



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

January 20, 2010  
NOC-AE-10002505  
10CFR50.90

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852

South Texas Project  
Units 1 and 2  
Docket Nos. STN 50-498, STN 50-499  
Response to Request for Additional Information  
Regarding Proposed Amendments for Deviation from  
Fire Protection Program Requirements (TAC Nos. ME0824, ME0825, ME1389, ME1390)

- References:
1. Letter from G. T. Powell, STPNOC, to NRC Document Control Desk dated February 3, 2009, "License Amendment Request for Deviation from Fire Protection Program Requirements" (NOC-AE-08002366) (ML090410486)
  2. Letter from G. T. Powell, STPNOC, to NRC Document Control Desk dated March 3, 2009, "License Amendment Request for Deviation from Fire Protection Program Requirements (Fire Area 27)" (NOC-AE-09002395) (ML090680781)

In the referenced letters, STP Nuclear Operating Company (STPNOC) submitted license amendment requests for deviation from the South Texas Project Fire Protection Program requirements. This submittal responds to NRC questions regarding these requests received by electronic mail on January 7, 2010.

STPNOC previously responded to the NRC questions by electronic mail on January 11, 2010. This letter provides additional clarification and thus supersedes the response provided via electronic mail.

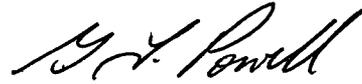
There are no new commitments in this submittal.

A006  
NRK

If you have any questions, please call Ken Taplett at 361-972-8416 or me at 361-972-7566.

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

Executed on 1-20-2010  
Date



G. T. Powell  
Vice President, Engineering

Attachment: STPNOC Response to Request for Additional Information

cc:

(paper copy)

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**STPNOC RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION**

**South Texas Project (STP)  
Units 1 & 2  
Docket Nos. STN 50-498, STN 50-499  
Response to Request for Additional Information (RAI)  
Regarding License Amendment Requests for Deviation from  
Fire Protection Program Requirements (TAC Nos. ME0824, ME0825, ME1389, ME1390)**

Note: The licensee's RAI response to which the NRC refers in the following RAI was submitted by STPNOC to the NRC Document Control Desk on November 20, 2009. (NOC-AE-09002489) (ML093350537)

**NRC RAI**

**The STP Fire Hazards Analysis Report, Amendment 16, page 3.10-4 (ML083260175) appears to include generic deviations from fire codes, but nothing specific to fire areas 27 and 31.**

**Can you please confirm that this was intended?**

**The NRC staff is concerned that if this is what the licensee intended, it was not what the staff approved in Supplemental Safety Evaluation Report (SSER) 3, as stated in the licensee's RAI response. In SSER 3, the staff accepted deviations from full suppression due to 3-hour fire barriers. So the staff is unclear what suppression is installed in the fire areas, especially the fire area with partial suppression.**

**What we need to know is if there is sprinkler protection in the areas where a fire is capable of damaging redundant trains. It appears from the paper work that this is the case, but we need confirmation.**

**Please provide your response at your earliest convenience.**

**STPNOC Response**

The deviations from the National Fire Protection Association code in Section 3.10.4 of the STP Fire Hazards Analysis Report (FHAR), which includes Amendment 16, page 3.10-4, are applicable to all fire areas in the STP Fire Protection Program. Deviations from the STP Fire Protection Program for specific fire areas are documented under the analysis of each fire area. The analysis of each fire area is located throughout Section 3 of the STP FHAR.

During the initial licensing process, STP acknowledges that the staff approved the STP Fire Protection Program for certain fire areas (including Fire Area 27) that did not have full

suppression because the circuits required for safe shutdown were<sup>1</sup> protected by 3-hour fire barriers.

The following discussion regarding if there is sprinkler protection in the areas where a fire is capable of damaging redundant trains is consistent with the information previously provided in References 1 and 2 in the cover letter to this Attachment.

In Fire Area 27, the cables for the two redundant volume control tank outlet motor-operated valves and the cables for the two redundant charging pump suction valves from the refueling water storage tank meet III.G.2 circuit separation criteria with the exception of Fire Zone Z127 where the cables are located adjacent to one another. The cabling for Train B Charging Pump discharge valve CV-MOV-8377B is also located in Fire Zone Z127. There is no sprinkler protection in this fire zone. Fire Zone Z127 has very few combustibles, such that the loading has a fire severity of 0.33 minutes. The fire zone boundaries within Fire Area 27 are heavy concrete. Most zone boundaries contain 3-hour rated fire doors. The fire zone door between Fire Zone Z127 and Fire Zone Z138 is not fire rated but is of heavy steel construction. These features provide significant obstructions that will inhibit zone-to-zone fire propagation. In conclusion, a fire is not capable of damaging circuits for the credited train in Fire Zone Z127.

The circuitry for the air-operated solenoid valves to operate Seal Water Injection Valve CV-HCV-0218 is located in Fire Area 27, specifically Fire Zones Z138 and Z139. Ceiling mounted area coverage automatic wet pipe sprinkler systems are installed in Fire Zones Z138 and Z139. Again, most zone boundaries in Fire Area 27 contain 3-hour rated fire doors. An exception is a fire door to a stairwell that is a 2-hour rated boundary. These features provide significant obstructions that will inhibit zone-to-zone fire propagation. Thus, there is sprinkler protection in the fire zones where a fire is capable of damaging the circuitry to the air-operated solenoid valves operating the valve credited in the safe shutdown train.

SSER 3 addressed six fire areas, including Fire Area 27, which did not have full area suppression in accordance with Section III.G of Appendix R. Fire Area 31 was not one of these fire areas. Fire Area 31 has area wide suppression as previously stated in the Licensee Amendment Request that is the subject of this request for additional information.

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<sup>1</sup> In 1998, STP completed removing the 3-hour fire wrap barriers (i.e., Thermo-lag) from circuits and cabling (including those in Fire Area 27) because the qualification of Thermo-lag came into question. STP approved the change based on an evaluation performed pursuant to 10 CFR 50.59. The evaluation concluded that the ability of the plant to achieve post fire safe shutdown utilizing a single train of equipment is assured because a redundant pathway of systems and components necessary to achieve and maintain safe shutdown will remain available following a fire in any fire area. As the result of more recent NRC generic communications stating that the use of manual actions in lieu of meeting circuit separation requirements is an adverse change, STP submitted License Amendment Requests (referenced in the cover letter to this Attachment) for approval to credit the use of manual actions in lieu of meeting circuit separation requirements.