



Nuclear Innovation
North America LLC
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January 31, 2011
U7-C-NINA-NRC-110008

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville MD 20852-2738

South Texas Project
Units 3 and 4
Docket Nos. 52-012 and 52-013
Revised Response to Request for Additional Information

Attached is the Nuclear Innovation North America LLC (NINA) revised response to Request for Additional Information (RAI) question 03.08.04-31, Supplement 1, related to Combined License Application (COLA) Part 2, Tier 2, Section 3.8.

Where there are COLA markups, they will be made at the first routine COLA update following NRC acceptance of the RAI response.

There are no commitments in this letter.

If you have any questions regarding these responses, please contact Scott Head at (361) 972-7136 or Bill Mookhoek at (361) 972-7274.

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

Executed on 1/31/2011

Mark McBurnett
Senior Vice President, Oversight & Regulatory Affairs
Nuclear Innovation North America LLC

jep

Attachment: RAI 03.08.04-31, Supplement 1, Revision 1

D091
STI 32817738 MRO

Table 3H.6-15: Required and Provided Gaps at the Interface of Site-Specific Seismic Category I Structures and Diesel Generator Fuel Oil Tunnels with and the Adjoining Structures

Interfacing Structures	Required and Provided Gaps (inches)	
	Required Gap	Provided Gap
RSW Piping Tunnels and Control Building	4:44:54	4:55:0
RSW Pump House and RSW Piping Tunnel A	3:51:39	4:55:0
RSW Pump House and RSW Piping Tunnel B	4:44:92	4:55:0
RSW Pump House and RSW Piping Tunnel C	2:59:07	4:55:0
Diesel Generator Fuel Oil Storage Vault (DGFO SV) No. 1A	4:42:37	2:03:0
Diesel Generator Fuel Oil Storage Vault (DGFO SV) No. 2B	4:622:60	2:03:0
Diesel Generator Fuel Oil Storage Vault (DGFO SV) No. 3C	4:382:42	2:03:0
Reactor Building and Diesel Generator Fuel Oil Tunnel (DGFO T) No. 1A	2:65	4:0
Reactor Building and Diesel Generator Fuel Oil Tunnel (DGFO T) No. 1B	3:77	4:0
Reactor Building and Diesel Generator Fuel Oil Tunnel (DGFO T) No. 1C	3:24	4:0

~~Note. See Figure 3H.6-221 for layout of the above structures~~

cc: w/o attachment except*
(paper copy)

(electronic copy)

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RAI 03.08.04-31 Supplement 1, Revision 1**QUESTION:****Follow-up to Question 03.08.04-25**

The staff reviewed the applicant's response to Question 03.08.04-25 (letter U7-C-STP-NRC-100108, dated May 13, 2010). In order for the staff to conclude that the interface between seismic category I buildings and tunnels will not result in any unacceptable interaction, the applicant is requested to provide the following additional information:

1. The applicant stated in its response that the separation gap between the Reactor Service Water (RSW) Piping Tunnels and the RSW Pump House and the Control Building (CB), as well as between the Diesel Generator Fuel Oil Storage Vaults (DGFOSV) and the Diesel Generator Fuel Oil Tunnels (DGFOT), will be at least 50% larger than the absolute sum of the calculated displacements due to seismic movements and long term settlement. The material used as flexible filler will be able to be compressed to approximately 1/3 of its thickness without subjecting the building to more than a negligible force. However, the applicant provided vendor test result where 7 psi compressive stress was observed when 5 inch joint was compressed to 50% movement. This does not provide any estimate of how much compressive stress may be developed when the material is compressed to 1/3 thickness of the material. Therefore, the applicant is requested to justify that no significant stress will be imparted to the building when the joint is compressed to 1/3 thickness.
2. The DGFOT is connected to the DGFOSV at one end. It is not clear from the response where the DGFOT is connected at the other end, and what are the anticipated movements at that connection. Please include this information in Table 3H.6-15.
3. Please provide an ITAAC with key parameters for as-built verification of the connections, or provide justification for not doing so.

REVISED SUPPLEMENTAL RESPONSE:

The response to Parts 1 and 3 of this RAI was submitted with STPNOC letter U7-C-STP-NRC-100208, dated September 15, 2010. The original supplement 1 response to Part 2 of this RAI was submitted with STPNOC letter U7-C-STP-NRC-110008, dated January 17, 2011. Due to discovery of a discrepancy within the calculations, the response is revised to report corrected results. This revised response completely supersedes the original response. The revised portion of the response is marked with a revision bar.

2. The layout of the Diesel Generator Fuel Oil Tunnels (DGFOTs) is as shown in COLA Part 2, Tier 2 Figure 3H.6-221 provided in the Supplement 1 response to RAI 03.07.01-27 which was submitted with STPNOC letter U7-C-STP-NRC-100274 dated December 21, 2010. There are three (3) DGFOTs for each unit and each DGFOT is connected at one end to the Reactor Building (RB) and at the other end to a Diesel Generator Fuel Oil Storage Vault (DGFOVS). There is a seismic gap between each of the DGFOT and the adjoining RB and DGFOVS. COLA Part 2, Tier 2, Table 3H.6-15 will be revised (see Enclosure 1) to include the required and provided gaps for the DGFOTs. This revised table also incorporates changes due to:

- Revised soil-structure-interaction (SSI) analysis for the Reactor Service Water (RSW) Piping Tunnels described in the Supplement 1 response to RAI 03.07.02-24 which was submitted with STPNOC letter U7-C-STP-NRC-100253 dated November 29, 2010.
- Revised SSI analysis for the DGFOVSs described in the Supplement 1 response to RAI 03.07.01-27 which was submitted with STPNOC letter U7-C-STP-NRC-100274 dated December 21, 2010.

Revision 4 of COLA Part 2, Tier 2 will be revised as shown in Enclosure 1.

**RAI 03.08.04-31, Supplement 1, Revision 1
Enclosure 1**

Revised Table 3H.6-15