

## PMSTPCOL PEmails

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**From:** Tai, Tom  
**Sent:** Tuesday, August 14, 2012 1:26 PM  
**To:** 'jeprice@stpegs.com'  
**Cc:** STPCOL; 'wemookhoek@stpegs.com'; Wunder, George; Chakrabarti, Samir; Jain, Bhagwat  
**Subject:** STP - 3H.11 Enhancement (PL 273)  
**Attachments:** 8-13-2012 FSAR Enhancements STP 3.docx

John,

Attached for your information and possible discussion for tomorrow's telephone conference is the proposed FSAR markup on Appendix 3H.11. This is based on our discussion in the July 23, 2012 audit (Punchlist Item 273 (AI No. 3.8-80)).

Please let me know if you have any questions.

Regards

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**Hearing Identifier:** SouthTexas34Public\_EX  
**Email Number:** 3424

**Mail Envelope Properties** (0A64B42AAA8FD4418CE1EB5240A6FED1A30D1567B5)

**Subject:** STP - 3H.11 Enhancement (PL 273)  
**Sent Date:** 8/14/2012 1:25:43 PM  
**Received Date:** 8/14/2012 1:25:45 PM  
**From:** Tai, Tom

**Created By:** Tom.Tai@nrc.gov

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<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
MESSAGE	395	8/14/2012 1:25:45 PM
8-13-2012 FSAR Enhancements STP 3.docx		26243

**Options**

**Priority:** Standard  
**Return Notification:** No  
**Reply Requested:** No  
**Sensitivity:** Normal  
**Expiration Date:**  
**Recipients Received:**

STP 3 & 4 FSAR  
Recommended Enhancements  
Design Basis Hurricane Wind and Hurricane Missile Evaluation

The staff requires the following level of details in the FSAR section 3H.11, directly or by referencing appropriate section of the FSAR where such information is specifically provided. Also the basis of the information considered in the final evaluation should be included in the FSAR (e.g., hurricane wind parameters, peak auto missile load of 1024K, dynamic load factor, etc.).

The applicant is requested to review the following information and determine the enhancements that are needed in various sections and subsections of 3H.11.

I. Hurricane Evaluation Parameters

- Maximum wind and missile impact speed for the design basis hurricane
- Procedures used to determine the loadings (transform the wind velocity into an effective pressure ) on structures induced by the design basis wind
- Hurricane missile spectrum considered (wt., foot print, velocity, etc)
- Describe automobile missile impact load –triangular pulse with peak magnitude (1024K for horizontal and (?) for vertical load. Discuss dynamic load factor considered due to automobile missile impact (always greater than or equal to 1.0).
- Design criteria including approaches and procedure to determine the effects of hurricane wind and hurricane missiles (with emphasis on auto missile impact evaluation).
- Total effect of the design hurricane on seismic Category I structures; identify appropriate combinations of individual effects of the hurricane wind pressure and hurricane-associated missiles. Specify loads and load combinations considered in the structural evaluation including the acceptance criteria. Identify specific industry codes and standards and regulations considered in the structural evaluation.

II. Evaluation of “DCD” Structures for design basis hurricane wind and hurricane missile

- Identify and provide brief description of “DCD” structures considered for the hurricane evaluation. Provide appropriate reference (DCD/FSAR sections) for detailed description of these structures
- Approaches and procedures considered for local and global effects and provide evaluation summary and results (demand and capacity). Also discuss whether shear or flexure controls the design and whether any design modifications are made and describe the design modification.

III. Evaluation of site-specific structures for design basis hurricane wind and hurricane missile

- Identify and provide brief description of site-specific structures considered for the hurricane evaluation. Provide appropriate reference (DCD/FSAR sections) for detailed description of these structures.
- Design approaches and procedures considered for local and global effects and provide evaluation summary and results (demand and capacity). Also discuss whether shear or flexure controls the design and whether any design modifications are made and describe the design modification.

IV. Summary and Conclusions

Add a new section under 3H.11.3, 'Summary and Conclusion' that provides an overall summary and conclusions of the hurricane evaluation.

(Note: In RAI response 02.03.01-24, supplement 1 on (page 88 of 97) a statement is made in the evaluation summary, "Therefore this change does not result in any significant adverse impact to the plant design". This statement should be augmented (in the summary/conclusion section) with what changes, structural (reinforcement/thickness) or otherwise have been made as a result of the hurricane evaluation and discuss what is meant by 'significant adverse impact'.

General Comments:

1. Include material from the two presentations to the staff on February 29, 2012 and July 23, 2012, as appropriate.
2. Identify specific industry codes and standards and regulations considered in the structural evaluation.