

## PMSTPCOL PEmails

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**From:** Muniz, Adrian  
**Sent:** Monday, July 06, 2009 9:28 AM  
**To:** Thomas, George; Wang, Weidong  
**Cc:** STPCOL  
**Subject:** STP Chapter 15 RAI Response  
**Attachments:** U7-C-STP-NRC-090061.pdf

Please see attached for your review.

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**From:** Muniz, Adrian

**Created By:** Adrian.Muniz@nrc.gov

**Recipients:**

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South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

July 2, 2009

U7-C-STP-NRC-090061

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
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South Texas Project  
Units 3 and 4  
Docket Nos. 52-012 and 52-013  
Responses to Requests for Additional Information

Attached are responses to NRC staff questions included in Request for Additional Information (RAI) letter numbers 111 and 112 related to Combined License Application (COLA) Part 2, Tier 2, Chapter 15.

The attachments address the responses to the two RAI questions listed below:

RAI 15.01.01-15.01.04-1  
RAI 15.08-1

There are no commitments in this letter.

If you have any questions regarding this response, please contact me at (361) 972-7136, or Bill Mookhoek at (361) 972-7274.

STI 32494875

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

Executed on 7/2/09



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

jet

Attachments:

1. Question 15.01.01-15.01.04-1
2. Question 15.08-1

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

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**RAI 15.01.01 – 15.01.04-1****QUESTION:**

The applicant submitted a new comparison FSAR Table 15.1S-2 listing the instrument response time given in the DCD and for STP3/4. Response time is significantly changed from the DCD values assumed in the analysis for scram, power-actuated safety relief function, recirculation pump trip (RPT) and MSIV isolation. What are the bounding values?

A detailed explanation is required in the FSAR relative to any impacts that the new values may have for the analysis already completed for the DCD analysis and whether the staff safety conclusions remain valid.

**RESPONSE:**

Supplementary Section 15.1S of the COLA discusses the design differences from the certified design that could impact the transient and safety analysis. In Rev. 0 of the COLA, there was a change to various instrument delay times in the DCD that was discussed in this supplementary section. This change was attributed to STD DEP T1 3.4-1.

In COLA Rev. 2, these instrument delay times were returned to the values used in the DCD, and STD DEP 3.4-1 was deleted from Section 15.1S. However, consistent with this deletion, the setpoint value changes shown in Table 15.1S-2 of Rev. 2 of the COLA should have also been deleted. This will be corrected in a future revision of the COLA as shown in the following markup of Rev 2 of the COLA.

As noted in Section 15.1S of Rev. 2 of the STP 3&4 COLA, there are no departures which affect the transient and accident analyses.

**Table 15.1S-2 Instrument Response Time**

<b>Design Function</b>	<b>DCD Response Time (see)</b>	<b>ABWR Response Time (see)</b>
<b>Seram Reactor</b>		
Reactor Water Level Trip (Level 3 only)	1.05	0.85
Reactor Vessel High Pressure Trip	0.55	0.70
MSIV Closure Trip	0.06	0.10
Turbine Stop Valve Closure Trip	0.06	0.10
Turbine Control Valve Fast Closure Trip	0.08	0.12
Core Flow Rapid Coastdown Trip		
— Core Flow Measurement	1.0	1.00
— NMS Logic Delay Time	0.10	0 (below)
— RPS Logic Delay Time	0.15	0.09
— Total	1.15	1.09
<b>Power Actuated Safety Relief Function</b>		
— Response Time	0.45	0.7
<b>Recirculation Pump Trip (RPT)</b>		
— Response time for vessel dome pressure sensors	0.30	0.70
<b>MSIV Isolation</b>		
— From detection of L1.5 water level to start of MSIV closure	1.20	1.0
— From detection of turbine inlet pressure to start of MSIV closure	1.0	0.7

**RAI 15.08-1****QUESTION:**

FSAR Chapter 15, Section 15E.4 - In the certified DCD, automated initiation of the automatic depressurization system (ADS) is inhibited unless there is a coincident low reactor water level signal (level 1.5) and an average power range monitor (APRM) anticipated transient without scram (ATWS) permissive signal. For STP, low reactor water level signal (level 1.5) is deleted from the ADS inhibit logic during ATWS. Justify the deletion of the reactor water level from the logic.

**RESPONSE:**

In Revision 2 of the Combined License (COL) application, there was an administrative departure to FSAR Appendix 15E, subsection titled "ATWS Logic and Setpoints," for Item (7) ADS Inhibit which was intended to clarify the conditions for automatic ADS inhibit. As part of this administrative departure, a portion of the sentence in Item 7 was deleted and replaced with alternate wording. The deletion did not delete the reactor water level signal (level 1.5) from the design. In fact there is no change to the ATWS ADS Inhibit mitigation function from what is described in the DCD and the logic that is shown in Figure 15E-1c.

To eliminate potential confusion, the administrative departure will be withdrawn and the subsection incorporated by reference from the DCD with no departures as shown below.

Changes to the COLA text are as shown below. Changes are highlighted in gray shading.

**15E.4 ATWS Logic and Setpoints**

STD-DEP Admin

*The mitigation of ATWS events is accomplished by a multitude of equipment and procedures. These include ARI, FMCRD run-in, feedwater runback, RPT, recirculation runback, ADS inhibit, and SLCS. The logic of this ATWS mitigation is presented in Figures 15E-1a, 15E-1b and 15E-1c. The following are the initiation signals and setpoints for the above response:*

*(7) ADS inhibit*

- *Automated initiation of ADS is inhibited unless there is a coincident low reactor water level signal (level 1.5) and an APRM ATWS permissive signal whenever potential ATWS conditions exist as indicated by APRMs not being downscale*