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NuStart Energy sm

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Entergy Letter # CNRO 2007-00025

May 31, 2007

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

SUBJECT: NuStart/Entergy (Grand Gulf) 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

:

On April 16, 2007, the U.S. Nuclear Regulatory Commission (NRC) published Regulatory Issue Summary 2007-08, "Updated Licensing Submittal Information to Support the Design-Centered Licensing Review Approach." The RIS seeks voluntary information regarding the scheduling of ESP, COL, and DC application submissions, and the extent to which those submittals support the NRC's design-centered review approach.

NuStart Energy Development, LLC (NuStart) is a consortium of companies established to investigate the design, certification and licensing of advanced nuclear power reactors. The companies involved in this joint effort include Exelon Corporation, Entergy Nuclear, Constellation Energy Group, Duke Energy, Electricité de France International North America, FPL Group, Progress Energy, SCANA Corporation, Southern Company, Tennessee Valley Authority, GE Energy, and Westinghouse Electric. NuStart is preparing a Combined License Application for the Grand Gulf site. Entergy (or subsidiaries thereof) will be the Applicant.

NuStart is providing this response as the agent for the applicant. Attachment 1 provides responses to the NRC information requests. Attachment 2 provides the Economic Simplified Boiling Water Reactor (ESBWR) Standardization Matrix.

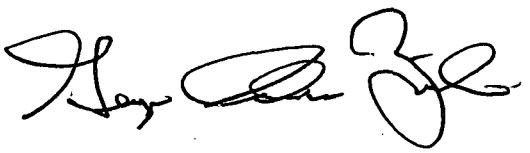
Although Entergy has not yet made a decision to construct a plant at Grand Gulf, Entergy does have milestone schedules which may be helpful in further discussing potential future NRC resource needs and timing. For example, the potential need for an LWA request which could be submitted with the COL Application is in part dependent on Entergy's

D069
D068
D079

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).

Sincerely,



George A. Zinke
NuStart Licensing Lead

Attachment 1: Entergy Grand Gulf Response to NRC RIS 2007-08
Attachment 2: ESBWR Standardization Matrix

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ENTERGY GRAND GULF RESPONSE TO NRC RIS 2007-08

Licensing Submittal Information

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

Response: On July 17, 2006, NuStart, in concert with Entergy 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 Grand Gulf, River Bend, 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.

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 November 2007. This date is the current NuStart 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. NuStart 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.

ENTERGY GRAND GULF RESPONSE TO NRC RIS 2007-08

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

Response: The design is General Electric's ESBWR, currently undergoing design certification review. The site is the Grand Gulf Early Site Permit (ESP) site, which is described in the Grand Gulf ESP, issued April 5, 2007. The Grand Gulf COL application will be for one ESBWR unit.

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

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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.

Site and Environmental Information

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

   Response: NuStart will be incorporating the Grand Gulf Early Site Permit, issued April 5, 2007 to System Energy Resources Inc. (a subsidiary of Entergy), into the Grand Gulf 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 NuStart, at Entergy's direction, 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 is generally complete for Entergy GGNS.

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

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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. Geological Survey – information related to stream gauges
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- Mississippi Natural Heritage Program
- Louisiana Natural Heritage Program
- Mississippi Department of Archives and History
- U.S. Department of the Interior – National Park Service
- National Park Service – Natchez Trace Parkway
- National Park Service – Vicksburg National Military Park
- Office of Federal Agency Programs – Advisory Council on Historic Preservation
- Mississippi Department of Environmental Quality
- Louisiana Department of Environmental Quality
- U.S. Army Corps of Engineers
- Mississippi Emergency Management Agency
- Louisiana Governor's Office of Homeland Security/Emergency Preparedness
- Port Gibson/Claiborne County (MS) Civil Defense and various other county/city organizations
- Tensas Parish (LA) Homeland Security and Emergency Preparedness, and various other parish organizations

In addition to Federal, State and local agencies, this project has contacted the following tribal organizations regarding cultural resources on the site.

- Tunica-Biloxi Indian Tribe of Louisiana
- Quapaw Tribe of Oklahoma
- Mississippi Band of Choctaw Indians
- Jena (LA) Band of Choctaw Indians
- Choctaw Nation of Oklahoma
- Chickasaw Nation

Plant Construction Requirements Information

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

Response: General Electric Company, Enercon Services, and Bechtel Power Corporation (through Dominion) are assisting NuStart and Entergy in the preparation of the Grand Gulf COL application.

Entergy is a member of NuStart and has provided the GGNS site for NuStart's development of a combined license application (COLA). NuStart has COLA preparation activities in progress for the GGNS site, located near Port Gibson, MS. The activities supporting development of

ENTERGY GRAND GULF RESPONSE TO NRC RIS 2007-08

this application are being conducted, where applicable, in accordance with the existing requirements of the NuStart QA Plan that meets 10 CFR 50 Appendix B (including use of individual NuStart member utilities' QA Programs, e.g., for performance of supplier audits).

NuStart has procured the services of Enercon Services Inc. to prepare its COLA. In addition General Electric is preparing substantial portions of the COLA. Where safety-related efforts are involved, these vendors have been audited in accordance with NuStart's and/or NuStart member utilities' QA Program requirements and are on one or more NuStart member utilities' approved suppliers list where appropriate. The procurement of additional sub-tier vendors is being performed in accordance with each of these vendors' QA Program requirements for procured services and equipment (where applicable).

NuStart is not permitted under its charter to be a licensee, procure equipment, or engage in construction. At the time of COLA submittal, Entergy (or subsidiaries thereof) will become the applicant for the GGNS COL. No decision has yet been made by Entergy to proceed with actual construction and no orders have been placed for equipment or materials. Assuming such a decision is made, additional audits of the applicable vendors and their respective QA programs will be performed as necessary in satisfaction of the Entergy QA program requirements for the procurement of services and equipment. At that time, Entergy will notify the NRC Staff of the procurement and construction schedules so that NRC can establish their internal inspection schedules.

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: The entities that are providing input to and are preparing the COL application under a QA program are Entergy, NuStart, General Electric Company, Enercon Services, and Bechtel Power Corporation (through Dominion). Entergy QA activities generally include transmittal of site specific information from prior GGNS work. NuStart's QA work is limited to procurement, oversight, and QA infrastructure (e.g., records).]

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.

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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

ESBWR FSAR Standardization Assessment		
Number of FSAR Sections	**Percent of FSAR Sections**	**Section Type**
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
182	**100%**	**Total**

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
Part 1	**General and Administrative Information**					
--	General Information	**Dominion NuStart Entergy**			**X (1)**	
--	Financial Information	**Dominion NuStart Entergy**				**X**
--	Other Information	**Dominion NuStart Entergy**			**X (1)**	
Part 2	**Final Safety Analysis Report**					
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 Contractors	**Dominion NuStart Entergy**			**X (2)**	
1.5	Requirements for Further Technical Information	**GE**	**X**			
1.6	Material Incorporated by Reference	**GE**			**X (1)**	
1.7	Drawings and Other Detailed	**GE**			**X (1)**	

[1] 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 Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
	Information					
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**
2.5	Geology, Seismology, and Geotechnical Engineering	**Dominion NuStart Entergy**				**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,	**GE**			**X (1)**	

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
	and Components					
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		
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		

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
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		
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	GE	X			

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
	Development					
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 Entergy			X (2)	
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			

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
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			
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		

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
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)	
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	GE			X (1)	

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
	Safety Analysis Reports					
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**		
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**			

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
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			
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			
Part 3	**Environmental Report**					
ER Chapter 1	Introduction	Dominion NuStart Entergy				X
ER Chapter 2	Environmental Description	Dominion NuStart Entergy				X
ER Chapter 3	Plant Description	Dominion NuStart Entergy				X
ER Chapter 4	Environmental Impacts of Construction (North Anna)	Dominion NuStart				X

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
	Environmental Effects of Construction (Grand Gulf, River Bend)	**Entergy**				
ER Chapter 5	Environmental Impacts of Station Operation (North Anna) Environmental Effects of Station Operations (Grand Gulf, River Bend)	**Dominion NuStart Entergy**				**X**
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**			**X (1)**	

ESBWR Standardization Matrix						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment[1]			
			Match DCD	Standard	Standard With Site-Specific	Site-Specific
		NuStart Entergy				
--	Training and Qualification Plan	**Dominion NuStart Entergy**			**X (1)**	
--	Safeguards Contingency Plan	**Dominion NuStart Entergy**			**X (2)**	
Part 9	**Plant-Specific PRA**	**GE**			**X (1)**	
Part 10	**ITAAC**	**GE**			**X (1)**	