



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

PROPRIETARY INFORMATION  
Contained in Attachment 1 to this Letter

June 18, 2009  
U7-C-STP-NRC-090059

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  
Post-Combined License Activities –  
Additional I&C Information

This letter addresses STPNOC's plans for the STP 3 & 4 design acceptance criteria (DAC) closure process, discusses the approval approach for the Field Programmable Gate Array (FPGA) design, and provides information to NRC regarding I&C design document availability as produced through the DAC process. Each is discussed below. Please note that the dates contained in Attachment 1 to this letter are considered to be proprietary to STPNOC and are requested to be withheld from public disclosure in accordance with 10 CFR 2.390.

**STP 3&4 DAC Closure Process**

In the May 7, 2009 public meeting with the I&C Branch of the NRC Division of Office of New Reactors, STPNOC stated its intent to submit DAC-related ITAAC closure letters after COL issuance. STPNOC will continue to develop DAC documentation and will utilize these documents to ensure that the STP 3&4 ABWR I&C platform design is developed in accordance with processes that meet the requirements of the ABWR DCD and appropriate regulatory requirements. As discussed in the May 7<sup>th</sup> meeting, I&C platform designs are progressing in parallel with the NRC COL review. In order to provide timely feedback on the I&C design, STPNOC will make the DAC-related ITAAC documents available to the NRC for audit. The results of these audits would provide early indications to STPNOC if deficiencies are identified by the NRC that may potentially impact designs in process. This strategy will greatly assist STPNOC in managing project risk from potential rework and schedule impacts. Formal closure of each DAC item would not be requested until after STPNOC submits formal closure letters.

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STI 32490823 NRC

### **FPGA Design Approval Approach**

The previous strategy for licensing STP 3 & 4 I&C design involved the NRC's approval of Toshiba's FPGA platform and Westinghouse's Common Q platform for generic use. As discussed in the public meeting on May 7<sup>th</sup>, Toshiba's topical report has been withdrawn. It will be replaced by technical reports that discuss the details of the NRW-FPGA design and qualification for use in STP 3 & 4. Details on the scope of I&C departure in relation to the topical reports have been provided in our response to RAI 07.01-1.

### **STP 3&4 I&C Design Document Availability**

As communicated in the May 7<sup>th</sup> meeting, STPNOC agreed to provide expected availability dates for I&C design documents that will support closure of DAC related ITAAC items contained in the STP 3&4 COLA Tier 1 Table 3.4. The document expected availability dates are included in Attachment 1 along with the scope and title of the upper tier and in some cases the second tier DAC-related ITAAC documents. Attachment 1 also provides STPNOC's desired date for NRC audit completion and our assessment of review complexity. Based on the current project schedule, STPNOC will begin to incur risk due to regulatory uncertainty if the NRC audit is not complete by the desired completion date. The review complexity is based on the size of the report and technical issues addressed. Additional documents residing at lower tiers to the initial documents are also planned for development as the project progresses. STPNOC will provide periodic updates to the NRC as to when the lower tier documents are projected to be available. The expected availability dates in the attachment are current as of June 1, 2009. This attachment supersedes previous schedule projections provided in the May 7<sup>th</sup> meeting.

Attachment 1 provides the table with the dates (proprietary) described above. Attachment 2 provides the same table with the proprietary information redacted (non-proprietary). Attachment 3 provides an accompanying affidavit which sets forth the basis for requesting that the information considered to be proprietary to STPNOC be withheld from public disclosure in accordance with 10 CFR 2.390.

STPNOC also indicated in our May 7<sup>th</sup> meeting that the STP 3&4 Software Life Cycle Plan and the Electromagnetic Compatibility (EMC) Qualification Plan would be available by the end of this month for safety related systems, and document revisions including non-safety related systems would be made available later in the third quarter. In reviewing our project needs and resources, STPNOC has determined that it is more appropriate to submit a single plan for each topic that includes both safety related and non-safety related systems. STPNOC also believes that this will make the NRC audit of these plans more efficient. The expected availability date for these plans has been revised as shown in Attachment 1.

There are no commitments in this letter.

If you have any questions regarding these responses, please contact me at (361) 972-7206, or Bill Mookhoek at (361) 972-7274.

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

Executed on 6/18/09



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

jwc

Attachments:

1. DAC-related Document Submittal List (Proprietary)
2. DAC-related Document Submittal List (Non-proprietary)
3. Affidavit for Withholding of Proprietary Information

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

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**Document Submittal List**

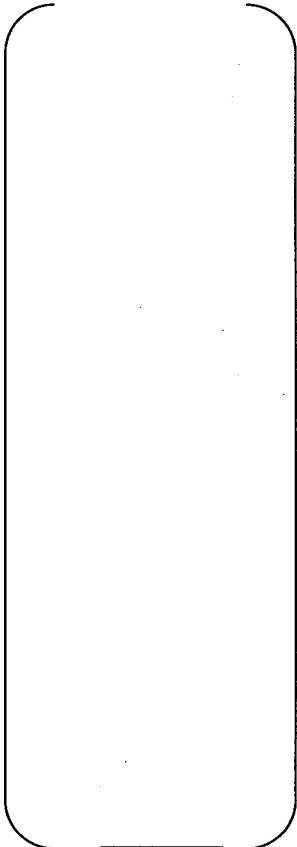
**Expected  
Availability  
Date**

**Desired  
Audit  
Completion  
Date**

**Estimated  
Complexity**

**Tier 1 Table 3.4 Items 7-10 – Software Life Cycle**

- STP 3&4 Software Life Cycle Plan - Project level document which describes how STP 3&4 projects will implement COLA and regulatory requirements for Software Quality Assurance, Software Management, Configuration Management, and Verification and Validation activities.
  - Technical Report for STP 3&4 Non-rewritable (NRW) Field Programmable Gate Array (FPGA) Based I&C Systems - STP 3&4 will use FPGA based platforms for the safety related Neutron Monitoring (NMS) and Reactor Trip and Isolation (RTIS) Systems. This summary document describes quality assurance programs and activities, the lifecycle approach to FPGA logic development, including the validation and verification (V&V) and hazards analysis processes, hardware qualification process, and generic qualification process for specific safety-related systems
  - ELCS Common Q Software Program Manual - STP 3&4 will use Westinghouse's Common Q technology for the Engineered Safety Features Logic Control System (ELCS). This summary document describes quality assurance programs and activities, the lifecycle approach to ELCS Software, including the validation and verification (V&V) and hazards analysis processes, hardware qualification process, and generic qualification process for specific safety-related systems.



(a)(4)

Moderate

Full Review

Straight-forward (Common Q has already received NRC staff review).

**Tier 1 Table 3.4 Item 11 – Software Life Cycle Design Verification**

- STP 3&4 I&C Platform Software Design Verification – Document(s) verifying that software development has been performed in accordance with the plans developed for Tier 1 Table 3.4 Items 8 through 10.



(a)(4)

Straight-forward

Document Submittal List	Expected Availability Date	Desired Audit Completion Date	Estimated Complexity
<b><u>Tier 1 Table 3.4 Items 12 – Electromagnetic Qualification Plan</u></b>			
<ul style="list-style-type: none"> <li>• <u>STP 3&amp;4 Electromagnetic Qualification Plan</u> - Project level document which describes how STP 3&amp;4 project will implement COLA and regulatory requirements for electromagnetic capability (EMC) requirements for nuclear power plant instrumentation and control (I&amp;C) equipment. The requirements for EMC qualification are provided in the US Nuclear Regulatory Commission (NRC) Regulatory Guide 1.180.</li> </ul>	(a)(4)		Moderate
<b><u>Tier 1 Table 3.4 Items 13 – Setpoint Methodology</u></b>			
<ul style="list-style-type: none"> <li>• <u>STP 3&amp;4 Setpoint Control Program Plan</u> - Project level document which describes how STP 3&amp;4 project will implement COLA and regulatory requirements for STP 3&amp;4 setpoint control program including specifying setpoint requirements, accounting for uncertainties, testing of instrument response, and replacement of instrumentation.</li> </ul>	(a)(4)		Straight-forward
<b><u>Tier 1 Table 3.4 Items 14 – Equipment Qualification Plan</u></b>			
<ul style="list-style-type: none"> <li>• <u>STP 3&amp;4 Equipment Qualification Plan</u> - Project level document which describes how the STP 3&amp;4 project will implement COLA and regulatory requirements to demonstrate how safety-related equipment is able to complete its safety function under the environmental conditions that exist up to and including the time the equipment has finished performing that function. The plan submitted will be generic in nature and cover all applicable STP 3&amp;4 equipment; not just I&amp;C equipment.</li> </ul>	(a)(4)		Moderate
<b><u>Tier 1 Table 3.4 Items 15 – Integrated Test Plan</u></b>			
<ul style="list-style-type: none"> <li>• <u>STP 3&amp;4 I&amp;C Validation and Integration Test Plan</u> – Project level document which describes the requirements for factory acceptance testing, integration testing, design installation verification and preoperational testing.</li> </ul>	(a)(4)		Full Review

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
STP Nuclear Operating Company	)	Docket Nos. 52-012
	)	& 52-013
South Texas Project Units 3 & 4	)	

AFFIDAVIT

I, Scott M. Head, being duly sworn, hereby depose and say that I am Manager, Regulatory Affairs, of the South Texas Project Units 3 & 4 (STP 3&4); that I am duly authorized to sign and file with the Nuclear Regulatory Commission (NRC) this affidavit on behalf of the STP Nuclear Operating Company (STPNOC); and state:

1. The accompanying information contains schedule activities regarding I&C design document availability as produced through the DAC process for STP 3&4; that I am familiar with the content thereof; that the matters set forth therein are true and correct to the best of my knowledge and belief; and that STPNOC is providing this information to assist the NRC in allocating review resources for STP 3 & 4 activities.
2. The accompanying information includes information specifically considered to be proprietary to STPNOC and its owners that should be held in confidence by the NRC and withheld from public disclosure pursuant to 10 CFR 2.390(a)(4), because:
  - i. This information is and has been withheld in confidence by STPNOC.
  - ii. This information is of a type that is customarily held in confidence by STPNOC and there is a rational basis for doing so because the information contains sensitive schedule information.
  - iii. This information is being submitted to the NRC voluntarily and in confidence.
  - iv. This information is not available in public sources and could not be gathered readily from other publicly available information.
  - v. Public disclosure of this information would create substantial harm to the competitive position of STPNOC by disclosing its internal schedule information.
4. The basis for this claim of competitive harm is that the schedule information provided reveals details that could be used by a competitor to gain unfair commercial advantage in the acquiring of resources and other commercial assets, and could be used to unfairly influence the availability of finite resources and other commercial assets, necessary to the development of a similar product.
5. Information proprietary to STPNOC and its owners included in the attachment to this letter is marked with “[ ]” and with “Proprietary Information – Withhold from public disclosure under 10 CFR 2.390(a)(4)” at the top of the page in accordance with the NRC’s guidance on categories of proprietary information defined in 10 CFR 2.390 and clarified by RIS 2004-11.

