.
06-03	Potentially Nonconforming Hemyc and MT Fire Barrier Configurations	9.5.1 See Note a.
07-01	Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients.	17.6 See Note a.

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

Add the following section after DCD Section 1.9.

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

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

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

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

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

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

1.10.1 POTENTIAL CONSTRUCTION ACTIVITY HAZARDS

WLS SUP 1.10-1 The power blocks for Units 1 and 2 have a minimum separation of at least 800 feet between plant centerlines.

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

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

1.10.2 POTENTIALLY IMPACTED SSCS AND LIMITING CONDITIONS FOR OPERATION

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

WLS SUP 1.10-1

- New unit SSCs important to safety are described in FSAR Chapter 3.
- As indicated in Chapter 16, the LCOs for Units 1 and 2 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 offsite power, control of hazardous materials and gases, and protection of cooling water supplies and safety system instrumentation. These managerial controls prevent or mitigate external construction impacts that could affect SSCs important to safety. These controls also prevent or mitigate unnecessary challenges to safety systems caused by

plant construction hazards, such as disruption of offsite transmission lines or impact to plant cooling water supplies.

TABLE 1.10-201 (Sheet 1 of 2)
POTENTIAL HAZARDS FROM CONSTRUCTION ACTIVITIES

STD SUP 1.10-1

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

TABLE 1.10-201 (Sheet 2 of 2)
POTENTIAL HAZARDS FROM CONSTRUCTION ACTIVITIES

STD SUP 1.10-1

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

TABLE 1.10-202
HAZARDS DURING CONSTRUCTION ACTIVITIES

STD SUP 1.10-1

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

a) Not applicable to AP1000 operating units

TABLE 1.10-203 (Sheet 1 of 2)
CONSTRUCTION CONTROLS

STD SUP 1.10-1

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

TABLE 1.10-203 (Sheet 2 of 2)
CONSTRUCTION CONTROLS

STD SUP 1.10-1

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 WasteRelease 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.
Impact of Equipment Delivery and Heavy Equipment Delivery	• Rail transport speed limits and maximum rail loading weights onsite are established. • General equipment and heavy equipment movement controls and limitations are established.

APPENDIX 1A
CONFORMANCE WITH REGULATORY GUIDES

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

Appendix 1AA is provided to supplement the information in DCD Appendix 1A.

APPENDIX 1AA
CONFORMANCE WITH REGULATORY GUIDES

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
DIVISION 1 - Power Reactors			
Reg. 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.			
Reg. 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.
Reg. 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	
Reg. 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.			
Reg. 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.

STD COL 1.9-1

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

Reg. 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.

Reg. 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	

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

General		Conforms	

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

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

Reg. 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).

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

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

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Reg. 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.
Reg. Guide 1.32, Rev. 3, 03/04 – Criteria for Power Systems for Nuclear Power Plants			
Conformance with Revision 2 of the Regulatory Guide is documented in the DCD.			
Reg. Guide 1.33, Rev. 2, 2/78 – Quality Assurance Program Requirements (Operation)			
		Exception	Quality assurance is in accordance with the QAPD.
Reg. 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.
Reg. 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.
Reg. 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.			

STD COL 1.9-1

Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
		Exception	Quality assurance is in accordance with the QAPD.
Reg. 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	
Reg. Guide 1.54, Rev. 1, 7/00 – Service Level I, II, And III Protective Coatings Applied To Nuclear Power Plants			
Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
		Conforms	
Reg. 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	
Reg. Guide 1.59, Rev. 2, 8/77 – Design Basis Floods for Nuclear Power Plants			
General		Exception	Regulatory Guide 1.59, Appendix A indicates use of ANSI N170-1976 “Standards for Determining Design Basis Flooding at Power Reactor Sites.” In place of this standard, ANSI/ANS 2.8-1992 “Determining Design Basis Flooding at Power Reactor Sites” was used. ANSI/ANS 2.8-1992 was withdrawn on July 26, 2002. However, a replacement standard has not been issued. NUREG-0800 2.4.3 Revision 4, March 2007and 2.4.4 Revision 3, March 2007 include ANSI/ANS 2.8-1992 as a reference. ANSI/ANS 2.8-1992 is also specifically identified in the review procedures subsection of NUREG-0800 2.4.4.

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

Reg. 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.

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

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

C2-C.9 Appendix B Appendix C	Conforms	

Reg. 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.

Reg. 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.

Reg. 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.

Reg. 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.

Reg. 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.

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
C.1 C.2 C.3.1 C.3.3 C.4.1 C.5		Conforms	

Reg. 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.

Reg. 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.

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

This Regulatory Guide is outside the scope of the FSAR.

Reg. 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

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

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

Reg. 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.

Reg. 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.

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

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

General N/A

Reg. 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

Reg. 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

Reg. 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

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

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

Reg. 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

Reg. 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

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

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

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	

Reg. 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.

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

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

Reg. 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.

Reg. 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.

Reg. 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.

Reg. 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 Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.

C.3a		Conforms	
C.6		Conforms	

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Reg. Guide 1.134, Rev. 3, 3/98 – Medical Evaluation of Licensed Personnel at Nuclear Power Plants			
General		Conforms	
Reg. 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	
Reg. Guide 1.138, Rev. 2, 12/03 – Laboratory Investigations of Soils and Rocks for Engineering Analysis and Design of Nuclear Power Plants			
General		Conforms	
Reg. 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.
Reg. Guide 1.143, Rev. 2, 11/01 (Revised 2/83 to correct page 1.145-7) – 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	
Reg. Guide 1.145, Rev. 1, 11/82 – Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants			
General		Conforms	
Reg. 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.			

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

Reg. 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.

Reg. 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.

Reg. 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	

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

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

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

General		Conforms	

Reg. 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	

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Reg. 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.
Reg. 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	
Reg. 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.
Reg. Guide 1.166, Rev. 0, 3/97 – Pre-Earthquake Planning and Immediate Nuclear Power Plant Operator Postearthquake Actions			
General		Conforms	
Reg. Guide 1.167, Rev. 0, 3/97 – Restart of a Nuclear Power Plant Shut Down by a Seismic Event			
General		Conforms	
Reg. 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.			
Reg. 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	
Reg. Guide 1.175, Rev. 0, 8/98 – An Approach for Plant-Specific, Risk-Informed Decisionmaking: Inservice Testing			
General		Conforms	

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Reg. Guide 1.176, Rev. 0, 8/98 – An Approach for Plant-Specific, Risk-Informed Decisionmaking: Graded Quality Assurance			
General		Conforms	
Reg. Guide 1.177, Rev. 0, 8/98 – An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications			
General		Conforms	
Reg. Guide 1.178, Rev. 1, 9/03 – An Approach for Plant-Specific Risk-Informed Decisionmaking for Inservice Inspection of Piping			
General		Conforms	
Reg. 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.
Reg. 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.			
Reg. 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	
Reg. Guide 1.182, Rev. 0, 5/00 – Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants			
General		Conforms	
Reg. Guide 1.184, Rev. 0, 7/00 – Decommissioning of Nuclear Power Reactors			
		N/A	This Regulatory Guide is outside the scope of the FSAR.
Reg. 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.

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Reg. 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.
Reg. Guide 1.187, Rev. 0, 11/00 – Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments			
General		Conforms	
Reg. 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.
Reg. Guide 1.189, Rev. 1, 3/07 – Fire Protection for Nuclear Power Plants			
Conformance with Revision 0 of the Regulatory Guide is documented in the DCD. Conformance of the design aspects is as stated in the DCD. Conformance with Revision 1 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
General		Conforms	
Reg. 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.
Reg. Guide 1.192, Rev. 0, 6/03 – Operation and Maintenance Code Case Acceptability, ASME OM Code			
General		Conforms	
Reg. 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	

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Reg. 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.			
Reg. 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	
Reg. Guide 1.197, Rev. 0, 5/03 – Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors			
General		Conforms	
Reg. Guide 1.198, Rev. 0, 11/03 – Procedures and Criteria for Assessing Seismic Soil Liquefaction at Nuclear Power Plant Sites			
General		Conforms	
Reg. 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.
Reg. 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	
Reg. 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.			
Reg. 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.			

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Reg. Guide 1.203, Rev. 0, 12/05 – Transient and Accident Analysis Methods			
This Regulatory Guide is not applicable to the AP1000 certified design.			
Reg. Guide 1.204, Rev. 0, 11/05 – Guidelines for Lightning Protection of Nuclear Power Plants			
General		Conforms	
Reg. Guide 1.205, Rev. 0, 5/06 – Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants			
This Regulatory Guide is not applicable to the AP1000 certified design.			
Reg. 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.
Reg. 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.			
Reg. 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 weer 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).
Reg. 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.			

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
DIVISION 4 – Environmental and Siting			
Reg. Guide 4.7 Rev. 2, 4/98 – General Site Suitability Criteria for Nuclear Power Stations			
General		Conforms	
Reg. 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			
Reg. 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.
Reg. 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.
Reg. 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.

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
DIVISION 8 – Occupational Health			
Reg. 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.
Reg. Guide 8.4, Rev. 0, 2/73 - Direct-Reading and Indirect-Reading Pocket Dosimeters			
General	10 CFR Part 20 ANSI N13.5-1972	Exception	The reference to 10 CFR 20.202 (a) and 20.401 is no longer valid in the current version of 10 CFR Part 20. ANSI N13.5-1972 was reaffirmed in 1989. The two performance criteria specified in Regulatory Guide 8.4 (accuracy and leakage) for these devices are met using acceptance standards in ANSI N322-1997 "American National Standard Inspection, Test, Construction, and Performance Requirements for Direct Reading Electrostatic/Electroscope Type Dosimeters".
Reg. Guide 8.5, Rev. 1, 3/81 - Criticality and Other Interior Evacuation Signals			
General		Conforms	
Reg. 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.”
Reg. Guide 8.7, Rev. 2, 11/05 - Instructions for Recording and Reporting Occupational Radiation Dose Data			
General		Conforms	

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Reg. Guide 8.8, Rev. 3, 6/78 – Information Relevant to Ensuring That Occupational Radiation Exposures at Nuclear Power Stations Will Be As Low As Is Reasonably Achievable			
Conformance of the design aspects is as stated in the DCD. Conformance with Revision 3 of this Regulatory Guide for programmatic and/or operational aspects is documented below.			
C.1		Conforms	
C.3.a		Conforms	
C.3.b		Exception	Regulatory Guide 1.16 C.1.b.(3) data is no longer reported. Reporting per C.1.b(2) is also no longer required.
C.3.c		Conforms	
C.4.b-C.4.d	ANSI Z-88.2, Regulatory Guide 8.15, NUREG-0041	Conforms	Conformance is with the latest revision of NUREG-0041.
Reg. Guide 8.9, Rev. 1, 7/93 – Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program			
General		Conforms	
Reg. Guide 8.10, Rev. 1-R, 5/77 – Operating Philosophy For Maintaining Occupational Radiation Exposures as Low as is Reasonably Achievable			
General		Conforms	
Reg. Guide 8.13, Rev. 3, 6/99 – Instruction Concerning Prenatal Radiation Exposure			
General		Conforms	
Reg. Guide 8.15, Rev. 1, 10/99 – Acceptable Programs for Respiratory Protection			
General		Conforms	
Reg. Guide 8.27, Rev. 0, 8/81 – Radiation Protection Training for Personnel at Light-Water-Cooled Nuclear Power Plants			
General		Conforms	

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Criteria Section	Referenced Criteria	FSAR Position	Clarification/ Summary Description of Exceptions
Reg. Guide 8.28, Rev. 0, 8/81 – Audible-Alarm Dosimeters			
General	ANSI N13.7-1981	Conforms	ANSI N13.7-1981 was reaffirmed in 1992.
Reg. Guide 8.29, Rev. 1, 2/96 – Instruction Concerning Risks from Occupational Radiation Exposure			
General		Conforms	
Reg. Guide 8.34, Rev. 0, 7/92 – Monitoring Criteria and Methods To Calculate Occupational Radiation Doses			
General		Conforms	
Reg. Guide 8.35, Rev. 0, 6/92 – Planned Special Exposures			
General		Conforms	
Reg. Guide 8.36, Rev. 0, 7/92 – Radiation Dose to the Embryo/Fetus			
General		Conforms	
Reg. 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	

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."