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ABBREVIATIONS

BOP	SYSTEM ENGINEERING - BALANCE OF PLANT
CHEM	CHEMISTRY
CIVIL	DESIGN ENGINEERING - CIVIL ENGINEERING
PGM/PGMS	PROGRAM/COMPONENT PROGRAM ENGINEERING
EIC	SYSTEM ENGINEERING - ELECTRICAL INSTRUMENTATION & CONTROL
ELEC	DESIGN ENGINEERING - ELECTRICAL ENGINEERING
EP	EMERGENCY PREPAREDNESS
ENV	ENVIRONMENTAL
FOPS	FIRE OPERATIONS
FP	DESIGN ENGINEERING - FIRE PROTECTION
FUELS	CORPORATE FUELS
HR	HUMAN RESOURCES
LIC	LICENSING
MAINT	MAINTENANCE - INSTRUMENT/ELECTRICAL
MATL	DESIGN ENGINEERING - MATERIAL ENGINEERING
MECH	DESIGN ENGINEERING - MECHANICAL/NUCLEAR ENGINEERING
MS	MANAGEMENT SERVICES
NS	NUCLEAR SECURITY
NSA	NUCLEAR SAFETY ANALYSIS
NSSS	SYSTEM ENGINEERING - NUCLEAR STEAM SUPPLY SYSTEM
OPS	OPERATIONS
PGM	PROGRAM/COMPONENT ENGINEERING PROGRAM
QA	QUALITY ASSURANCE
RADPRO	RADIATION PROTECTION
RDS	RIVER SYSTEMS OPERATIONS (DAM SAFETY)
RSO	RIVER SYSTEMS OPS (AIR/LAND/WATER)
RXE	REACTOR ENGINEERING
TRG	NUCLEAR TRAINING
TPS	TRANSMISSION & POWER SUPPLY

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SAR CHAPTER	TITLE	LEAD	SUPPORT
1.0	**INTRODUCTION AND GENERAL PLANT DESCRIPTION**		
1.1	INTRODUCTION	LIC	
1.1.2	Licensing Basis Document	LIC	
1.1.3	NRC Commitments	LIC	
1.2	GENERAL PLANT DESCRIPTION	CIVIL	RXE
1.2.1.1	Location	CIVIL	
1.2.1.2	Demography	CIVIL	
1.2.1.3	Meteorology	CIVIL	RSO
1.2.1.4	Hydrology	CIVIL	
1.2.1.5	Geology	CIVIL	RDS
1.2.1.6	Seismology	CIVIL	RDS
1.2.2	Facility Description		
1.2.2.2	Nuclear Steam Supply System	MECH	
1.2.2.3	Control and Instrumentation	ELEC	
1.2.2.4	Fuel Handling System	MECH	
1.2.2.5	Waste Processing System	MECH	
1.2.2.6	Steam and Power Conversion System	MECH	
1.2.2.7	Plant Electrical system	ELEC	
1.2.2.8	Cooling Water	MECH	
1.2.2.9	Component Cooling system	MECH	
1.2.2.10	Chemical and Volume Control System	MECH	
1.2.2.11	Sampling and Water Quality System	MECH	
1.2.2.12	Ventilation	MECH	
1.2.2.13	Fire Protection System	FP	
1.2.2.14	Compressed Air System	MECH	
1.2.2.15	Engineered Safety Features	MECH	
1.2.2.16	Shared Facilities and Equipment	MECH	
1.2.3	General Arrangement of Major Structures and Equipment	MECH	
1.3	COMPARISON TABLES - ***HISTORICAL***	NE	
1.4	IDENTIFICATION OF AGENTS AND CONTRACTORS ***HISTORICAL***	NE	
1.5	REQUIREMENTS FOR FURTHER TECHNICAL INFORMATION	MECH	RXE/FUELS
1.6	MATERIAL INCORPORATED BY REFERENCE	MECH	
1.7	ELECTRICAL, I&C CONTROL DRAWINGS	ELEC	EIC
1.8	TECHNICAL QUALIFICATION OF APPLICANT	ELEC	
1.9	NUCLEAR PERFORMANCE PLAN - ***HISTORICAL***	LIC	NE

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SAR CHAPTER	TITLE	LEAD	SUPPORT
2.0	**SITE CHARACTERISTICS**		
2.1	GEOGRAPHY AND DEMOGRAPHY		
2.1.1	Site Location and Description	CIVIL	CHEM/RADPRO
2.1.1.2	Site Area Map	RADPRO	
2.1.1.3	Boundaries For Establishing Effluent Limits	RADPRO	
2.1.2	Exclusion Area Authority and Control	RADPRO	NS
2.1.3	Population Distribution	EP	CIVIL
2.1.3.4	Low Population Zone	EP	CIVIL/LIC
2.1.3.5	Population Center	EP	CIVIL/LIC
2.1.3.6	Population Density	EP	CIVIL/LIC
2.2	NEARBY INDUSTRIAL TRANSPORTATION, AND MILITARY FACILITIES		
2.2.1	Location and Route	CIVIL	
2.2.2	Descriptions	CIVIL	
2.2.3	Evaluations of Potential Accidents	CIVIL	
2.3	METEOROLOGY		
2.3.1	Regional Climate	ENV	RSO
2.3.2	Local Meteorology	ENV	RSO
2.3.3	Onsite Meteorological Measurements Program	ENV	BOP/RSO
2.3.4	Short-Term (Accident) Diffusion Estimates	ENV	RSO
2.3.5	Long-Term (Routine) Diffusion Estimates	ENV	RSO
2.4	HYDROLOGIC ENGINEERING	CIVIL	
2.4.1	Hydrologic Description	CIVIL	
2.4.2	Floods	CIVIL	
2.4.3	Probable Maximum Flood on Streams & Rivers	CIVIL	
2.4.4	Potential Dam Failures, Seismically Induced	CIVIL	
2.4.5	Probable Maximum Surge and Seiche Flooding	CIVIL	
2.4.6	Probable Maximum Tsunami Flooding	CIVIL	
2.4.7	Ice Effects	CIVIL	
2.4.8	Cooling Water Canals and Reservoirs	CIVIL	
2.4.9	Channel Diversions	CIVIL	
2.4.10	Flooding Protection Requirements	CIVIL	
2.4.11	Low Water Considerations	CIVIL	
2.4.12	Dispersion, Dilution, and Travel Times of Accidental Releases of Liquid Effluents	CIVIL	CHEM
2.4.13	Groundwater	CIVIL	
2.4.14	Flooding Protection Requirements	CIVIL	
2.5	GEOLOGY, SEISMOLOGY, AND GEOTECHNICAL ENGINEERING SUMMARY OF FOUNDATION CONDITIONS - ***HISTORICAL***	CIVIL	
3.0	**DESIGN OF STRUCTURES, COMPONENTS, EQUIPMENT AND SYSTEMS**		
3.1	CONFORMANCE WITH NRC GENERAL DESIGN CRITERIA	CIVIL	
3.2	CLASSIFICATION OF STRUCTURES, SYSTEMS AND COMPONENTS	CIVIL	

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SAR CHAPTER	TITLE	LEAD	SUPPORT
3.3	WIND AND TORNADO LOADING	CIVIL	RSO
3.4	WATER LEVEL (FLOOD) DESIGN	CIVIL	
3.5	MISSILE PROTECTION	CIVIL	
3.5A	ESTIMATES OF VELOCITIES OF JET PROPELLED MISSILES	CIVIL	
3.6	PROTECTION AGAINST DYNAMIC EFFECTS ASSOCIATED WITH THE POSTULATED RUPTURE OF PIPING	CIVIL	
3.6A	PROTECTION AGAINST DYNAMIC EFFECTS ASSOCIATED WITH THE POSTULATED RUPTURE OF PIPING (EXCLUDING REACTOR COOLANT SYSTEM PIPING)	CIVIL	
3.6B	PROTECTION AGAINST DYNAMIC EFFECTS ASSOCIATED WITH THE POSTULATED RUPTURE OF PIPING	CIVIL	
3.7	SEISMIC DESIGN		
3.7.1	Seismic Input	CIVIL	RDS
3.7.2	Seismic System Analysis	CIVIL	RDS
3.7.3	Seismic Subsystem Analysis	CIVIL	RDS
3.7.4	Seismic Instrumentation Program	CIVIL	MAINT/EIC/RDS
3.8	DESIGN OF CATEGORY I STRUCTURES		
3.8.1	Concrete Shield Building	CIVIL	
3.8.2	Steel Containment System	CIVIL	
3.8.3	Concrete Interior Structure	CIVIL	
3.8.4	Other Category I Structures	CIVIL	
3.8.5	Foundations and Concrete Supports	CIVIL	
3.8.6	Category I(L) Cranes	CIVIL	BOP
3.8A	SHELL TEMPERATURE TRANSIENTS	CIVIL	RDS
3.8B	BUCKLING STRESS CRITERIA	CIVIL	RDS
3.8C	DOCUMENTATION OF CB&I COMPUTER PROGRAMS	CIVIL	RDS
3.8D	COMPUTER PROGRAMS FOR STRUCTURAL ANALYSIS	CIVIL	RDS
3.8E	CODES, LOAD DEFINITIONS, AND LOAD COMBINATIONS FOR THE MODIFICATION & EVALUATION OF EXISTING STRUCTURES & FOR THE DESIGN OF NEW FEATURES ADDED To EXISTING STRUCTURES AND THE DESIGN OF STRUCTURES INITIATED AFTER JULY 1979	CIVIL	RDS

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SAR CHAPTER	TITLE	LEAD	SUPPORT
3.9	MECHANICAL SYSTEMS AND COMPONENTS		
3.9.1	General Topics for Analysis of Seismic Category I ASME Code & Non-Code Items	CIVIL	
3.9.2	Dynamic Testing and Analysis	CIVIL	
3.9.3	ASME Code Class 1, 2, and 3 Components, Component Supports and Core Support Structures	CIVIL	MECH
3.9.4	Control Rod System	CIVIL	NSSS/RXE
3.9.5	Reactor Pressure Vessel Internals	CIVIL	NSSS/RXE
3.9.6	Inservice Testing of Pumps and Valves	PGM	MECH
3.10	SEISMIC DESIGN OF CATEGORY 1 INSTRUMENTATION AND ELECTRICAL EQUIPMENT		
3.10.1	Seismic Qualification Criteria	CIVIL	
3.10.2	Methods and Procedures for Qualifying Electrical Equipment Instrumentation	CIVIL	
3.10.3	Methods of Qualifying TVA-Designed Supports for Electrical Equipment Instrumentation and Cables	CIVIL	
3.10.4	Operating License Review	CIVIL	
3.11	ENVIRONMENTAL DESIGN OF MECHANICAL AND ELECTRICAL EQUIPMENT		
3.11.1	Equipment Identification & Environmental Conditions	MECH	BOP
3.11.2	Environmental Conditions	MECH	EIC
3.11.3	Electrical Equipment within the Scope of 10 CFR 50.49	ELEC	EIC
3.11.4	Qualification Tests and Analyses	ELEC	EIC
3.11.5	Qualification Test Results	ELEC	EIC
3.11.6	Loss of Heating, Ventilation, and Air Conditioning (HVAC)	MECH	EIC
3.11.7	Estimated Chemical & Radiation Environment	MECH	EIC
3.12	CONTROL OF HEAVY LOADS	CIVIL	CIVIL
3.12.1	Introduction/Licensing Background	CIVIL	CIVIL
3.12-2	Safety Basis	CIVIL	CIVIL
3.12.3	Scope of Heavy Load Handling System	CIVIL	CIVIL
3.12.4	Control of Heavy Loads Program	CIVIL	CIVIL
3.12.5	Safety Evaluation	CIVIL	CIVIL
4.0	**REACTORS**		
4.1	SUMMARY DESCRIPTION	FUELS	MECH/RXE
4.2	MECHANICAL DESIGN	MECH	RXE/NSSS/FUELS
4.2.1	Fuel	FUELS	MECH/RXE/NSSS
4.2.2	Reactor Vessel Internals	MECH	RXE/NSSS/FUELS
4.2.3	Reactivity Control System	MECH	FUELS/RXE/NSSS
4.2.4	Tritium Producing Burnable Assembly Rods - Tritium Production Core	MECH	
4.3	NUCLEAR DESIGN	FUELS	MECH/RXE
4.4	THERMAL AND HYDRAULIC DESIGN	NSA	MECH

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SAR CHAPTER	TITLE	LEAD	SUPPORT
5.0	**REACTOR COOLANT SYSTEM**		
5.1	SUMMARY DESCRIPTION	MECH	NSSS
5.2	INTEGRITY OF RCS PRESSURE BOUNDARY		
5.2.1	Design of Reactor Coolant Pressure Boundary Components	MECH	SE-NSS
5.2.2	Overpressurization Protection	MECH	NSSS/OPS
5.2.3	General Material Considerations	MECH	NSSS
5.2.4	Fracture Toughness	MECH	NSSS
5.2.5	Austenitic Stainless Steel	MECH	NSSS
5.2.6	Pump Flywheels	MECH	NSSS
5.2.7	RCPB Leakage Detection System	MECH	OPS/MECH/CHEM
5.2.8	Inservice Inspection of ASME Code Class 1 Components	PGM	MECH
5.3	THERMAL HYDRAULIC SYSTEM DESIGN		
5.3.1	Analytical Methods and Data	NSA	MECH
5.3.2	Operating Restrictions on Pumps	NSA	MECH
5.3.4	Temperature-Power Operating Map	NSA	MECH
5.3.5	Load Following Characteristics	NSA	MECH
5.3.6	Transient Effects	NSA	MECH
5.3.7	Thermal & Hydraulic Characteristics Summary Table	NSA	MECH
5.4	REACTOR VESSEL AND APPURTENANCES	MECH	NSSS
5.5	COMPONENT AND SUBSYSTEM DESIGN	MECH	NSSS/OPS
5.5.1	Reactor Coolant Pumps	MECH	NSSS/OPS
5.5.2	Replacement Steam Generators	MECH	NSSS/OPS/CHEM
5.5.3	Reactor Coolant Piping	MECH	NSSS/OPS
5.5.4	Steam Outlet Flow Restrictor (Steam Generator)	MECH	NSSS/OPS
5.5.5	Main Steam Line Isolation System	MECH	BOP/OPS
5.5.6	Reactor Vessel Head Vent System	MECH	NSSS/OPS
5.5.7	Residual Heat Removal System	MECH	NSSS/OPS
5.5.8	Reactor Coolant Cleanup System	MECH	NSSS/OPS/CHEM
5.5.10	Pressurizer	MECH	NSSS/OPS
5.5.11	Pressurizer Relief Tank	MECH	NSSS/OPS
5.5.12	Valves	MECH	NSSS/OPS
5.5.13	Safety and Relief Valves	MECH	NSSS/OPS
5.5.14	Component Supports	MECH	NSSS/OPS
5.6	INSTRUMENTATION APPLICATION	ELEC	MAINT/EIC
6.0	**ENGINEERED SAFETY FEATURES**		
6.1	ENGINEERED SAFETY FEATURE MATERIALS		
6.1.1	Metallic Material	MATL	
6.1.2	Organic Material	MATL	NSSS
6.1.3	Post-Accident Chemistry	MECH	CHEM
6.1.4	Degree of Compliance with RG 1.54 for Paints & Coatings Inside Containment	MATL	

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SAR CHAPTER	TITLE	LEAD	SUPPORT
6.2	CONTAINMENT SYSTEMS		
6.2.1	Containment Functional Design	MECH	NSSS
6.2.2	Containment Heat Removal Systems	MECH	NSSS/OPS
6.2.3	Secondary Containment Functional Design	MECH	NSSS
6.2.4	Containment Isolation Systems	MECH	NSSS
6.2.5	Combustible Gas Control in Containment	MECH	NSSS
6.2.5A	Hydrogen Mitigation System	MECH	NSSS
6.2.6	Containment Leakage Testing	PGM	MECH
6.3	EMERGENCY CORE COOLING SYSTEM		
6.3.1	Design Bases	NSA	MECH/NSSS/OPS
6.3.2	System Design	NSA	MECH/NSSS/OPS
6.3.3	Performance Evaluation	NSA	MECH/NSSS/OPS
6.3.4	Tests and Inspections	MECH	NSSS/OPS/EIC/NSA
6.3.5	Instrumentation Application	EIC	MECH/MAINT/NSA
6.4	HABITIBILITY SYSTEM		
6.4.1	Design Bases	NSA	MECH/BOP
6.4.2	System Design	NSA	MECH/BOP
6.4.3	System Operational Procedures	NSA	MECH/OPS
6.4.4	Design Evaluations	NSA	MECH/BOP
6.4.5	Testing and Inspection	MECH	BOP/NSA
6.4.6	Instrumentation Requirements	EIC	MECH/MET/NSA
6.5	FISSION PRODUCT REMOVAL & CONTROL SYSTEMS	NSA	MECH/CHEM/OPS/NSSS
6.5.1	Engineered Safety Feature (ESF) Filter Systems	NSA	MECH/CHEM/OPS/NSSS
6.5.2	Containment Spray System for Fission Product Cleanup	NSA	MECH/CHEM/OPS/NSSS
6.5.3	Fission Product Control Systems	NSA	MECH/CHEM/OPS/NSSS
6.5.4	Ice Condenser as a Fission Product Cleanup System	NSA	MECH/CHEM/OPS/NSSS
6.6	INSERVICE INSPECTION OF ASME CODE CLASS 2 AND 3 COMPONENTS	PGM	MATL
6.7	ICE CONDENSER SYSTEM		
6.7.1	Floor Structure and Cooling System	MECH	NSSS/NSA
6.7.2	Wall Panels	MECH	NSSS/NSA
6.7.3	Lattice Frames and Support Columns	MECH	NSSS/NSA
6.7.4	Ice Baskets	MECH	NSSS/NSA
6.7.5	Crane and Rail Assembly	MECH	NSSS/NSA
6.7.6	Refrigeration System	MECH	NSSS/NSA
6.7.7	Air Handling Units	MECH	NSSS/NSA
6.7.8	Lower Inlet Doors	MECH	NSSS/NSA
6.7.9	Lower Support Structure	MECH	NSSS/NSA
6.7.10	Top Deck and Doors	MECH	NSSS/NSA
6.7.11	Intermediate Deck and Doors	MECH	NSSS/NSA
6.7.12	Air Distribution Ducts	MECH	NSSS/NSA
6.7.13	Equipment Access Door	CIVIL	NSSS/NSA
6.7.14	Ice Technology, Ice Performance, & Ice Chemistry	MEC	NSSS/CHEM/NSA
6.7.15	Ice Condenser Instrumentation	ELEC	EIC/MAINT/NSA
6.7.16	Ice Condenser Structural Design	CIVIL	NSSS/NSA
6.7.17	Seismic Analysis	NSA	CIVIL/NSSS
6.7.18	Materials	MATL	NSSS/NSA
6.7.19	Tests and Inspections	MECH	NSSS

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SAR CHAPTER	TITLE	LEAD	SUPPORT
6.8	AIR RETURN FANS		
6.8.1	Design Bases	NSA	MECH/BOP
6.8.2	System Description	NSA	MECH/BOP
6.8.3	Safety Evaluation	NSA	MECH/BOP
6.8.4	Inspection and Testing	NSA	MECH/BOP
6.8.5	Instrumentation Requirements	ELEC	EIC/MET/BOP/NSA
6.9	MOTOR-OPERATED VALVE (MOV) PROGRAMS	PROG	MECH/NSA
7.0	**INSTRUMENTATION AND CONTROLS**		
7.1	INTRODUCTION	ELEC	MAINT/EIC
7.1.1	Identification of Safety-Related Systems	ELEC	MAINT/EIC
7.1.2	Identification of Safety Criteria	ELEC	MAINT/EIC
7.2	REACTOR TRIP SYSTEM	ELEC	MAINT/EIC/OPS
7.3	ENGINEERED SAFETY FEATURES ACTUATION SYSTEM (ESFAS)	ELEC	EIC/MAINT/OPS
7.4	SYSTEMS REQUIRED FOR SAFE SHUTDOWN	ELEC	EIC/MAINT/OPS
7.5	INSTRUMENTATION SYSTEMS IMPORTANT TO SAFETY	ELEC	EIC/MAINT
7.5.1	Post Accident Monitoring Instrumentation (PAM)	ELEC	EIC/MAINT
7.5.2	Plant Computer System	ELEC	EIC/MAINT
7.6	ALL OTHER SYSTEMS REQUIRED FOR SAFETY		
7.6.1	120V AC and 125DC Vital Plant Control Power System	ELEC	EIC/MAINT
7.6.2	Residual Heat Removal Isolation Valves	ELEC	EIC/MAINT/OPS
7.6.3	Refueling Interlocks	ELEC	EIC/MAINT
7.6.5	Accumulator Motor-Operated Valves	ELEC	EIC/MAINT
7.6.6	Spurious Actuation Protection for MOVs	ELEC	EIC/MAINT
7.6.7	Loose Parts Monitoring System (LPMS)	ELEC	MAINT/EIC
7.6.8	Interlocks for RCS Pressure Control During Low Temperature Operation	ELEC	EIC/MAINT
7.6.9	Switchover from Injection to Recirculation Mode Following a LOCA	ELEC	EIC/MAINT
7.7	CONTROL SYSTEMS	ELEC	MAINT/EIC
APP 7.A	INSTRUMENTATION IDENTIFICATIONS AND SYMBOLS	ELEC	MAINT/EIC

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SAR CHAPTER	TITLE	LEAD	SUPPORT
8.0	**ELECTRIC POWER**		
8.1	INTRODUCTION	ELEC	EIC/MAINT
8.2	OFFSITE (PREFERRED) POWER SYSTEM	ELEC	EIC/OPS/MAINT
8.3	ONSITE (STANDBY) POWER SYSTEM	ELEC	EIC/OPS/MAINT
8.3.1	A.C. Power System	ELEC	EIC/OPS/MAINT
8.3.2	D.C. Power System	ELEC	EIC/OPS/MAINT
APP 8A	DELETED by UFSAR Amendment 1		
APP 8B	DELETED by UFSAR Amendment 1		
APP 8C	DELETED by Initial UFSAR		
APP 8D	IEEE STD 387-1984 FOR DIESEL-GENERATING UNITS APPLIED AS STANDBY POWER SUPPLIES FOR NUCLEAR POWER GENERATING STATIONS	ELEC	EIC/MAINT
APP 8E	PROBABILITY/RELIABILITY ANALYSIS OF PROTECTION DEVICE SCHEMES FOR ASSOCIATED AND NON-CLASS 1E CABLES	ELEC	
9.0	**AUXILIARY SYSTEM**		
9.1	FUEL STORAGE AND HANDLING		
9.1.1	New Fuel Storage	MECH	RXE/OPS/FUELS
9.1.2	Spent Fuel Storage	MECH	RXE/OPS/FUELS
9.1.3	Spent Fuel Pool Cooling and Cleanup System (SFPCCS)	MECH	RXE/PGM/FUELS OPS/CHEM
9.1.4	Fuel Handling System	MECH	RXE/BOP/ OPS/FUELS
9.1.5	Tritium Producting Burnable Absorber Rods (TPBARs) Consolidation Activity	MECH	RXE/BOP/ OPS/FUELS
9.2	WATER SYSTEMS		
9.2.1	Essential Raw Cooling Water (ERCW)	MECH	CHEM/NSSS
9.2.2	Component Cooling System	MECH	CHEM/NSSS
9.2.3	Demineralized Water Makeup System	MECH	CHEM/BOP
9.2.4	Potable and Sanitary Water Systems	MECH	CHEM/BOP
9.2.5	Ultimate Heat Sink	MECH	BOP
9.2.6	Condensate Storage Facilities	MECH	BOP
9.2.7	Refueling Water Storage Tank	NSA	CHEM/NSSS
9.2.8	Raw Cooling Water System	MECH	CHEM/NSSS
9.3	PROCESS AUXILIARIES		
9.3.1	Compressed Air System	MECH	BOP/CHEM
9.3.2	Process Sampling System	MECH	NSSS/CHEM
9.3.3	Equipment and Floor Drainage System	MECH	NSSS/CHEM
9.3.4	Chemical and Volume Control System	MECH	NSSS/CHEM
9.3.5	Failed Fuel Detection System	MECH	BOP/CHEM
9.3.6	Auxiliary Charging System	MECH	NSSS/CHEM
9.3.7	Boron Recycle System	MECH	BOP/CHEM
9.3.8	Heat Tracing	MECH	BOP/CHEM

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SAR CHAPTER	TITLE	LEAD	SUPPORT
9.4	AIR CONDITIONING, HEATING, COOLING, AND VENTILATION SYSTEMS		
9.4.1	Control Room Area Ventilation System	MECH	BOP
9.4.2	Fuel Handling Area Ventilation System	MECH	BOP
9.4.3	Auxiliary Building & Radwaste Area Ventilation	MECH	BOP
9.4.4	Turbine Building Area Ventilation	MECH	BOP
9.4.5	Engineered Safety Feature Ventilation	MECH	BOP
9.4.6	Reactor Building Purge Ventilating System	MECH	BOP
9.4.7	Containment Air Cooling System	MECH	BOP
9.4.8	Condensate Demineralizer Waste Evaporator Building Environmental Control System (Historical)	MECH	BOP
9.4.9	Post Accident Sampling Facility (PASF) Environmental Control System	MECH	BOP/CHEM
9.5	OTHER AUXILIARY SYSTEMS		
9.5.1	Fire Protection System	PGM	FOPS
	(Fire Protection Report)	PGM	FOPS/BOP
	(Table 14.10.1 impact)		OPS/FP/BOP
9.5.2	Plant Communications System	ELEC	EIC/NS
9.5.3	Lighting Systems	ELEC	EIC
9.5.4	Diesel Generator Fuel Oil Storage and Transfer System	MECH	BOP/EIC
9.5.5	Diesel Generator Cooling Water System	MECH	BOP/EIC
9.5.6	Diesel Generator Starting System	MECH	BOP/EIC
9.5.7	Diesel Engine Lubrication System	MECH	BOP/EIC
9.5.8	Diesel Generator Combustion Air Intake and Exhaust System	MECH	BOP/EIC
10.0	**MAIN STEAM AND POWER CONVERSION SYSTEMS**		
10.1	SUMMARY DESCRIPTION	MECH	
10.2	TURBINE GENERATOR		
10.2.1	Design Bases	MECH	BOP/OPS
10.2.2	Description	MECH	BOP/OPS
10.2.3	Turbine Rotor and Disc Integrity	MECH	BOP/OPS
10.2.4	Evaluation	MECH	BOP/OPS
10.3	MAIN STEAM SUPPLY SYSTEM		
10.3.1	Design Bases	NSA	MECH/BOP
10.3.2	System Description	NSA	MECH/BOP
10.3.3	Design Evaluation	NSA	MECH/BOP
10.3.4	Inspection and Testing Requirements	NSA	MECH/BOP
10.3.5	Water Chemistry	NSA	MECH/BOP/CHEM
10.3.6	Steam Feedwater System Materials	NSA	MECH/BOP
10.4	OTHER FEATURES OF STEAM AND POWER CONVERSION		
10.4.1	Main Condenser	MECH	CHEM/BOP
10.4.2	Main Condenser Evacuation System	MECH	BOP
10.4.3	Turbine Gland Sealing System	MECH	BOP/OPS
10.4.4	Turbine Bypass System	MECH	BOP/OPS
10.4.5	Condenser Circulating Water System	MECH	CHEM/BOP
10.4.6	Condensate Polishing Demineralizer System	MECH	CHEM/BOP
10.4.7	Condensate and Feedwater Systems	MECH	CHEM/BOP
10.4.8	Steam Generator Blowdown System	MECH	CHEM/BOP
10.4.9	Auxiliary Feedwater System	NSA	MECH

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SAR CHAPTER	TITLE	LEAD	SUPPORT
11.0	**RADIOACTIVE WASTE MANAGEMENT**		
11.1	SOURCE TERMS		
11.1.1	Historical Design Model for Radioactivities in Systems and Components	MECH	CHEM
11.1.2	Realistic Model for Radioactivities in Systems and Components	MECH	CHEM
11.1.3	Plant Leakage	MECH	CHEM
11.1.4	Additional Sources	MECH	CHEM
11.2	LIQUID WASTE SYSTEMS		
11.2.1	Design Objectives	MECH	CHEM/PGM/OPS
11.2.2	System Descriptions	MECH	CHEM/PGM/OPS
11.2.3	System Design	MECH	CHEM/PGM/OPS
11.2.4	Operating Procedure	MECH	CHEM/PGM/OPS
11.2.5	Performance Tests	MECH	CHEM/PGM/OPS
11.2.6	Estimated Releases	MECH	CHEM/PGM/OPS
11.2.7	Release Points	MECH	CHEM/PGM/OPS
11.2.8	Dilution Factors	CHEM	RADPRO/OPS/ ENV/PGM
11.2.9	Estimated Doses from Radionuclides in Liquid Effluents	CHEM	PGM/RADPRO
11.3	GASEOUS WASTE SYSTEMS		
11.3.1	Design Bases	MECH	CHEM/PGM/OPS
11.3.2	System Description	MECH	CHEM/PGM/OPS
11.3.3	System Design	MECH	CHEM/PGM/OPS
11.3.4	Operating Procedure	MECH	CHEM/PGM/OPS
11.3.5	Performance Tests	MECH	CHEM/PGM/OPS
11.3.7	Radioactive Releases	MECH	CHEM/PGM/OPS
11.3.8	Release Points	MECH	CHEM/PGM/OPS
11.3.9	Atmospheric Dilution	CHEM	MECH/PGM
11.3.10	Estimated Doses from Radionuclides in Gaseous Effluents	CHEM	RADPRO/ MECH/PGM
11.4	PROCESS AND EFFLUENT RADIOLOGICAL MONITORING AND SAMPLING SYSTEM		
11.4.1	Design Objectives	MECH	CHEM/EIC
11.4.2	Continuous Monitors	MECH	CHEM/EIC
11.4.3	Sampling	MECH	CHEM/EIC
11.4.4	Calibration and Maintenance	MECH	CHEM/MAINT
11.5	SOLID WASTE MANAGEMENT SYSTEM		
11.5.1	Design Objectives	ENV	MECH
11.5.2	System Inputs	ENV	MECH
11.5.3	System Description	ENV	MECH
11.5.4	Equipment Operation	ENV	MECH
11.5.5	Storage Facilities	ENV	MECH
11.5.6	Shipment	ENV	MECH
11.6	OFFSITE RADIOLOGICAL MONITORING PROGRAM		
11.6.1	Expected Background	RADPRO	CHEM
11.6.2	Critical Pathways to Man	RADPRO	CHEM

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SAR CHAPTER	TITLE	LEAD	SUPPORT
11.6.3	Sampling Media, Locations, and Frequency	RADPRO	CHEM
11.6.4	Analytical Sensitivity	RADPRO	CHEM
11.6.5	Data Analysis and Presentation	RADPRO	CHEM
11.6.6	Program Statistical Sensitivity	RADPRO	CHEM
APP 11A	TRITIUM CONTROL		
APP 11A.1	System Sources	MECH	CHEM/RXE RADPRO/OPS
APP 11A.2	Tritium Releases	MECH	CHEM/RXE RADPRO/OPS
APP 11A.3	Design Bases	MECH	CHEM/RXE RADPRO/OPS
APP 11A.4	Design Evaluation	MECH	CHEM/RXE RADPRO/OPS
APP 11A.5	Tritium Producing Burnable Absorber Rods (TPBARs)	MECH	RXE
APP 11A.6	Tritium Production Core Impact on Station Operation	MECH	RXE
12.0	**RADIATION PROTECTION**		
12.1	ASSURING THAT OCCUPATIONAL RADIATION EXPOSURES ARE AS LOW AS REASONABLY ACHIEVALBE (ALARA)	MECH	RADPRO
12.1.1	Policy Considerations	MECH	RADPRO
12.1.2	Design Considerations	MECH	RADPRO
12.1.3	ALARA Operational Considerations	MECH	RADPRO
12.2	RADIATION SOURCES		
12.2.1	Contained Sources	MECH	RADPRO/CHEM
12.2.2	Airborne Radioactive Material Sources	MECH	RADPRO/CHEM
12.3	RADIATION PROTECTION DESIGN FEATURES		
12.3.1	Facility Design Features	MECH	RADPRO
12.3.2	Shielding	MECH	RADPRO
12.3.3	Ventilation	MECH	RADPRO/BOP
12.3.4	Area Radiation and Airborne Radioactivity Monitoring Instrumentation	MECH	RADPRO/ EIC/CHEM
12.4	DOSE ASSESSMENT	RADPRO	CHEM
12.5	RADIOLOGICAL CONTROL (RADCON) PROGRAM	RADCON	
APP 12A	RADIATION PROTECTION FEATURES FOR THE TRITIUM PRODUCTION PROGRAM	RADCON	
13.0	**CONDUCT OF OPERATIONS**		
13.1	ORGANIZATION STRUCTURE OF APPLICANT		
13.1.1	Corporate Organization	HR	QA/LIC
13.1.2	Nuclear Power	HR	QA/LIC
13.1.3	Qualification Requirements for Nuclear Facility Personnel	HR	QA/TRG/OPS RADPRO/CHEM

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SAR CHAPTER	TITLE	LEAD	SUPPORT
13.2	TRAINING PROGRAMS	TRG	OPS/MAINT
13.2.1	Accredited Training Programs	TRG	
13.2.2	General Employee and Fitness for Duty Training Programs	TRG	
13.2.3	Other Training Programs	TRG	
13.3	EMERGENCY PLANNING	EP	QA/RADPRO
13.4	REVIEW AND AUDIT	QA	LIC
13.5	SITE PROCEDURES	MS	OPS
13.6	PLANT RECORDS	MS	QA/OPS/ RADPRO
13.7	NUCLEAR SECURITY	NS	QA
14.0	**INITIAL TEST PROGRAM- *HISTORICAL***		
15.0	**ACCIDENT ANALYSES**		
15.1	CONDITION I - NORMAL OPERATION AND OPERATIONAL TRANSIENTS		
15.1.1	Optimization of Control Systems	NSA	MECH
15.1.2	Initial Power Conditions Assumed in Accident Analyses	NSA	MECH
15.1.3	Trip Points and Time Delays to Trip Assumed in Accident Analyses	NSA	OPS/MECH/EIC
15.1.4	Instrumentation Drift and Calorimetric Errors - Power Range Neutron Flux	ELEC	OPS/NSA/EIC
15.1.5	Rod Cluster Control Assembly Insertion Characteristic	NSA	OPS/MECH
15.1.6	Reactivity Coefficients	NSA	OPS/MECH
15.1.7	Fission Product Inventories	NSA	OPS/MECH
15.1.8	Residual Decay Heat	NSA	OPS/MECH
15.1.9	Computer Codes Utilized	NSA	OPS/MECH
15.2	CONDITION II - FAULTS OF MODERATE FREQUENCY		
15.2.1	Uncontrolled Rod Cluster Control Assembly Bank Withdrawal from Subcritical Condition	NSA	OPS/MECH
15.2.2	Uncontrolled Rod Cluster Control Assembly Bank Withdrawal at Power	NSA	OPS/MECH
15.2.3	Rod Cluster Control Assembly Misalignment	NSA	OPS/MECH
15.2.4	Uncontrolled Boron Dilution	NSA	OPS/MECH
15.2.5	Partial Loss of Forced Reactor Coolant Flow	NSA	OPS/MECH
15.2.6	Startup of an Inactive Reactor Coolant Loop at an Incorrect Temperature	NSA	OPS/MECH
15.2.7	Loss of External Electrical Load and/or Turbine Trip	NSA	OPS/MECH
15.2.8	Loss of Normal Feedwater	NSA	OPS/MECH
15.2.9	Coincident Loss of Onsite and External (Offsite) AC Power to the Station - Loss of Offsite Power to the Station Auxiliaries	NSA	OPS/MECH

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SAR CHAPTER	TITLE	LEAD	SUPPORT
15.2.10	Excessive Heat Removal Due to Feedwater System Malfunctions	NSA	OPS/MECH
15.2.11	Excessive Load Increase Incident	NSA	OPS/MECH
15.2.12	Accidental Depressurization of the Reactor Coolant System	NSA	OPS/MECH
15.2.13	Accidental Depressurization of the Main Steam System	NSA	OPS/MECH
15.2.14	Inadvertent Operation of Emergency Core Cooling System	NSA	OPS/MECH
15.3	CONDITION III - INFREQUENT FAULTS		
15.3.1	Loss of Reactor Coolant from Small Ruptured Pipes or from Cracks in Large Pipes Which Actuate the Emergency Core Cooling System	NSA	OPS/MECH
15.3.2	Minor Secondary System Pipe Breaks	NSA	OPS/MECH
15.3.3	Inadvertent Loading of a Fuel Assembly into an Improper Position	NSA	OPS/MECH
15.3.4	Complete Loss of Forced Reactor Coolant Flow	NSA	OPS/MECH
15.3.5	Waste Gas Decay Tank Rupture	NSA	OPS/MECH
15.3.6	Single Rod Cluster Control Assembly Withdrawal at Full Power	NSA	OPS/MECH
15.4	CONDITION IV - LIMITING FAULTS		
15.4.1	Major RCS Pipe Ruptures (LOCA)		
15.4.2	Major Secondary System Pipe Rupture	NSA	OPS/MECH
15.4.3	Steam Generator Tube Rupture	NSA	OPS/MECH
15.4.4	Single Reactor Coolant Pump Locked Rotor	NSA	OPS/MECH
15.4.5	Fuel Handling Accident	NSA	OPS/MECH
15.4.6	Rupture of a Control Rod Drive Mechanism Housing (RCCA Ejection)	NSA	OPS/MECH
15.5	ENVIRONMENTAL CONSEQUENCES OF ACCIDENTS		
15.5.1	Environmental Consequences of a Postulated Loss of AC Power to the Plant Auxiliaries	NSA	CHEM/EIC/ RADPRO/MECH
15.5.2	Environmental Consequences of a Postulated Waste Gas Decay Tank Rupture	NSA	CHEM/MECH/ RADPRO
15.5.3	Environmental Consequences of a Postulated Loss of Coolant Accident	NSA	CHEM/NSSS/ RADPRO
15.5.4	Environmental Consequences of a Postulated Steam Line Break	NSA	CHEM/MECH/ RADPRO
15.5.5	Environmental Consequences of a Postulated Steam Generator Tube Rupture	NSA	CHEM/MECH/ RADPRO
15.5.6	Environmental Consequences of a Postulated Fuel Handling Accident	NSA	CHEM/NSSS/ RADPRO
15.5.7	Environmental Consequences of a Postulated Rod Ejection Accident	NSA	CHEM/NSSS
15.5.8	Tritium Production - Accident Releases	NSA	MECH
15A	DOSE MODELS USED TO EVALUATE THE ENVIRONMENTAL CONSEQUENCES OF ACCIDENTS	NSA	MECH

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SAR CHAPTER	TITLE	LEAD	SUPPORT
15B	OPERATION WITH A TRITIUM PRODUCTION CORE	NSA	RXE
16.0	**TECHNICAL SPECIFICATIONS**		
16.1	PROPOSED TECHNICAL SPECIFICATIONS (NOT USED)		
16.2	FINAL TECHNICAL SPECIFICATIONS	LIC	
16.3	RELOCATED SPECIFICATIONS		
16.3.1	Discussion	LIC	
16.3.2	Document Control	LIC	
16.3.3	Changes to the Relocated Specifications	LIC	
17.0	**QUALITY ASSURANCE**		
17.1	QUALITY ASSURANCE DURING DESIGN AND CONSTRUCTION		
17.1.1	TVA Organization	QA	TPS
17.1.2	Quality Assurance Program	QA	
APP 17.1A	WESTINGHOUSE NUCLEAR ENERGY SYSTEM DIVISION'S QUALITY ASSURANCE PLAN	QA	NSSS
17.2	QUALITY ASSURANCE FOR STATION OPERATION		
17.2.1	Identification of Safety Related Features	QA	MECH/MAINT/OPS