



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

May 27, 2010
U7-C-STP-NRC-100116

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 South Texas Project Nuclear Operating Company (STPNOC) response to the NRC staff question in Request for Additional Information (RAI) letter number 338 related to COLA Part 2, Tier 2, Sections 1C and 8.4S, "Station Blackout." This completes the response to RAI letter number 338. Also attached is the schedule for responding to NRC staff question 02.04.05-10 in RAI letter number 334 related to COLA Part 2, Tier 2, Section 2.4S.5, "Probable Maximum Surge and Seiche Flooding." Attachment 1 provides the response to the following RAI question:

08.04-4

No COLA changes are required as a result of this response.

There are no commitments in this letter.

If you have any questions, 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 5/27/10

A handwritten signature in black ink, appearing to read "S. Head".

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

rhb

- Attachments: 1. RAI 08.04-4
2. Response Date Extension for RAI Question

DOA1
NRC

STI 32681310

cc: w/o attachments and enclosure except*
(paper copy)

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08.04-4

QUESTION:

In response to RAI 08.04-1 regarding the time required to declare the existence of an SBO, the applicant stated that the Station Blackout (SBO) clock (10 minutes) starts after the operators perform the immediate steps in the emergency operating procedures (EOPs) to verify the SCRAM, primary parameters, etc., and the attempt to restore offsite power and start the diesel generators from the control room per the EOPs as discussed in Appendix I to NUMARC 87-00, Rev. 1. The NRC staff notes that during an SBO inspection at one of the operating plants, it took as long as 15 minutes to declare the onset of an SBO after going through the EOPs and bringing the Alternate AC (AAC) power source to the safety-related bus in the next 10 minutes. As a result, this plant was in an unanalyzed condition for almost 25 minutes. This is inconsistent with the requirements of 10 CFR 50.63 which requires that the 10-minute criterion shall start as soon as the plant loses both onsite and offsite power to the emergency buses. Therefore, the staff has determined that no additional time is allowed to restore the offsite power source or restart the emergency diesel generator from the control room in order to determine the onset of an SBO. The staff requests that the applicant revises its response to either demonstrate that the total time to identify the existence of an SBO and bringing the AAC power source to the safety-related bus can be accomplished within the 10-minute criterion or provide AC-independent coping analysis for one hour.

RESPONSE:

During the first 10 minutes of an SBO, the reactor will have automatically tripped, the Main Steam Isolation Valves (MSIVs) closed, and the Reactor Core Isolation Cooling (RCIC) actuated. The RCIC system will automatically control reactor coolant level. Any necessary relief valve operation will also be automatic. Within the 10 minute SBO interval, none of the above actions will require AC power or manual operator actions.

In response to a Loss of Preferred Power, the Combustion Turbine Generator (CTG) will automatically progress through its starting sequence in parallel with the operator performing the immediate steps in the EOPs. The only remaining step to connect the CTG power to a Class 1E bus would be the operation of circuit breakers to align the pre-selected Class 1E bus to the CTG. These circuit breakers are operable from the Main Control Room and could be closed within 10 minutes of a Loss of Preferred Power.

Technical Specification Limiting Condition for Operation (LCO) 3.5.1, "ECCS – Operating," and LCO 3.8.1, "AC Sources – Operating," require verification of CTG capability whenever RCIC, one offsite source, or a diesel generator is not operable. As explained in the technical specification bases, this verification ensures that the CTG is "capable of starting, accelerating to required speed and voltage, and of being manually configured to provide power to the ESF bus. This sequence must be accomplished in less than 10 minutes. The CTG must also be capable of accepting required loads, must be capable of maintaining rated frequency and voltage, and accepting required loads when connected to the ESF bus."

Therefore, in accordance with 10 CFR 50.63(c)(2), a station blackout coping analysis is not required because the alternate ac source (i.e., the CTG) "can be demonstrated by test to be available to power the shutdown buses within 10 minutes of the onset of station blackout."

No COLA revisions are required as a result of this response.

Response Date Extension for RAI Question

RAI Question	Reason for Extension	Response Date
02.04.05-10	Additional time is required to perform and evaluate alternate methods for determining Probable Maximum Storm Surge and the potential impact on the Main Cooling Reservoir embankment.	7/12/2010