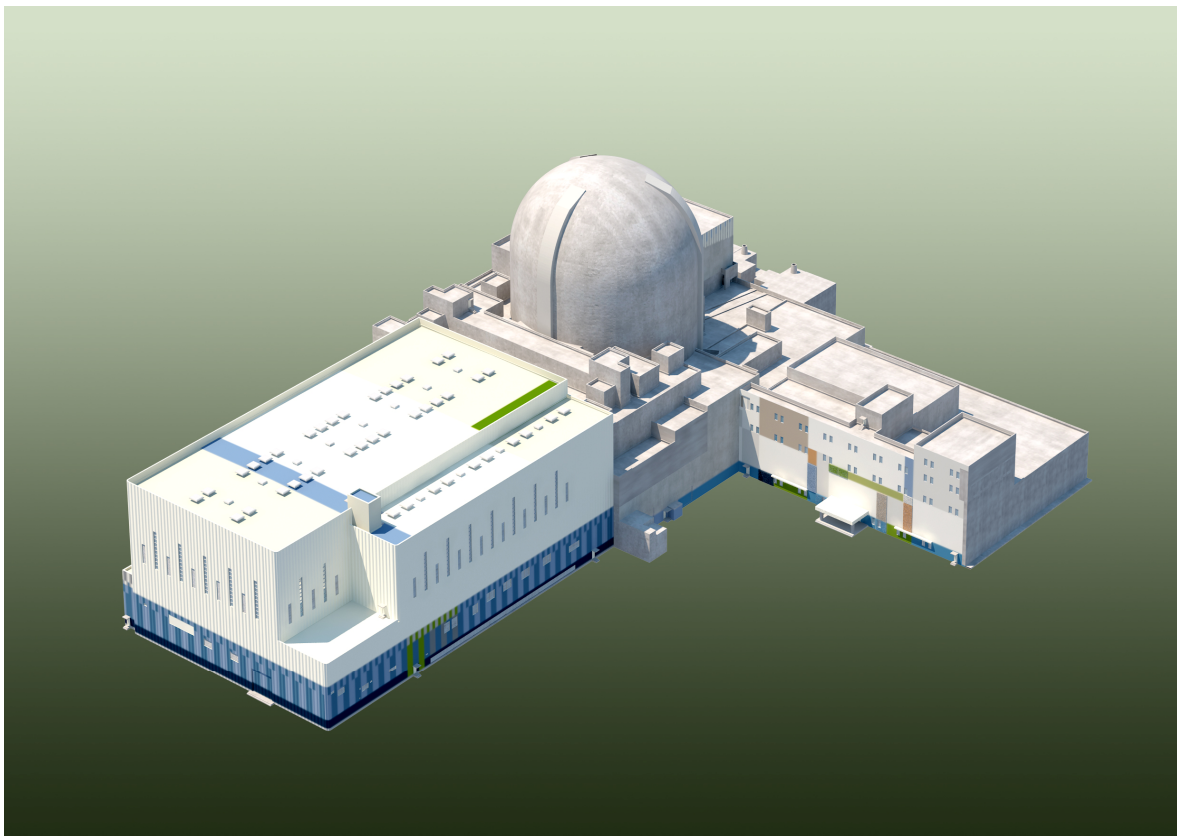


**APR1400**  
**DESIGN CONTROL DOCUMENT TIER 2**

**CHAPTER 3**  
**DESIGN OF STRUCTURES, SYSTEMS,**  
**COMPONENTS, AND EQUIPMENT**

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**CHAPTER 3 – DESIGN OF STRUCTURES, SYSTEMS,  
COMPONENTS, AND EQUIPMENT**

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**ACRONYM AND ABBREVIATION LIST**

AAC	Alternate Alternating Current
AB	Auxiliary Building
AC	Alternating Current
ACI	American Concrete Institute
ACU	Air Cleaning Unit
AFW	Auxiliary Feedwater
AFWS	Auxiliary Feedwater System
AHU	Air Handling Unit
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ANS	American Nuclear Society
ANSI	American National Standards Institute
AOO	Anticipated Operational Occurrence
APR	Advanced Power Reactor
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing And Materials
ATWS	Anticipated Transient Without Scram
BAST	Boric Acid Storage Tank
BLPB	Branch Line Pipe Break
BOP	Balance Of Plant
BRL	Ballistic Research Laboratory
CCW	Component Cooling Water
CCWS	Component Cooling Water System
CEA	Control Element Assembly
CEDM	Control Element Drive Mechanism
CFR	Code of Federal Regulations
CIAS	Containment Isolation Actuation Signal
CIV	Containment Isolation Valve

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COL	Combined License
COLA	Combined License Application
CS	1) Containment Spray 2) Core Support
CSB	Core Support Barrel
CSDRS	Certified Seismic Design Response Spectra
CSS	Containment Spray System
CVAP	Comprehensive Vibration Assessment Program
CVCS	Chemical and Volume Control System
CWS	Circulating Water System
DAC	Design Acceptance Criteria
DBE	Design Basis Event
DBFL	Design Basis Flooding Level
DBPB	Design Basis Pipe Break
DCD	Design Control Document
DFOT	Diesel Fuel Oil Tank
DFL	Dynamic Fluid Loads
DIF	Dynamic Impact Factor
DLF	Dynamic Load Factor
DN	Nominal Diameter
DNBR	Departure from Nucleate Boiling Ratio
DVI	Direct Vessel Injection
EAB	Exclusion Area Boundary
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EPRI	Electric Power Research Institute
ESA	Extension Shaft Assembly
ESF	Engineered Safety Features
ESFAS	Engineered Safety Features Actuation System (or Signal)
ESWS	Essential Service Water System
FEM	Finite Element Model

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FHA	Fuel Handling Area
FIV	Flow Induced Vibration
FWLB	Feedwater Line Break
FTC	Fuel Temperature Coefficient
FW	Feed Water
FWLB	Feedwater Line Break
FWPB	Feedwater Pipe Break
GDC	General Design Criteria (of 10 CFR 50, Appendix A)
GL	Generic Letter
GMRS	Ground Motion Response Spectra
GTAW	Gas Tungsten Arc Weld
HELB	High Energy Line Break
HIS	Hydraulic Institute Standard
HJTC	Heated Junction Thermocouple
HRHF	Hard Rock High Frequency
HSB	Hot Standby
HSD	Hot Shutdown
HVAC	Heating, Ventilation, and Air Conditioning
HVT	Holdup Volume Tank
HX	Heat Exchanger
I&C	Instrumentation And Control
IBA	Inner Barrel Assembly
ICI	In-Core Instrumentation
ID	Inner Diameter
IEEE	Institute of Electrical and Electronics Engineers
IHA	Integrated Head Assembly
IRWST	In-Containment Refueling Water Storage Tank
ISI	Inservice Inspection
ISM	Independent Support Motion
ISRS	In-structure Response Spectra
IST	Inservice Testing

**APR1400 DCD TIER 2**

ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria
J-R	J-Resistance
JOG	Joint Owner Group
KNPP	Korean Nuclear Power Plant
LBB	Leak Before Break
LCO	Limiting Conditions for Operation
LOCA	Loss Of Coolant Accident
LOOP	Loss Of Offsite Power
LOF	Left-Out-Force
LPD	Local Power Density
LPZ	Low Population Zone
LSS	Lower Support Structure
LSSS	Limiting Safety System Setting
LTOP	Low Temperature Overpressure Protection
LWR	Light Water Reactor
MCC	Motor Control Center
MCL	Main Coolant Loop
MCR	Main Control Room
MFS	Main Feedwater System
MMC	Missing Mass Correction
MOV	Motor-Operated Valve
MS	Main Steam
MSE	Main Steam Enclosure
MSIS	Main Steam Isolation Signal
MSIV	Main Steam Isolation Valve
MSLB	Main Steam Line Break
MSS	Main Steam System
MSSV	Main Steam Safety Valve
MSV	Main Steam Valve
MSVH	Main Steam Valve House
MTC	Moderator Temperature Coefficient

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NDRC	National Defense Research Council
NDTT	Nil Ductility Transition Temperature
NI	Nuclear Island
NNS	Non-Nuclear Safety
NO	Normal Operation
NOP	Normal Operating Procedure
NPP	Nuclear Power Plant
NPSH	Net Positive Suction Head
NPSHA	Net Positive Suction Head Available
NPSHR	Net Positive Suction Head Required
NS	Non-Seismic
NSSS	Nuclear Steam Supply System
NUREG	U.S. Nuclear Regulatory Commission Regulation
OBE	1) Operating Basis Earthquake 2) Operating Basis Event
OD	Outside Diameter
P&ID	Piping and Instrumentation Diagram
PED	Piping Evaluation Diagram
PGA	Peak Ground Acceleration
PIV	Pressure Isolation Valve
PMF	Probable Maximum Flood
PMP	Probable Maximum Precipitation
POSRV	Pilot Operated Safety Relief Valve
POV	Power-Operated Valve
PPS	1) Plant Protection System 2) Preferred Power Supply
PSD	Power Spectra Density
PSW	Primary Shield Wall
PWR	Pressurized Water Reactor
PZR	Pressurizer
RAP	Reliability Assurance Program

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RC	Reactor Coolant
RCB	Reactor Containment Building
RCGVS	Reactor Coolant Gas Vent System
RCL	Reactor Coolant Loop
RCP	Reactor Coolant Pump
RCPB	Reactor Coolant Pressure Boundary
RCS	Reactor Coolant System
RHR	Residual Heat Removal
RPS	Reactor Protection System
RRS	Required Response Spectra
RSPT	Reed Switch Position Transmitter
RTD	Resistance Temperature Detector
RTNDT	Reference Temperature Nil-Ductility Transition
RTSS	Reactor Trip Switchgear System
RTSS	Reactor Trip Switchgear System
RV	Reactor Vessel
RVI	Reactor Vessel Internals
SAFDL	Specified Acceptable Fuel Design Limit
SAM	Seismic Anchor Movement Motion
SC	1) Shutdown Cooling 2) Safety Console
SCP	Shutdown Cooling Pump
SCS	Shutdown Cooling System
SDVS	Safety Depressurization and Vent System
SECY	Office of the Secretary of the Commission
SFP	Spent Fuel Pool
SG	Steam Generator
SGBDS	Steam Generator Blowdown System
SGTR	Steam Generator Tube Rupture
SI	Safety Injection
SIF	Stress Intensification Factor

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SIP	Safety Injection Pump
SIS	Safety Injection System
SIT	1) Safety Injection Tank 2) Structural Integrity Test
SLB	Steam Line Break
SMAW	Shielded Metal Arc Weld
SOV	Solenoid-Operated Valve
SQSDS	Seismic Qualification Summary Data Sheet
SRI	Stanford Research Institute
SRP	Standard Review Plan
SRSS	Square Root of the Sum of the Squares
SRV	Safety Relief Valve
SSC	Structures, Systems, and Components
SSE	Safe Shutdown Earthquake
SSI	Soil Structure Interaction
SSW	Secondary Shield Wall
TEDE	Total Effective Dose Equivalent
TGB	Turbine Generator Building
TIV	Temperature Isolation Valve
TLOFW	Total Loss Of Feedwater
UGS	Upper Guide Structure
UHS	Ultimate Heat Sink
UPC	Ultimate Pressure Capacity
URS	Uniform Response Spectrum
USH	Uniform Support Motion
USNRC	United States Nuclear Regulatory Commission
VCT	Volume Control Tank
ZPA	Zero Period Acceleration