Nuclear Innovation
North America LLC
4000 Avenue F, Suite A
Bay City, Texas 77414

March 28, 2011
U7-C-NINA-NRC-110049

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
Response to Request for Additional Information

Attached is the Nuclear Innovation North America LLC (NINA) response to NRC staff question 03.07.02-31 included in Request for Additional Information (RAI) letter number 374 related to Combined License Application (COLA) Part 2, Tier 2, Section 3.7.2. This completes the response to this NRC letter.

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 me 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 3/28/11

Scott Head
Manager, Regulatory Affairs
South Texas Project Units 3 & 4

jep

Attachment: RAI 03.07.02-31

D091
NRO

STI 32845524

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

Director, Office of New Reactors
U. S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, Texas 76011-8064

Kathy C. Perkins, RN, MBA
Assistant Commissioner
Division for Regulatory Services
Texas Department of State Health Services
P. O. Box 149347
Austin, Texas 78714-9347

Alice Hamilton Rogers, P.E.
Inspection Unit Manager
Texas Department of State Health Services
P. O. Box 149347
Austin, Texas 78714-9347

*Steven P. Frantz, Esquire
A. H. Gutterman, Esquire
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Ave. NW
Washington D.C. 20004

*Tom Tai
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852

(electronic copy)

*George F. Wunder
*Tom Tai
Loren R. Plisco
U. S. Nuclear Regulatory Commission

Steve Winn
Joseph Kiwak
Jamey Seely
Eli Smith
Nuclear Innovation North America

Peter G. Nemeth
Crain, Caton and James, P.C.

Richard Peña
Kevin Pollo
L. D. Blaylock
CPS Energy

RAI 03.07.02-31

QUESTION:

Follow-up to RAI Question 03.07.02-30 (Fluor Part 21 Issue)

In the response to RAI 03.07.02-30, the applicant stated that "*STPNOC continues to believe that the dynamic input for the MLS analysis as specified in DCD Section 3.2.5.3 is valid and that the detailed design of the TB can be developed to be consistent with those provisions without any inconsistency or deficiency.*" But, in light of the Fluor Part 21 report, the applicant in its response has not demonstrated that the dynamic input loads for the design of the Main Steam Lines (MSL) in the turbine building would be conservative at the STP site. The applicant also stated that "*In implementation of ITAAC 2.15.11 and ITAAC 2.10.1 (related to the Main Steam System design), a dynamic analysis of the TB will be performed to confirm that the DCD dynamic input requirements for the MSL are satisfied for the final design of the TB.*" The referenced ITAACs do not specifically require verification of the DCD dynamic input requirements for the MSL. As such, the applicant is requested to provide a STP specific ITAAC that specifically delineates that a dynamic analysis of the TB will be performed to confirm that the DCD dynamic input requirements for the MSL are satisfied for the final design of the TB. In view of the Fluor Part 21 and in the absence of the results of final dynamic analysis of the TB, the staff needs this ITAAC to ensure that design of the MSLs and other important to safety SSCs in the TB appropriately consider the SSE design loads in combination with other appropriate loads as required by the ABWR DCD.

REVISED SUPPLEMENTAL RESPONSE:

As requested by NRC, a new site-specific ITAAC is being added in COLA Part 9 that specifically delineates that a dynamic analysis of the Turbine Building will be performed to confirm that the DCD dynamic input requirements for the Main Steam Line are satisfied for the final design of the Turbine Building.

See attached COLA mark-up.

3.0 Site-Specific ITAAC

The reference ABWR DCD Tier 1, Chapter 4.0, "Interface Requirements," identifies significant design provisions for interface between systems within the scope of the ABWR standard design and other systems that are wholly or partially outside the scope of the ABWR standard design. The interface requirements define the attributes and performance characteristics that the out-of-scope (site-specific) portion of the plant must have in order to support the certified ABWR design.

The STP 3 & 4 site-specific systems and activities that require ITAAC, because they have a safety-related, safety-significant, or risk significant function, and/or have interface requirements stated in ABWR DCD (Tier 1), Section 4.0, are listed below:

- Ultimate Heat Sink (UHS)
- Offsite Power System
- Makeup Water Preparation (MWP) System
- Reactor Service Water (RSW) System
- Communication System (See Section 4.0 - Emergency Planning ITAAC)
- Site Security (See Section 5.0 - Physical Security ITAAC)
- Circulating Water (CW) System
- Backfill under Category 1 Structures
- Breathing Air (BA) System
- Waterproofing Membrane
- Design Reports for ASME Class 1, 2, and 3 Components
- Pipe Break Analysis Report for the As-designed Plant
- Diesel Generator Fuel Oil Storage Vaults
- Main Steam Lines Dynamic Analysis

Table 3.0-18 Main Steam Lines Dynamic Analysis

Design Requirement	Inspections, Tests, Analyses	Acceptance Criteria
1. For the dynamic analysis of the Main Steam Lines (MSL) in the Turbine Building (TB), the dynamic inputs are as follows: a. for locations on the basemat, the amplified response spectra (ARS) shall be two times the ARS shown in Tier 1 Figures 5.0a and 5.0b. b. for locations at either the operating or turbine deck level, the ARS shall be the same as used at the reactor building end of the main steam tunnel.	1. A dynamic analysis of the TB will be performed to generate in-structure response spectra which are compared to the following MSL dynamic inputs: a. for locations on the basemat, the amplified response spectra (ARS) shall be two times the ARS shown in Tier 1 Figures 5.0a and 5.0b. b. for locations at either the operating or turbine deck level, the ARS shall be the same as used at the reactor building end of the main steam tunnel.	1. A report exists that concludes that the TB in-structure response spectra for MSL dynamic analysis are bounded by the dynamic input requirements for the MSL dynamic analysis: a. for locations on the basemat, the amplified response spectra (ARS) shall be two times the ARS shown in Tier 1 Figures 5.0a and 5.0b. b. for locations at either the operating or turbine deck level, the ARS shall be the same as used at the reactor building end of the main steam tunnel.