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G3NO-2008-00008

October 23, 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. 7 (GG3 COLA)

REFERENCE: NRC Letter to Entergy Nuclear, *Request for Additional Information Letter No. 7 Related to the SRP Section 09.05.04 for the Grand Gulf Combined License Application*, dated September 29, 2008 (ADAMS Accession No. ML082730189)

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 (COLA). The response to the following Request for Additional Information (RAI) is provided as Attachment 1 to this letter:

- RAI Question 09.05.04-1, Fuel Oil Transfer Piping Corrosion Control

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

D088
NRO

This letter contains commitments as identified in Attachment 2.

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

Executed on October 23, 2008.

Sincerely,

WKH/ghd

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

cc (email unless otherwise specified):

Mr. T. A. Burke (ECH)
Mr. S. P. Frantz (Morgan, Lewis & Bockius)
Mr. B. R. Johnson (GE-Hitachi)
Ms. M. Kray (NuStart)
Mr. P. D. Hinnenkamp (ECH)

NRC Project Manager – GGNS COLA
NRC Director – Division of Construction Projects (Region II)
NRC Regional Administrator - Region IV
NRC Resident Inspectors' Office: GGNS

ATTACHMENT 1

G3NO-2008-00008

RESPONSE TO NRC RAI LETTER NO. 7

RAI QUESTION NO. 09.05.04-1

RAI QUESTION NO. 09.05.04-1

NRC RAI 09.05.04-1

Please discuss how GGNS COL 9.5.4-2-A is consistent with the ESBWR DCD regarding corrosion control for underground portions of the fuel oil transfer system. The DCD states that piping or components subject to corrosion, such as carbon steel piping, will be provided with corrosion protection. The COL application states that the buried section of the piping will be provided with "waterproof protected coating." If "protected" refers here to a cathodic protection (CP) system, discuss your plans to clarify this in the FSAR. If the corrosion protection does not include CP, discuss the basis for concluding that a coating alone will be adequate for corrosion protection. Although the ESBWR is not required to follow the guidance in SRP Section 9.5.4 and associated RG 1.137, which reference CP for underground portions of piping and tanks, industry consensus documents recommend that CP be used with coatings, or at least that the need for CP be assessed. (For example, NACE RP-0169, Section 4.2.1 states, "External corrosion control must be a primary consideration during the design of a piping system. Materials selection and coatings are the first line of defense against external corrosion. Because perfect coatings are not feasible, cathodic protection must be used in conjunction with coatings.")

In addition, discuss whether the corrosion protection is applied to the external or internal surface of the buried pipe and discuss your plans to add this information to the FSAR.

Entergy Response

Piping is the only component of the fuel oil transfer system that is located underground. 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; it does not include cathodic protection at this time. FSAR Appendix 8A.2, *Cathodic Protection*, Section 8A.2.1 states, "The need for cathodic protection system will be determined during final design of the plant. If a cathodic protection system is required, it will be designed in accordance with the requirements of the National Association of Corrosion Engineers (NACE) Standards (DCD Reference 8A-5). This section of the FSAR will be updated as necessary to describe the final design of the cathodic protection system."

Proposed COLA Revision

FSAR Section 9.5.4.2 will be revised to clarify that the waterproof protective coating is for protection of the external surface of the buried fuel oil transfer system piping, 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.

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.

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-2008-00008

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	
Entergy will revise FSAR Section 9.5.4.2 as indicated in draft markups included in Attachment 1 of this letter, in Revision 1 of Part 2 of the COL application.	✓		Future COLA Submittal