

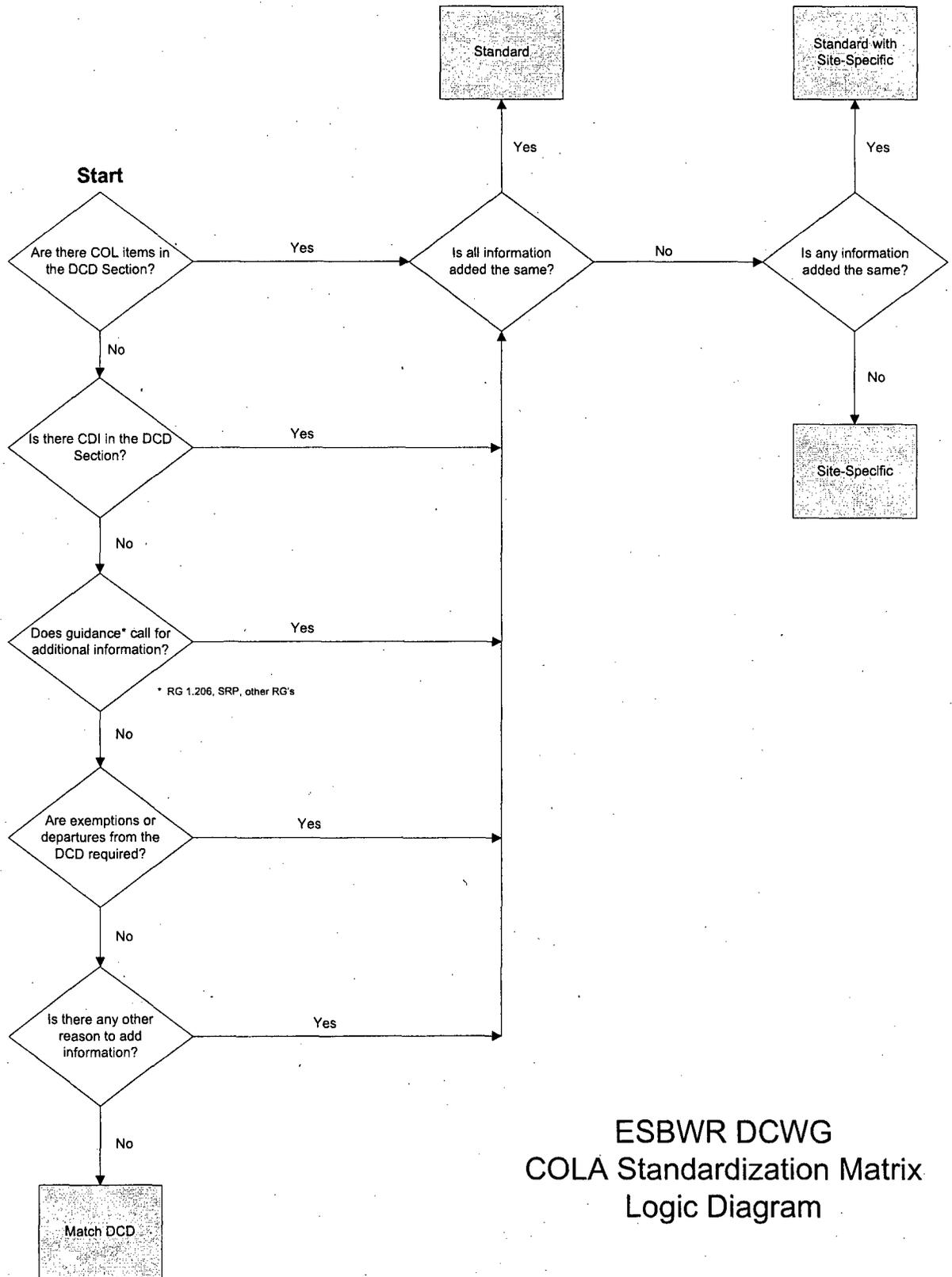
Victoria County Station, Units 1 and 2 ESBWR FSAR Standardization Assessment		
Number of FSAR Sections	Percent of FSAR Sections	Section Type
96	48	Match DCD
41	21	Standard (identical)
9	5	Standard with a limited amount of site-specific information
12	6	Standard with a moderate amount of site-specific information
40	20	Site-specific
198	100%	Total FSAR Sections

Standardization Assessment Definitions

- Match DCD. These sections are identical to the corresponding section in ESBWR DCD Revision 4 with no additional text, tables, or figures needed in the COLA.
- Standard sections are identical in the R-COLA and S-COLAs.
- Standard with site-specific. These sections are identical in the R-COLA and S-COLAs to the extent possible but also contain some site- and/or applicant-specific information. For the site/applicant-specific information, consistent wording and level-of-detail are used.
 - (1) – Standard section that contains a limited amount of site/applicant-specific information.
 - (2) – Standard section that contains a moderate amount of site/applicant-specific information.
 - (+) – Although some site-specific information is contained in these sections, the section verbiage is effectively the same as the R-COLA with only minor non-technical differences.
- Site-specific sections are not standard and contain site/applicant-specific information.
- Sections marked with an asterisk (*) have been classified differently than the R-COLA Standardization Assessment.

A simple logic diagram, depicting how the FSAR sections were evaluated and assigned to the categories defined above, is shown on the following page.

NOTE: Approximately 90% of the Victoria County Station sections/parts were classified the same as the R-COLA section/part classification.



ESBWR DCWG
COLA Standardization Matrix
Logic Diagram

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
Part 1	General and Administrative Information				X
Part 2	Final Safety Analysis Report				
FSAR Chapter 1	Introduction and General Description				
1.1	Introduction			X (2)	
1.2	General Plant Description			X(1)	
1.3	Comparison Tables			X(2)* RCOLA - X(1)	
1.4	Identification of Agents and Contractors				X
1.5	Requirements for Further Technical Information	X			
1.6	Material Incorporated by Reference				X
1.7	Drawings and Other Detailed Information			X (2)* RCOLA - X(1)	
1.8	Interfaces for Standard Design			X(2)	
1.9	Conformance with SRP and Codes & Standards			X(2)	
1.10	Summary of COL Items			X(2)*	RCOLA
1.11	Technical Resolutions of Task Action Plan Items, New Generic Issues, New Generic Safety Issues and Chernobyl Issues			X(2)	
1.12	Construction Impacts on Existing Units				X
1A	Response to TMI Related Matters		X		
1B	Plant Shielding to Provide Access to Vital Areas and Protective Safety Equipment for Post-Accident Operation	X			
1C	Industry Operating Experience		X		
FSAR Chapter 2	Site Characteristics				
2.0	Site Characteristics				X
2.1	Geography and Demography				X
2.2	Nearby Industrial, Transportation, and Military Facilities				X
2.3	Meteorology				X

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
2.4	Hydrology				X
2.5	Geology, Seismology, and Geotechnical Engineering				X
FSAR Chapter 3	Design of Structures, Components, Equipment, Systems				
3.1	Conformance with NRC General Design Criteria	RCOLA		X(1)*	
3.2	Classification of Structures, Systems, and Components		X		
3.3	Wind and Tornado Loadings	X			
3.4	Water Level (Flood) Design	X			
3.5	Missile Protection		RCOLA	X(1)*	
3.6	Protection Against Dynamic Effects		X		
3.7	Seismic Design				X
3.8	Seismic Category I Structures	X			
3.9	Mechanical Systems and Components			X(1)(+)	
3.10	Seismic and Dynamic Qualification		X		
3.11	Environmental Qualification		X		
3.12	Piping Design Review		X		
3.13	Threaded Fasteners – ASME Code Class 1, 2, and 3		X		
3A	Seismic Soil Structure Interaction Analysis				X
3B	Containment Hydrodynamic Load Definitions	X			
3C	Computer Programs Used in the Design and Analysis of Seismic Category I Structures	X			
3D	Computer Programs Used in the Design of Components, Equipment and Structures	X			
3E	Design Details and Evaluation Results of Seismic Category I Structures	X			
3F	Response of Structures to Containment Loads	X			
3G	Design Details and Evaluation Results of Seismic Category I Structures	X			
3H	Equipment Qualification Design Environmental Conditions	X			

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
3I	Designated NEDE-24326-1-P Material Which May Not Change Without Prior NRC Approval	X			
3J	Evaluation of Postulated Ruptures in High Energy Pipes	X			
3K	Resolution of Intersystem Loss of Coolant Accident	X			
3L	Reactor Internals Flow Induced Vibration Program	X			
FSAR Chapter 4	Reactor				
4.1	Summary Description	X			
4.2	Fuel System Design		X		
4.3	Nuclear Design		X		
4.4	Thermal and Hydraulic Design	X			
4.5	Reactor Materials	X			
4.6	Functional Design of Reactivity Control System	X			
4A	Typical Control Rod Patterns and Associated Power Distribution for ESBWR		X		
4B	Fuel Licensing Acceptance Criteria	X			
4C	Control Rod License Acceptance Criteria	X			
4D	Stability Evaluation	X			
FSAR Chapter 5	Reactor Coolant System and Connected Systems				
5.1	Summary Description	X			
5.2	Integrity of Reactor Coolant Pressure Boundary		X		
5.3	Reactor Vessels		X		
5.4	Component and Subsystem Design		X		
FSAR Chapter 6	Engineered Safety Features				
6.0	General	X			
6.1	Engineered Safety Feature Materials		X		
6.2	Containment Systems		X		
6.3	Emergency Core Cooling Systems	X			

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
6.4	Control Room Habitability Systems			RCOLA	X*
6.5	Atmosphere Cleanup Systems	X			
6.6	ISI of Class 2 and 3 Components		X		
6A	TRACG Application for Containment Analysis	X			
6B	Evaluation of the TRACG Nodalization For The ESBWR Licensing Analysis	X			
6C	Evaluation of the Impact of Containment Back Pressure On the ECCS Performance	X			
FSAR Chapter 7	Instrumentation and Controls				
7.1	Introduction	X			
7.2	Reactor Trip System	X			
7.3	Engineered Safety Features Systems	X			
7.4	Safety-Related and Non-Safety Related Shutdown Systems	X			
7.5	Safety-Related and Non-Safety Related Information Systems	X			
7.6	Interlock Systems	X			
7.7	Control Systems	X			
7.8	Diverse Instrumentation and Control Systems	X			
7A	Automated Fixed In-Core Probe Subsystem for the Neutron Monitoring System	X			
7B	Software Quality Program for Hardware/Software Design and Development	X			
FSAR Chapter 8	Electric Power				
8.1	Introduction				X
8.2	Offsite Power System				X
8.3	Onsite Power Systems				X
8A	Miscellaneous Electrical Systems				X
FSAR Chapter 9	Auxiliary Systems				
9.1	Fuel Storage and Handling		X		

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
9.2.1	Plant Service Water System				X
9.2.2	Reactor Component Cooling Water System	X			
9.2.3	Makeup Water System				X
9.2.4	Potable and Sanitary Water Systems				X
9.2.5	Ultimate Heat Sink		X		
9.2.6	Condensate Storage and Transfer System		RCOLA	X(1)*	
9.2.7	Chilled Water System	X			
9.2.8	Turbine Component Cooling Water System	X			
9.2.9	Hot Water System	X			
9.2.10	Station Water Systems				X
9.3.1	Compressed Air Systems	X			
9.3.2	Process Sampling System		X		
9.3.3	Equipment and Floor Drain System	X			
9.3.4	Chemical and Volume Control System	X			
9.3.5	Standby Liquid Control System		X		
9.3.6	Instrument Air System	RCOLA			X*
9.3.7	Service Air System	RCOLA			X*
9.3.8	High Pressure Nitrogen Supply System	X			
9.3.9	Hydrogen Water Chemistry System			X(1)(+)	
9.3.10	Oxygen Injection System				X(+)
9.3.11	Zinc Injection System		X		
9.3.12	Auxiliary Boiler System	X			
9.4.1	Control Room Area Ventilation System	RCOLA			X*
9.4.2	Fuel Building HVAC System (FBHVS)	X			
9.4.3	Radwaste Building Heating, Ventilation and Air Conditioning System	X			
9.4.4	Turbine Building HVAC System	X			
9.4.5	Engineered Safety Feature Ventilation System	X			
9.4.6	Reactor Building HVAC System	X			
9.4.7	Electrical Building HVAC System	X			
9.4.8	Drywell Cooling System	X			
9.4.9	Containment Inerting System	X			
9.4.10	HVAC Component Information	X			
9.5.1	Fire Protection System			X (2)	

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
9.5.2	Communications Systems				X
9.5.3	Lighting System	X			
9.5.4	Diesel Generator Fuel Oil Storage and Transfer System			X (1)(+)	
9.5.5	Diesel Generator Jacket Cooling Water System	X			
9.5.6	Diesel Generator Starting Air System	X			
9.5.7	Diesel Generator Lubrication System	X			
9.5.8	Diesel Generator Combustion Air Intake and Exhaust System	X			
9A	Fire Hazards Analysis			RCOLA	X*
9B	Summary of Analysis Supporting Fire Protection Design Requirements	X			
FSAR Chapter 10	Steam and Power Conversion Systems				
10.1	Summary Description	RCOLA			X*
10.2	Turbine Generator		X		
10.3	Turbine Main Steam System	X			
10.4	Other Features of Steam and Power Conversion System			X (2)	
FSAR Chapter 11	Radioactive Waste Management				
11.1	Source Terms	X			
11.2	Liquid Waste Management System		RCOLA	X(1)*	
11.3	Gaseous Waste Management System				X
11.4	Solid Waste Management System		RCOLA	X(1)*	
11.5	Process Radiation Monitoring System		X		
FSAR Chapter 12	Radiation Protection				
12.1	Ensuring That Occupational Radiation Exposures Are ALARA		X		
12.2	Plant Sources			X (2)	
12.3	Radiation Protection		X		
12.4	Dose Assessment				X
12.5	Operational Radiation Protection Program		X		
12.6	Minimization of Contamination and Radwaste Generation		X		
12A	Calculation of Airborne Radionuclides	X			

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
12AA	ALARA Program		X		
12BB	Radiation Protection Program		X		
FSAR Chapter 13	Conduct of Operations				
13.1	Organizational Structure of Applicant				X
13.2	Training		RCOLA	X(2)*	
13.3	Emergency Planning		X		
13.4	Operational Program Implementation		X		
13.5	Plant Procedures		X		
13.6	Physical Security		X*	RCOLA	
13.7	Fitness for Duty		RCOLA		X*
13AA	Construction-Related Organization				X
13BB	Standard Supplement to Generic Template NEI 06-13		RCOLA		X(+)*
FSAR Chapter 14	Initial Test Program				
14.1	Initial Test Program For Preliminary Safety Analysis Reports	X			
14.2	Initial Plant Test Program For Final Safety Analysis Reports			X(2)* RCOLA - X(1)	
14.3	Selection of Tier 1 Criteria and Processes		X		
FSAR Chapter 15	Safety Analyses				
15.0	Analytical Approach	X			
15.1	Nuclear Safety Operational Analysis	X			
15.2	Analysis of Anticipated Operational Occurrences	X			
15.3	Analysis of Infrequent Events		X		
15.4	Analysis of Accidents	X			
15.5	Special Event Evaluations	X			
15A	Event Probability Analyses	X			
15B	LOCA Inventory Curves	X			
FSAR Chapter 16	Technical Specifications		X		

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
FSAR Chapter 17	Quality Assurance				
17.0	Introduction		X		
17.1	Quality Assurance During Design and Construction				X
17.2	Quality Assurance During the Operations Phase		RCOLA		X(+)*
17.3	Quality Assurance Program Document		RCOLA		X*
17.4	Reliability Assurance Program During Design Phase		X		
17.5	Quality Assurance Program Description			RCOLA - X(1)	X*
17.6	Maintenance Rule Program		X		
Appendix 17AA	Policy, Quality Assurance During Construction and Operation				X
Appendix 17BB	Quality Assurance Program Description				X
FSAR Chapter 18	Human Factors Engineering				
18.1	Overview	X			
18.2	HFE Program Management	X			
18.3	Operating Experience Review	X			
18.4	Functional Requirements Analyses and Function Allocation	X			
18.5	Task Analysis	X			
18.6	Staffing and Qualifications	X			
18.7	Human Reliability Analysis	X			
18.8	Human-System Interface Design	X			
18.9	Procedure Development	X			
18.10	Training Program Development	X			
18.11	Human Factors V&V	X			
18.12	Design Implementation	X			
18.13	Human Performance Monitoring	X			
18.14	Inventory of Controls and Instrumentation	X			
FSAR Chapter 19	Probabilistic Risk Assessment and Severe Accidents				
19.1	Introduction	X			

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
19.2	PRA Results and Insights		X		
19.3	Severe Accident Evaluations	X			
19.4	PRA Maintenance	X			
19.5	Conclusions				X(+)
19A	Regulatory Treatment of Non Safety Systems (RTNSS)	X			
19ACM	Availability Controls Manual	X			
19B	Deterministic Analysis for Containment Pressure Capability	X			
19C	Probabilistic Analysis for Containment Pressure Fragility	X			
Part 3	Environmental Report				
ER Chapter 1	Introduction				X
ER Chapter 2	Environmental Description				X
ER Chapter 3	Plant Description				X
ER Chapter 4	Environmental Impacts of Construction				X
ER Chapter 5	Environmental Impacts of Station Operation				X
ER Chapter 6	Environmental Measurements and Monitoring Programs				X
ER Chapter 7	Environmental Impacts of Postulated Accidents Involving Radioactive Materials				X
ER Chapter 8	Need for Power				X
ER Chapter 9	Alternatives to the Proposed Action				X

Part Chapter Section	Title	Standardization Assessment			
		Match DCD	Standard	Standard With Site- Specific	Site- Specific
ER Chapter 10	Environmental Consequences of the Proposed Action				X
Appendix A to COL	Environmental Protection Plan				X
Part 4	Technical Specifications			X (1)	
Part 5	Emergency Plan				X
Part 6	LWA/Site Redress Plan – not used	N/A	N/A	N/A	N/A
Part 7	Departures Report (Includes information on departures, variances, and exemptions)				X
Part 8	Safeguards/Security Plans¹				
--	Physical Security Plan			X (1)	
--	Training and Qualification Plan			X (1)	
--	Safeguards Contingency Plan			X (2)	
Part 9	Withheld Information				X
Part 10	ITAAC			X (1)	
Part 11	Enclosures²				
	Final Data Report, Geotechnical Exploration and Testing				X

¹ The Security Plan, submitted under separate cover, includes the Training and Qualification Plan and Safeguards Contingency Plan, as well as other security related application information.

² Part 11 includes the Final Data Report, Geotechnical Exploration and Testing. Part 11 was not used in the NAPS R-COL application.