

NRR-PMDAPEm Resource

From: Singal, Balwant
Sent: Friday, April 11, 2014 7:56 AM
To: Lsterling@stpegs.com
Cc: Morris, James [jrmorris@STPEGS.COM] (jrmorris@STPEGS.COM)
Subject: South Texas Project License Amendment Request for Fire Protection Program Change Request for Additional Information - TACs MF2477 and MF2478
Attachments: MF2477-RAI-AFPB.doc

Lance,

By letter dated July 23, 2013 (Agencywide Documents Access and Management System (ADAMS), Accession No. ML13212A243, STP Nuclear Operating Company, (STPNOC, the licensee) requested a license amendment for the South Texas Project (STP), Units 1 and 2, from their commitment to certain technical requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix R, Section III.L, as documented in the STP Fire Hazards Analysis Report, for crediting the performance of certain operator actions in the control room in the event that a fire necessitates the evacuation of the control room.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided by the licensee and determined that additional information is needed to complete the review. A copy of the request for additional information (RAI) is attached. Draft RAIs were transmitted to STPNOC on April 8, 2014. Mr. Jim Morris of STPNOC informed us on April 10, 2014 that a clarification call is not needed and agreed to respond to these RAIs within 30 days from the date of this e-mail. Please advise by April 10, 2014 if a RAI clarification is needed. Please treat this e-mail as formal transmittal of RAIs.

Thanks.

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"Morris, James [jrmorris@STPEGS.COM] (jrmorris@STPEGS.COM)" <jrmorris@STPEGS.COM>
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REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST

REVISION TO THE FIRE PROTECTION PROGRAM

SOUTH TEXAS PROJECT, UNITS 1 AND 2

By letter dated July 23, 2013 (Agencywide Documents Access and Management System (ADAMS), Accession No. ML13212A243, STP Nuclear Operating Company, (the licensee) requested a license amendment for the South Texas Project (STP), Units 1 and 2, from their commitment to certain technical requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix R, Section III.L, as documented in the STP Fire Hazards Analysis Report, for crediting the performance of certain operator actions in the control room in the event that a fire necessitates the evacuation of the control room.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided by the licensee and determined that the following additional information is needed to complete the review.

Request for Additional Information (RAI)

RAI-01 Physical Separation

Section 3.5 of Enclosure 1 to the request refers to physical and flame retardant barriers and thermal insulating material installed between redundant devices but does not specify whether a particular assembly is utilized for this purpose and whether it carries any classification or rating by a recognized testing laboratory.

Please state what materials or assemblies are used to accomplish the physical separation noted in Section 3.5 and provide any applicable design or testing certifications for their use in the noted applications.

RAI-02 Transfer of Control

Section 3.7.4 of Enclosure 1 to the request states that the required actions are backed up from outside the control room within a short period of time but does not specify what that duration is and whether the operator manual actions that are performed outside the control room have been evaluated for feasibility and reliability, e.g., per NUREG-1852 "Demonstrating the Feasibility and Reliability of Operator Manual Actions in Response to Fire (NUREG-1852)," October 2007 (ADAMS Accession No. ML073020676)

ENCLOSURE

Please state what the licensee has assumed for the time necessary to back up the control room actions at the alternate location and provide a technical basis for the assumed time, including a discussion of feasibility and reliability, to perform the operator manual actions.

RAI-03 Typo in Description of Limiting Event

There appears to be a typo in the description of the Case 1b results in Section 3.8.4 of Enclosure 1. The licensee stated that “Core peak exit fluid temperature remains well below approaches 1200°F so that fuel integrity is not challenged,” but it is not clear whether core peak exit fluid temperature remains well below 1200°F or approaches 1200°F. Please clarify the statement noted above.

RAI-04 Fire Model Analysis

Section A3.2.2 of Enclosure 1 states that smoke detectors are present in each cabinet adjacent to the exhaust ventilation duct but it is not clear whether these are the same fire detectors noted in Section 3.3. Section A3.2.2 also states that the automatic detection system does not isolate ventilation upon actuation.

RAI-04.1

Please clarify what type of detectors are located in the control cabinets and provide a technical justification for why receipt of a detection alarm signal does not prompt isolation of the ventilation system as to not propagate products of combustion across fire areas or zone boundaries, e.g. from outside the control room fire area or the relay room fire zone.

Table A3.1 provides the cable acceptance criteria used in the fire modeling analysis but does not include any tenability criteria for operators.

RAI-04.2

Please clarify whether the licensee evaluated any tenability criteria to understand whether the control room remains habitable during the postulated fire scenarios and provide a technical justification for any assumptions related to main control room habitability made during the analysis. If tenability was evaluated, provide the criteria used to do so and state whether an evacuation due to a loss of tenability would occur for the postulated fire scenarios.

Section A3.2.4 describes the ignition sources and fire size assumed for the analysis but does not state what material or fuel properties were used in the analysis.

RAI-04.3

Please describe the material properties of the combustibles that were modeled and the material properties used in the model. If there were differences between the installed and modeled material properties provide a technical basis that justifies how the modeled material properties are bounding.

Section A3.3 states that ignition of secondary combustibles around CP001 was assumed not to occur but does not state why this was assumed or whether it was based on modeling results.

RAI-04.4

Please provide a technical justification for the assumption that secondary combustibles are assumed not to ignite.

Section A3.4.1 makes reference to an ambient heat flux and depicts graphs of certain criteria over time but does not explain what is intended by this term or where the measurements were recorded within the model domain.

RAI-04.5

Please explain what is intended by the term ambient heat flux and why Figure A3.3 appears to show it exceeding the acceptance criterion for cabinet CP001. In addition, describe the locations of the data collection nodes in the model that recorded the stated values for heat flux and temperature and provide a technical justification as to why the data collection locations are considered bounding.