Entergy

Entergy Operations, Inc.
1340 Echelon Parkway
Jackson, Mississippi 39213-8298

George A. Zinke
Manager, QA/QC/NRC – New Plant
(601) 368-5381
gzinke@entergy.com

G3NO-2008-00027

December 17, 2008

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

DOCKET: No. 52-024

SUBJECT: Response to NRC Request for Additional Information, Letter No. 22 (GG3 COLA)

REFERENCE: NRC Letter to Entergy Nuclear, *Request for Additional Information Letter No. 22 Related to the SRP Section 9.5.4 for the Grand Gulf Combined License Application*, dated November 24, 2008 (ADAMS Accession No. ML083260625).

Dear Sir or Madam:

In the referenced letter, the NRC requested additional information on one item to support the review of certain portions of the Grand Gulf Unit 3 Combined License Application (GG3 COLA). The response to the following Request for Additional Information (RAI) in the referenced letter is provided in Attachment 1 to this letter as follows:

1. RAI Question 09.05.04-2, Corrosion protection methods and standards

Should you have any questions, please contact me or Mr. Tom Williamson. Mr. Williamson may be reached as follows:

Telephone: (601) 368-5786

Mailing Address: 1340 Echelon Parkway
Mail Stop M-ECH-21
Jackson, MS 39213

E-Mail Address: twilli2@entergy.com

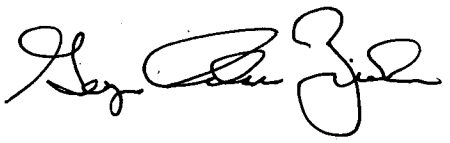
This letter contains commitments as identified in Attachment 2.

D088
NRO

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 17, 2008.

Sincerely,



GAZ/ghd

Attachments: 1. Response to RAI Question No. 09.05.04-2
2. Regulatory Commitments

cc (email unless otherwise specified):

NRC

NRC Project Manager – Grand Gulf Unit 3 COLA
NRC Project Manager – North Anna Unit 3 COLA
NRC Director – Division of Construction Projects (Region II)
NRC Regional Administrator - Region IV
NRC Resident Inspectors' Office - GGNS

Ms. B. Abeywickrama
Ms. T. Dozier
Mr. R. Foster
Mr. J. Hales
Ms. J. Jessie

Entergy

Mr. T. A. Burke (ECH)
Mr. C. E. Brooks (ECH)
Mr. F. G. Burford (ECH)
Mr. G. H. Davant (ECH)
Mr. W. H. Hammett (M-ELEC)
Mr. P. D. Hinnenkamp (ECH)
Ms. D. Jacobs (ECH)
Ms. K. J. Lichtenberg (L-ENT)
Ms. D. Millar (ECH)
Ms. L. A. Patterson (ECH)
Mr. G. A. Rolfson (ECH)
Mr. J. Smith (ECH)
Mr. G. L. Sparks (ECH)
Ms. K. A. Washington (L-ENT)
Mr. T. L. Williamson (ECH)
Mr. M. D. Withrow (ECH)

Manager, Licensing (GGNS-1)
Site VP (GGNS-1)

Corporate File [11]

NuStart

Mr. G. Cesare
Mr. R. Grumbir
Mr. T. Hicks
Ms. M. Kray
NuStart Records (eB)

ENERCON

Mr. A. Schneider
Mr. T. Slavonic
Ms. R. Sullivan

Industry

Mr. R. Bell (NEI)
Ms. R. Borsh (Dominion)
Mr. L. F. Drbal (Black & Veatch)
Mr. S. P. Frantz (Morgan, Lewis & Bockius)
Mr. J. Hegner (Dominion)
Mr. B. R. Johnson (GE-Hitachi)
Mr. P. Smith (DTE)

ATTACHMENT 1

G3NO-2008-00027

RESPONSE TO NRC RAI LETTER NO. 22

RAI QUESTION NO. 09.05.04-2

RAI QUESTION NO. 09.05.04-2

NRC RAI 09.05.04-2

Please discuss your plans to modify the proposed Grand Gulf Unit 3 FSAR to clarify the internal and external corrosion protection methods for underground portions of the diesel generator fuel oil storage and transfer systems, and to identify the industry standards that will be applied to the corrosion protection systems. GGNS COL 9.5.4-2-A states that buried carbon steel piping for the diesel fuel oil transfer system will have a waterproof protected coating for external corrosion control. It does not identify the corrosion control system for the internal surface of the piping or provide the industry standards that will be applied to these corrosion control methods. The ESBWR DCD and Grand Gulf COLA state that SRP Section 9.5.4 and RG 1.137 do not apply. However, because they are RTNSS Criterion B and C systems, availability of standby and ancillary diesel generators is required according to the Availability Controls Manual (ACLCO 3.8.1 and 3.8.2). In addition, the ESBWR DCD (p. 9.5-46) states underground piping portions of the standby DG system will be designed and constructed according to "the latest industry standards for buried pipe including provisions for corrosion protection," but it does not identify the standards to be used.

Entergy Response

As discussed in the response to RAI Question 09.05.04-1[1], the corrosion protection of the underground portions of the fuel oil transfer system is comprised of a waterproof protected coating applied to the external surface of the buried piping to control external corrosion.

As stated in ESBWR DCD Rev 5, Table 3.2-1 for the Oil Storage and Transfer System, the safety class of the system is N. DCD Table 3.2-2 indicates that the Quality Group designation for Safety Class N, is D. DCD Table 3.2-3 indicates that for the Quality Group D classification, ASME B31.1 is applicable for piping and valves. ASME B31.1, *Power Piping Code*, Nonmandatory Appendix IV, *Corrosion Control for ASME B31.1 Power Piping Systems*, is utilized for corrosion protection for the external surfaces of the underground portion of the diesel fuel oil transfer system piping. FSAR Section 9.5.4.2, "System Description, Detailed System Description," for Standby Diesel Generators and Ancillary Diesel Generators will be updated to reflect use of ASME B31.1 Nonmandatory Appendix IV for corrosion control.

DCD Section 9.5.4 provides design information/requirements for the Fuel Oil Storage and Transfer System. None of this information is considered "conceptual design information"; hence, the system design is part of the standard plant. For this system, the DCD specifies that the COL applicant (COL Item 9.5.4-2-A) address material selection and corrosion protection of the underground portion of the fuel oil system because that is the portion of the system exposed to external corrosion from contact with soils, which can vary from site to site. Protection of the fuel oil pipe from internal corrosion, if necessary, would not be limited to the underground portion of the system, would not be site-specific, and would apply to the entire system, similar to requirements for fuel oil quality. Hence, protection of the underground fuel oil system piping from internal corrosion is not applicable to COL item 9.5.4-2-A.

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[1] Letter from Entergy to NRC, *Response to NRC Request for Additional Information, Letter No. 7 (GG3 COLA)*, dated October 23, 2008 (ADAMS Accession #ML083010034)

Proposed COLA Revision

FSAR Section 9.5.4.2 will be revised as indicated in the attached draft markup.

Markup of Grand Gulf COLA

The following markup represents Entergy's good faith effort to show how the COLA will be revised in a future COLA submittal in response to the subject RAI. However, the same COLA content may be impacted by revisions to the ESBWR DCD, responses to other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be somewhat different than as presented herein.

9.5.4 DIESEL GENERATOR FUEL OIL STORAGE AND TRANSFER SYSTEM

This section of the referenced DCD is incorporated by reference with the following departures and/or supplements.

9.5.4.2 SYSTEM DESCRIPTION

Detailed System Description

Standby Diesel Generators

Replace the third to last sentence in the first paragraph with the following.

STD COL 9.5.4-1-A

Procedures require that the quantity of DG fuel oil in the standby DG fuel oil storage tanks is monitored on a periodic basis. The diesel fuel oil usage is tracked against planned deliveries. Regular transport replenishes the fuel oil inventory during periods of high demand and ensures continued supply in the event of adverse weather conditions. These procedures ensure sufficient diesel fuel oil inventory is available on site so that the standby DGs can operate continually for seven days with each operating at its calculated design load, with appropriate design margins. The procedures will be developed in accordance with the milestone and processes described in Section 13.5.

Replace the 3rd paragraph with the following.

GGNS COL 9.5.4-2-A

The standby DG fuel oil storage tanks are above ground. The material for the underground piping portion of the standby DG fuel oil transfer system is carbon steel. The buried section of the piping is provided with waterproof protected coating to control external corrosion, in accordance with ASME B31.1, Power Piping Code, Nonmandatory Appendix IV, Corrosion Control for ASME B31.1 Power Piping Systems.

STD COL 9.5.4-1-A

Delete the parenthetical "(COL 9.5.4-1-A)" at the end of the last paragraph.

Ancillary Diesel Generators

Replace the third to last sentence in the first paragraph with the following.

STD COL 9.5.4-1-A

Procedures require that the quantity of DG fuel oil in the ancillary DG fuel oil storage tanks is monitored on a periodic basis. The diesel fuel oil usage is tracked against planned deliveries. Regular transport replenishes the fuel oil inventory during periods of high demand and ensures continued supply in the event of adverse weather conditions. These procedures ensure sufficient diesel fuel oil inventory is available on site so that the ancillary DGs can operate continually for seven days with each operating at its calculated design load, with appropriate design margins. The procedures will be developed in accordance with the milestone and processes described in Section 13.5.

Replace the 3rd paragraph with the following.

GGNS COL 9.5.4-2-A

The ancillary DG fuel oil storage tanks are contained within the ancillary diesel building. The ancillary DG fuel oil storage tanks have an interconnection to the standby DG fuel oil storage tanks. The material for the underground portion of this interconnecting piping is carbon steel. The buried section of this interconnecting piping is provided with waterproof protected coating to control external corrosion, in accordance with ASME B31.1, Power Piping Code, Nonmandatory Appendix IV, Corrosion Control for ASME B31.1 Power Piping Systems.

System Operation

Standby Diesel Generators

STD COL 9.5.4-1-A

Delete the parenthetical "(COL 9.5.4-1-A)" at the end of the last paragraph.

Ancillary Diesel Generators

STD COL 9.5.4-1-A

Delete the parenthetical "(COL 9.5.4-1-A)" at the end of the last paragraph.

9.5.4.6 COL INFORMATION

STD COL 9.5.4-1-A

9.5.4-1-A Fuel Oil Capacity

This COL item is addressed in Section 9.5.4.2.

ATTACHMENT 2

G3NO-2008-00027

REGULATORY COMMITMENTS

REGULATORY COMMITMENTS

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check one)		SCHEDULED COMPLETION DATE (If Required)
	ONE-TIME ACTION	CONTINUING COMPLIANCE	
FSAR Section 9.5.4.2, System Description, Detailed System Description, for Standby Diesel Generators and Ancillary Diesel Generators will be updated to reflect use of ASME B31.1 Nonmandatory Appendix IV for corrosion control.	✓		Future COLA submittal.