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CNRO-2007-00024

May 31, 2007

U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001  
Attention: Document Control Desk

DOCKET: NRC Project No. 745

SUBJECT: Entergy (River Bend) COL Application Project - Response to RIS 2007-08

REFERENCE: NRC Regulatory Issue Summary 2007-08, *Updated Licensing Submittal Information to Support the Design-Centered Licensing Review Approach*; dated April 16, 2007

In the reference Regulatory Issue Summary, the Nuclear Regulatory Commission (NRC) indicated its intent to promote standardization of COL applications and to facilitate the establishment of a predictable and consistent method for reviewing applications. To this end, NRC requested updated information regarding activities related to safety and quality assurance requirements, environmental reviews, construction plans and preparation, and other pre-application activities.

Entergy's response to the RIS questions is hereby submitted. Attachment 1 provides responses to the NRC information requests. Attachment 2 provides the Economic Simplified Boiling Water Reactor (ESBWR) Standardization Matrix.

Although Entergy has not yet made a decision to construct a plant at River Bend, Entergy does have milestone schedules which may be helpful in further discussing potential future NRC resource needs and timing. For example, the potential need for an LWA request which could be submitted with the COL Application is in part dependent on Entergy's milestone schedule and in part on NRC's review schedules and resource estimates. Entergy would like to have further discussions with the staff on this topic.

If you have any questions regarding this response, please contact George Zinke at (601) 368-5381 ([gzinke@entergy.com](mailto:gzinke@entergy.com)).

Sincerely,

A handwritten signature in black ink, appearing to read "George A. Zinke".

George A. Zinke  
Project Manager  
Entergy New Nuclear Utility Development, Inc.

D079

Attachment 1: ENTERGY (RBS) RESPONSE TO NRC RIS 2007-08  
Attachment 2: ESBWR Standardization Matrix

cc: R. Bell, NEI  
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Resident Inspectors' Office: RBS

**ENTERGY (RBS) RESPONSE TO NRC RIS 2007-08**

**Licensing Submittal Information**

**1. a) Will the applicants be organized into DCWGs?**

Response: On July 17, 2006, Entergy, in concert with NuStart and Dominion responded to NRC Regulatory Issue Summary 2006-06, dated May 31, 2006. The companies expressed their support for NRC's design-centered review approach and announced the formation of the ESBWR Design-Centered Working Group (DCWG). In the same letter, the three companies announced their intent to submit COL applications for River Bend, Grand Gulf, and North Anna, respectively, that referenced the General Electric ESBWR standard design.

**b) If so, what is the membership and who is the single point of contact designated for each DCWG?**

Response: Current ESBWR DCWG membership remains as described in the response to Question 1.a. The ESBWR DCWG's single points-of-contact for policy and licensing matters were identified in Dominion's February 23, 2007 letter to NRC.

**c) Have protocols been developed to provide coordinated responses for RAIs with generic applicability to a design center?**

Response: The ESBWR DCWG is currently developing protocols for use in preparing coordinated responses to Reference COL RAIs.

**2. Which applicant referencing the design will be designated as the R-COL applicant?**

Response: The designation of a Reference COL (R-COL) application is not proposed at this time for the announced ESBWR COL application projects. These projects are working in cooperation with each other and General Electric to develop standard ESBWR-based COL applications. The projects have developed a joint process for controlling the origination and review of standard application material. The bulk of standardized material is within the scope of General Electric to supply and will be incorporated into the respective COL applications. Administrative controls are used to provide effective control and consistency in the standardized material. Identification of the R-COL applicant will be communicated to the NRC approximately 90 days prior to the submittal of the ESBWR applications. Entergy River Bend will be an S-COL applicant.

**3. a) When (month and year) will each of the COL applications be submitted for review?**

Response: Entergy currently intends to submit the COL application in May, 2008. This date is the current Entergy planning basis and is predicated in part on the successful completion of applicable regulations and guidance; additionally there is currently a large degree of uncertainty with the COL application preparation schedule. Entergy will communicate promptly to the NRC Staff any changes to this planning basis, and expects to confirm this date approximately 90 days prior to the application submittal date.

**b) In addition, what is the design, site location, and the number of units at each site?**

**ENTERGY (RBS) RESPONSE TO NRC RIS 2007-08**

Response: The application is for the ESBWR certified design, at the RBS (St. Francisville, Louisiana) site, for one ESBWR unit supplied by General Electric.

**4. What portions of the COL application (chapters, sections, subsections) will be relying on the DC?**

Response: The COL application consists of ten parts. Most parts will rely on information contained in the ESBWR design control document. The parts include:

- a. Part 2, Final Safety Analysis Report (FSAR) – The FSAR will rely on the ESBWR design certification document (DCD) and will be supplemented as necessary to address additional information, such as COL information items.
- b. Part 3, Environmental Report (ER) – Information in the ER will also rely on DCD information, such as design descriptions and the DCD Appendix 1B severe accident mitigation design alternatives (SAMDA) discussion.
- c. Part 4, Technical Specifications – The plant-specific Technical Specifications will consist of the standard Technical Specifications for the ESBWR, as supplemented with plant-specific information.
- d. Part 7, Departures Report – The Departures Report will summarize the COL application's departures from the DCD.
- e. Part 9, Plant-Specific Probability Risk Assessment (PRA) Information – Part 9 of the COL application may contain information regarding the plant-specific PRA, which relies on GE's DCD and generic ESBWR PRA.
- f. Part 10, Inspections, Tests, Analyses, and Acceptance Criteria ITAAC – This part will rely on the ESBWR ITAAC, and supplement them with plant-specific ITAAC.

**5. What portions of the R-COL application (chapters, sections, subsections) will be referenced (i.e., replicated verbatim) in S-COL applications, and what portions of the application are likely to be site-specific?**

Response: Details in response to this request are provided in Attachment 2 .

**6. a) When (month and year) will applicants complete the detailed design information to be verified under those inspections, tests, analyses, and acceptance criteria that are directed at certification information (design acceptance criteria)?**

Response: The detailed design information to be verified under inspections, tests, analyses, and acceptance criteria (ITAAC) that are directed at certification information (i.e., DAC) will be completed at varying times prior to fuel load, depending on the availability of the information. No DAC information is currently planned for submittal with the COLA.

**b) Will this information be completed in a design certification amendment application, in the R-COL application, in S-COL applications, in post-COL Final Safety Analysis Report updates, or a combination thereof?**

Response: The detailed design information to be verified under ITAAC is expected to be completed in a combination of post-COL FSAR updates and other post-COL notifications.

**ENTERGY (RBS) RESPONSE TO NRC RIS 2007-08**

**Site and Environmental Information**

- 7. a) Do any applicants intend to apply for an ESP prior to submitting their COL applications?**

Response: Entergy does not intend to apply for an ESP prior to submitting its COL application.

- b) If so, when (month and year) would the proposed ESP be submitted to the NRC for review?**

Response: Not applicable

- 8. For ESP applicants, is the applicant going to be seeking approval of either "proposed major features of the emergency plans" per 10 CFR 52.17(b)(2)(i), or "proposed complete and integrated emergency plans" per 10 CFR 52.17(b)(2)(ii)?**

Response: Not Applicable

- 9. Do the applicants plan to submit an environmental report or limited work authorization request prior to other portions of the COL application, and if so, when (month and year)?**

Response: Entergy does not intend to submit an environmental report or limited work authorization (LWA) request prior to submitting the COL application. Entergy is considering submitting an LWA request with its COL application. However the need for an LWA is contingent on the anticipated NRC review schedule for a COLA. Additionally the NRC staff indicated on May 22, 2007, during a public meeting with the industry on the LWA Rule, that an LWA request submitted with a COLA could substantially increase the review schedule for the COLA. Further information from the NRC is needed concerning anticipated LWA review schedules and potential impacts to COLA review schedules.

- 10. What scope and schedule do applicants project for site characterization activities, such as core borings and testing of core samples?**

Response: The scope of site characterization activities should complete in June 2007 for Entergy RBS.

- 11. What interactions have taken place with local and State authorities and other Federal agencies to support licensing new reactors?**

Response: Limited interactions have taken place with local and State authorities and other Federal agencies to support licensing new reactors. Future interactions are planned as appropriate to support the development and submittal of the COLA. This project has contacted the following Federal, State and local agencies to support the licensing of the new reactors:

- U.S. Fish and Wildlife Service

### ENTERGY (RBS) RESPONSE TO NRC RIS 2007-08

- Louisiana Department of Wildlife and Fisheries
- U.S. Army Corps of Engineers
- Louisiana Department of Culture, Recreation and Tourism
- West Feliciana Community Development Foundation
- Louisiana Department of Environmental Quality
- LSU Research and Extension Service
- Louisiana Governor's Office of Homeland Security/Emergency Preparedness
- Louisiana Department of Environmental Quality—Radiation Protection Division
- Mississippi Emergency Management Agency
- Emergency Directors of the 5 River Bend Parishes (East and West Feliciana Parishes, East and West Baton Rouge Parishes, and Pointe Coupee Parish).

#### **Plant Construction Requirements Information**

**12. a) Who are the vendors and consultants that are assisting in the preparation of the application?**

Response: The Entergy River Bend COL application will be an S-COL application and is therefore dependent on the work and contractors associated with the Dominion and Grand Gulf COL applications. Entergy has procured the services of Black and Veatch to prepare its COLA. Procurement of additional sub-tier vendors is being performed in accordance with the vendors' QA Program requirements for procured services and equipment (where applicable).

**b) The NRC requests that the potential applicants submit a list of entities that are providing input to and are preparing the COL application under a QA program.**

Response: See above response.

**13. a) What information do the applicants have regarding the timing of construction, the ordering of long lead time components, and other commitments to construction?**

Response: Entergy has not yet made a commitment to construction, nor determined the timing of construction or ordering of long lead time components. When such a decision is made, the NRC will be notified of the procurement and construction schedules.

**b) Furthermore, what vendors will be designing, manufacturing, fabricating, and testing safety-related components for eventual plant construction?**

Response: As stated above, no construction decision has been made. If Entergy decides to construct a new nuclear unit, vendors for design, manufacturing, fabricating, and testing safety-related components would be identified through a competitive bid process. In an effort to be responsive to NRC's request, vendors known to Entergy who have design, manufacturing, fabricating, and/or testing capabilities are identified below. This list is not intended to represent a bidders list nor in any way indicate a preference or selection of any vendor for any purpose.

**ENTERGY (RBS) RESPONSE TO NRC RIS 2007-08**

Vendors who have capabilities such as NRC describes include:

- General Electric – plant equipment
- Japan Steel Works – forgings
- Hitachi – fabrication services
- Toshiba – fabrication services
- Washington Group, Incorporated – engineering and construction services
- Black and Veatch Zachry Nuclear, LLC – engineering and construction services
- Kewitt Bibb – engineering and construction services
- Bechtel Power Corporation – engineering and construction services

<b>ESBWR FSAR Standardization Assessment</b>		
<b>Number of FSAR Sections</b>	<b>Percent of FSAR Sections</b>	<b>Section Type</b>
80	44%	Match DCD
53	29%	Standard (identical)
31	17%	Standard with a limited amount of site-specific information
11	6%	Standard with a moderate amount of site-specific information
7	4%	Site-specific
<b>182</b>	<b>100%</b>	<b>Total</b>



ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment <sup>1</sup>			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
<b>Part 1</b>	<b>General and Administrative Information</b>					
--	General Information	Dominion NuStart Entergy			X (1)	
--	Financial Information	Dominion NuStart Entergy				X
--	Other Information	Dominion NuStart Entergy			X (1)	
<b>Part 2</b>	<b>Final Safety Analysis Report</b>					
FSAR Chapter 1	Introduction and General Description					
1.1	Introduction	Dominion NuStart Entergy			X (2)	
1.2	General Plant Description	GE			X (1)	
1.3	Comparison Tables	GE			X (1)	
1.4	Identification of Agents and	Dominion			X (2)	

<sup>1</sup> There are 4 types of ESBWR COLA sections:

- Match DCD. These sections are identical to the ESBWR DCD with no additional text, tables, or figures needed in the COLA. Based on DCD Revision 3.
- Standard sections are identical.
- Standard with site-specific. These sections are identical 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.
- Site-specific sections are not standard and contain site/applicant-specific information.

Revision 3 Changes

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment1			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
	Contractors	NuStart Entergy				
1.5	Requirements for Further Technical Information	GE	X			
1.6	Material Incorporated by Reference	GE			X (1)	
1.7	Drawings and Other Detailed Information	GE			X (1)	
1.8	Interfaces for Standard Design	GE		X		
1.9	Conformance with SRP and Codes & Standards	Dominion NuStart Entergy			X (2)	
1.10	Summary of COL Items	GE			X (2)	
1.11	Technical Resolutions of Task Action Plan Items, New Generic Issues, New Generic Safety Issues and Chernobyl Issues	GE			X (1)	
1.12	Construction Impacts on Existing Units	Dominion NuStart Entergy				X
1A	Response to TMI Related Matters	GE		X		
1B	Plant Shielding to Provide Access to Vital Areas and Protective Safety Equipment for Post-Accident Operation	GE	X			
1C	Industry Operating Experience	GE			X (1)	
FSAR Chapter 2	Site Characteristics					
2.0	Site Characteristics	Dominion NuStart Entergy				X
2.1	Geography and Demography	Dominion NuStart Entergy				X
2.2	Nearby Industrial, Transportation, and Military Facilities	Dominion NuStart Entergy				X
2.3	Meteorology	Dominion NuStart Entergy				X
2.4	Hydrology	Dominion NuStart Entergy				X

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment1			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
2.5	Geology, Seismology, and Geotechnical Engineering	Dominion NuStart Energy				X
FSAR Chapter 3	Design of Structures, Components, Equipment, Systems					
3.1	Conformance with NRC General Design Criteria	GE	X			
3.2	Classification of Structures, Systems, and Components	GE			X (1)	
3.3	Wind and Tornado Loadings	GE	X			
3.4	Water Level (Flood) Design	GE	X			
3.5	Missile Protection	GE			X (1)	
3.6	Protection Against Dynamic Effects	GE		X		
3.7	Seismic Design	GE			X (1)	
3.8	Seismic Category I Structures	GE		X		
3.9	Mechanical Systems and Components	GE		X		
3.10	Seismic and Dynamic Qualification	GE		X		
3.11	Environmental Qualification	GE		X		
3A	Seismic Soil Structure Interaction Analysis	GE	X			
3B	Containment Hydrodynamic Load Definitions	GE	X			
3C	Computer Programs Used in the Design and Analysis of Seismic Category I Structures	GE	X			
3D	Computer Programs Used in the Design of Components, Equipment and Structures	GE	X			
3F	Response of Structures to Containment Loads	GE	X			
3G	Design Details and Evaluation Results of Seismic Category I Structures	GE	X			
3H	Equipment Qualification Design Environmental Conditions	GE		X		
3I	Designated NEDE-24326-1-P Material Which May Not Change Without Prior NRC Approval	GE	X			
3J	Evaluation of Postulated Ruptures in High Energy Pipes	GE		X		

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment <sup>1</sup>			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
3K	Resolution of Intersystem Loss of Coolant Accident	GE	X			
3L	Reactor Internals Flow Induced Vibration Program	GE	X			
FSAR Chapter 4	Reactor					
4.1	Summary Description	GE	X			
4.2	Fuel System Design	GE		X		
4.3	Nuclear Design	GE		X		
4.4	Thermal and Hydraulic Design	GE		X		
4.5	Reactor Materials	GE		X		
4.6	Functional Design of Reactivity Control System	GE		X		
4A	Typical Control Rod Patterns and Associated Power Distribution for ESBWR	GE		X		
4B	Fuel Licensing Acceptance Criteria	GE	X			
4C	Control Rod License Acceptance Criteria	GE	X			
4D	Stability Evaluation	GE		X		
FSAR Chapter 5	Reactor Coolant System and Connected Systems					
5.1	Summary Description	GE	X			
5.2	Integrity of Reactor Coolant Pressure Boundary	GE		X		
5.3	Reactor Vessels	GE		X		
5.4	Component and Subsystem Design	GE		X		
FSAR Chapter 6	Engineered Safety Features					
6.1	Engineered Safety Feature Materials	GE		X		
6.2	Containment Systems	GE		X		
6.3	Emergency Core Cooling Systems	GE		X		
6.4	Control Room Habitability Systems	GE			X (1)	
6.5	Atmosphere Cleanup Systems	GE	X			
6.6	ISI of Class 2 and 3 Components	GE		X		

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment1			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
FSAR Chapter 7	Instrumentation and Controls					
7.1	Introduction	GE	X			
7.2	Reactor Trip System	GE	X			
7.3	Engineered Safety Features Systems	GE	X			
7.4	Safety-Related and Non-Safety Related Shutdown Systems	GE	X			
7.5	Safety-Related and Non-Safety Related Information Systems	GE	X			
7.6	Interlock Systems	GE	X			
7.7	Control Systems	GE	X			
7.8	Diverse Instrumentation and Control Systems	GE	X			
7B	Software Quality Program for Hardware/Software Design and Development	GE	X			
FSAR Chapter 8	Electric Power					
8.1	Introduction	GE			X (1)	
8.2	Offsite Power System	Dominion NuStart Entergy			X (2)	
8.3	Onsite Power Systems	GE			X (1)	
8A	Miscellaneous Electrical Systems	Dominion NuStart Entergy		X		
FSAR Chapter 9	Auxiliary Systems					
9.1	Fuel Storage and Handling	GE		X		
9.2.1	Plant Service Water System	Dominion NuStart Entergy			X (2)	
9.2.2	Reactor Component Cooling Water System	GE	X			
9.2.3	Makeup Water System	Dominion NuStart Entergy			X (2)	
9.2.4	Potable and Sanitary Water Systems	Dominion NuStart			X (2)	

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment1			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
		Entergy				
9.2.5	Ultimate Heat Sink	Dominion NuStart Entergy		X		
9.2.6	Condensate Storage and Transfer System	GE	X			
9.2.7	Chilled Water System	GE	X			
9.2.8	Turbine Component Cooling Water System	GE	X			
9.2.9	Hot Water System	GE	X			
9.2.10	Station Water Systems	Dominion NuStart Entergy			X (2)	
9.3.1	Compressed Air Systems	GE	X			
9.3.2	Process Sampling System	GE		X		
9.3.3	Equipment and Floor Drain System	GE	X			
9.3.4	Chemical and Volume Control System	GE	X			
9.3.5	Standby Liquid Control System	GE	X			
9.3.6	Instrument Air System	GE	X			
9.3.7	Service Air System	GE	X			
9.3.8	High Pressure Nitrogen Supply System	GE	X			
9.3.9	Hydrogen Water Chemistry System	GE		X		
9.3.10	Oxygen Injection System	GE			X (1)	
9.3.11	Zinc Injection System	GE		X		
9.3.12	Auxiliary Boiler System	GE	X			
9.4.1	Control Room Area Ventilation System	GE	X			
9.4.2	Fuel Building HVAC System (FBHVS)	GE	X			
9.4.3	Radwaste Building Heating, Ventilation and Air Conditioning System	GE	X			
9.4.4	Turbine Building HVAC System	GE	X			
9.4.5	Engineered Safety Feature Ventilation System	GE	X			
9.4.6	Reactor Building HVAC System	GE	X			
9.4.7	Electrical Building HVAC System	GE			X (1)	
9.4.8	Drywell Cooling System	GE	X			

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment1			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
9.4.9	Containment Inerting System	GE	X			
9.4.10	HVAC Component Information	GE	X			
9.5.1	Fire Protection System	GE			X (2)	
9.5.2	Communications Systems	GE			X (1)	
9.5.3	Lighting System	GE	X			
9.5.4	Diesel Generator Fuel Oil Storage and Transfer System	GE			X (1)	
9.5.5	Diesel Generator Jacket Cooling Water System	GE	X			
9.5.6	Diesel Generator Starting Air System	GE	X			
9.5.7	Diesel Generator Lubrication System	GE	X			
9.5.8	Diesel Generator Combustion Air Intake and Exhaust System	GE	X			
9A	Fire Hazards Analysis	GE			X (1)	
9B	Summary of Analysis Supporting Fire Protection Design Requirements	GE	X			
FSAR Chapter 10	Steam and Power Conversion Systems					
10.1	Summary Description	GE	X			
10.2	Turbine Generator	GE		X		
10.3	Turbine Main Steam System	GE	X			
10.4	Other Features of Steam and Power Conversion System	GE			X (2)	
10A	Alternative Design for Steam and Power Conversion System	GE		X		
FSAR Chapter 11	Radioactive Waste Management					
11.1	Source Terms	GE	X			
11.2	Liquid Waste Management System	GE			X (1)	
11.3	Gaseous Waste Management System	GE	X			
11.4	Solid Waste Management System	GE			X (1)	
11.5	Process Radiation Monitoring System	GE			X (1)	

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment1			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
FSAR Chapter 12	Radiation Protection					
12.1	Ensuring That Occupational Radiation Exposures Are ALARA	Dominion		X		
12.2	Plant Sources	GE			X (1)	
12.3	Radiation Protection	GE		X		
12.4	Dose Assessment	GE	X			
12.5	Operational Radiation Protection Program	Dominion			X (1)	
12.6	Minimization of Contamination and Radwaste Generation	GE	X			
12A	Calculation of Airborne Radionuclides	GE	X			
FSAR Chapter 13	Conduct of Operations					
13.1	Organizational Structure of Applicant	NuStart			X (1)	
13.2	Training	Dominion		X		
13.3	Emergency Planning	Dominion		X		
13.4	Operational Program Implementation	NuStart		X		
13.5	Plant Procedures	NuStart		X		
13.6	Physical Security	Dominion		X		
FSAR Chapter 14	Initial Test Program					
14.1	Initial Test Program For Preliminary Safety Analysis Reports	GE	X			
14.2	Initial Plant Test Program For Final Safety Analysis Reports	GE			X (1)	
14.3	Selection Of Tier 1 Criteria and Processes	GE		X		
FSAR Chapter 15	Safety Analyses					
15.0	Analytical Approach	GE		X		
15.1	Nuclear Safety Operational Analysis	GE	X			
15.2	Analysis of Anticipated Operational Occurrences	GE		X		
15.3	Analysis of Infrequent Events	GE		X		



ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment1			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
15.4	Analysis of Accidents	GE			X (1)	
15.5	Special Event Evaluations	GE		X		
15A	Event Probability Analyses	GE		X		
15B	LOCA Inventory Curves	GE	X			
FSAR Chapter 16	Technical Specifications	GE		X		
FSAR Chapter 17	Quality Assurance					
17.0	Introduction	Dominion			X (1)	
17.1	Quality Assurance During Design and Construction	Dominion NuStart Entergy			X (1)	
17.2	Quality Assurance During the Operations Phase	NuStart			X (1)	
17.3	Quality Assurance Program Document	NuStart			X (1)	
17.4	Reliability Assurance Program During Design Phase	NuStart		X		
17.5	Quality Assurance Program Description	NuStart			X (1)	
17.6	Maintenance Rule Program	NuStart		X		
FSAR Chapter 18	Human Factors Engineering					
18.1	Overview	GE	X			
18.2	HFE Program Management	GE	X			
18.3	Operating Experience Review	GE	X			
18.4	Functional Requirements Analyses and Function Allocation	GE	X			
18.5	Task Analysis	GE	X			
18.6	Staffing and Qualifications	GE	X			
18.7	Human Reliability Analysis	GE	X			
18.8	Human-System Interface Design	GE	X			
18.9	Procedure Development	GE	X			
18.10	Training Program Development	GE	X			
18.11	Human Factors V&V	GE	X			
18.12	Design Implementation	GE	X			

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment1			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
18.13	Human Performance Monitoring	GE	X			
18.14	Inventory of Controls and Instrumentation	GE	X			
FSAR Chapter 19	PRA and Severe Accidents					
19.1	Introduction	GE		X		
19.2	PRA Results and Insights	GE	X			
19.3	Severe Accidents Evaluations	GE	X			
19.4	PRA Maintenance	GE	X			
19.5	ITAACs, Action Items, & Other Commitments	GE		X		
19.6	Conclusions	GE	X			
19A	Regulatory Treatment of Non Safety Systems (RTNSS)	GE	X			
19B		GE	X			
19C		GE	X			
<b>Part 3</b>	<b>Environmental Report</b>					
ER Chapter 1	Introduction	Dominion NuStart Energy				X
ER Chapter 2	Environmental Description	Dominion NuStart Energy				X
ER Chapter 3	Plant Description	Dominion NuStart Energy				X
ER Chapter 4	Environmental Impacts of Construction (North Anna) Environmental Effects of Construction (Grand Gulf, River Bend)	Dominion NuStart Energy				X
ER Chapter 5	Environmental Impacts of Station Operation (North Anna) Environmental Effects of Station	Dominion NuStart Energy				X

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment1			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
	Operations (Grand Gulf, River Bend)					
ER Chapter 6	Environmental Measurements and Monitoring Programs	Dominion NuStart Entergy				X
ER Chapter 7	Environmental Impacts of Postulated Accidents Involving Radioactive Materials	Dominion NuStart Entergy				X
ER Chapter 8	Need for Power	Dominion NuStart Entergy				X
ER Chapter 9	Alternatives to the Proposed Action	Dominion NuStart Entergy				X
ER Chapter 10	Environmental Consequences of the Proposed Action	Dominion NuStart Entergy				X
Part 4	Technical Specifications	GE			X (1)	
Part 5	Emergency Plan	Dominion NuStart Entergy				X
Part 6	LWA/Site Redress Plan	Dominion NuStart Entergy			X (2)	
Part 7	Generic DCD Departures Report	Dominion NuStart Entergy			X (1)	
Part 8	Safeguards/Security Plans					
--	Physical Security Plan	Dominion NuStart Entergy			X (1)	
--	Training and Qualification Plan	Dominion			X (1)	

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment <sup>1</sup>			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
		NuStart Entergy				
--	Safeguards Contingency Plan	Dominion NuStart Entergy			X (2)	
Part 9	Plant-Specific PRA	GE			X (1)	
Part 10	ITAAC	GE			X (1)	