



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

April 5, 2010
U7-C-STP-NRC-100075

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
Revised Responses to Request for Additional Information

Attached are additional revisions to Request for Additional Information (RAI) responses related to COLA Part 2, Tier 2, Subsection 9.5.1, "Fire Protection System." The attachments provide revised responses to the RAI questions listed below:

09.05.01-5

09.05.01-8

The COLA changes provided by the revised responses will be incorporated into the next routine revision of the COLA following NRC acceptance of the responses.

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 32646063

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NR0

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

Executed on 4/5/10



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

jaa

Attachments: 1. RAI 09.05.01-5, Revision 2
2. RAI 09.05.01-8, Revision 2

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

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RAI 09.05.01-5, Revision 2**QUESTION:**

Operator Manual Actions:

The applicant is to clarify and describe if any operator manual actions outside of the main control room that will be credited for post-fire safe shutdown operations. The applicant is to explain why such actions are required and describe compliance with regulatory guidance for operator manual actions (e.g., RG 1.189, Rev 1 and NUREG-1852).

REVISED RESPONSE:

References:

1. Letter from Scott Head to NRC dated August 12, 2009, U7-C-NRC-STP-090098 (ML092260197)
2. Letter from Mark McBurnett to NRC dated January 13, 2010, U7-C-STP-NRC-100016 (ML100141737)

The initial response to this RAI (reference 1) is superseded by this revision to Reference 2 which is submitted to delete mention of Appendix R in the COLA markup provided by Reference 2.

As required by Fire Protection System ITAAC (Tier 1, Section 2.15.6), a fire hazards report will exist for the as-built plant which concludes that, for each postulated fire, the plant can be shut down and maintained in a safe shut down condition. In the unlikely event the as-built fire safe shutdown analysis identifies a challenge to safe shutdown requiring mitigation by an operator manual action, then the guidance of RG 1.189 will be utilized.

COLA Part 2, Tier 2, Appendix 9E, Fire Related Administrative Controls, will be revised as follows with changes indicated by gray shading:

9E.5.3 Fire Protection of Safe-Shutdown Capability

The systems required for safe shutdown are discussed in Section 7.4 and the fire protection design features for protecting safe-shutdown capability are discussed in detail in Subsection 9.5.1.

Additionally, for Operator Manual Actions, in the event that the final as-built fire safe shutdown analysis performed to meet ITAAC 2.15.6 identifies the need for a operator manual action(s) not previously described in the DCD, then the applicable regulatory guidance associated with operator manual actions (i.e., RG 1.189, Revision 1, Fire Protection for Nuclear Power Plants, paragraph 5.3.3 Operator Manual Actions) will be utilized. In addition the guidance provided in NUREG 1852, Demonstrating the Feasibility and Reliability of Operator Manual Actions in Response to Fire, will be utilized to demonstrate that the operator manual actions are feasible and can be reliably accomplished.

RAI 09.05.01-8, Revision 2**QUESTION:**

The final Safe Shutdown Analysis is to include a detailed post-fire safe-shutdown circuit analysis performed and documented using a methodology similar to that described in NEI guidance document, NEI 00-01, "Guidance for Post-Fire Safe-Shutdown Circuit Analysis". The applicant should describe how this as-built analysis will be performed and documented. In addition, the applicant is to commit to having a milestone to have this safe shutdown analysis completed prior to fuel load.

REVISED RESPONSE:

Reference: Letter from Mark McBurnett to NRC dated January 13, 2010, U7-C-STP-NRC-100016 (ML100141737)

The above referenced response to this RAI is superseded by this response.

The as-built analysis will be performed and documented as discussed in FSAR Tier 2, Subsection 9.5.1.4 and the supplemental information included in FSAR Section 9A.1 Introduction. The relevant information from FSAR Tier 2, Subsection 9.5.1.4 is copied below for convenience.

A compliance review will be conducted of the as-built design against the assumptions and requirements stated in the Fire Hazard Analysis as documented in Appendix 9B. This as-built reconciliation will include a comparison with Table 9A.6-1 (database) and Table 9A.5-2 (special cases). In addition, it will [be] demonstrated that multiple high impedance faults of those circuits described in Table 9A.5-2 resulting from a fire within any one fire area will not negatively impact other equipment fed from the same power source. Any non-compliance shall be documented in a Fire Hazards Report as being required and acceptable on the basis of the Fire Hazard Analysis (Appendix 9A) and the Fire Protection Probabilistic Risk Assessment (Appendix 19M). The Fire Hazards Analyses (Appendix 9A) will be updated to include the as-built information. Any noncompliance must be documented as being required and acceptable.

With regard to the spurious operation concerns identified in Nuclear Energy Institute (NEI) publication NEI-00-01, "Guidance for Post-Fire Safe Shutdown Circuit Analysis", Revision 2; due to the degree of divisional separation within the ABWR, susceptibility to spurious operations is minimized. FSAR Subsection 9.5.1.1.7 discusses the resistance of the ABWR design to spurious control actions generated from the Engineered Safety Features Logic and Control System (ELCS). Additional discussion relative to spurious control actions is contained in DCD Section 9A.5.5.

The as-built Fire Hazards Analysis will include an assessment of single and multiple spurious scenarios using an approach that is consistent with the methodology of NEI 00-01, Revision 2 as

modified by the guidance of Regulatory Guide 1.189, Revision 2 as it applies to Single and Multiple Spurious Operation Analysis. The following text will be added as the final paragraph to FSAR section 9.5.1.1.7, Spurious Control Actions:

The evaluation of single and multiple spurious operations that could adversely impact post-fire safe shutdown will be performed in a manner that is consistent with the methodology of NEI 00-01, Revision 2 as modified by the guidance of RG 1.189 Revision 2 as it applies to Single and Multiple Spurious Operation Analysis.

Operator manual actions may be considered as a potential resolution strategy for single and multiple spurious scenarios. The response to RAI 09.05.01-5, Revision 2 provides the methodology that shall be implemented for evaluation of an operator manual action as a credited post-fire safe shutdown operation.

As discussed in FSAR Tier 2, Subsection 9E.8.6, the elements of the Fire Protection Program that are necessary to protect new fuel from the adverse affects of a fire in the new fuel storage area or adjacent areas will be implemented prior to the receipt of new fuel. Other required elements of the Fire Protection Program will be implemented prior to initial fuel load.