



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



September 29, 2010
U7-C-STP-NRC-100217

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville MD 20852-2738

South Texas Project
Docket No. 52-001
Reply to Notice of Violation

Reference: Letter, Juan Peralta to Scott M. Head: "South Texas Project Nuclear Operating Company Response to U.S. Nuclear Regulatory Commission (NRC) Inspection Report 05200001/2010-202 and Notice of Violation (NOV)" dated September 22, 2010 (ML102640660).

Attached is STP Nuclear Operating Company's response to the NRC request for additional information contained in the referenced letter.

There are no commitments in this submittal.

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 9/29/10

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

rhs
Attachment:
Reply to Notice of Violation

IE01
D050
NED

STI 32756336

Designate as original per PM, Stacy Joseph 10/12/2010

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

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Additional Request #1:

Reanalysis - In Attachment 1 to your letter, Item 5, you stated that "STPNOC reperformed the entire fuel cooling assessment to validate that fire areas, walls and doors were correctly identified and credited." Further, under "Summary," you stated that "reanalysis of the fuel cooling and structural analyses were completed and the associated reports were revised based on STPNOC's understanding of the NRC's interpretation of the guidance in NEI 07-13".

Please summarize the breadth and depth of the reanalysis performed as compared to the original fuel cooling assessment and structural analyses available to the NRC staff during the inspection. In addition, please describe how this reanalysis confirmed that the issues identified in the inspection findings are not symptomatic of broader assessment deficiencies.

Response:

The fuel cooling assessment involved a complete re-analysis that was equivalent in depth and breadth to the assessment reviewed during the NRC inspection. The fuel cooling assessment was re-performed using the guidance in NEI 07-13, Revision 7, Section 3.0, and the results compared to the assessment as reviewed during the inspection. The re-analysis verified that the NEI 07-13 criteria or rule sets were properly applied and assessed the extent of condition. The only change needed to the criteria applied in the initial assessment was to expand the fire damage footprints to ensure that once fire entered any portion of a fire area, all elevations of the fire area were considered fire damaged, i.e. implementing STPNOC's new understanding of NRC's interpretation of NEI 07-13, Revision 7. The physical damage footprints, shock damage footprints, and fire damage footprints were determined and the composite damage footprints and strike summaries in Appendix D of the assessment report were completely re-performed consistent with these expanded damage footprints. The only changes required due to the expanded fire spread was the need to create a new fire area (F1102) encapsulating Rooms 111 and 118 and upgrading the doors to these rooms to 3-hour, fire-rated doors. These changes were needed to protect the suppression pool level instrument rack associated with the AFI system. A comparison between the initial assessment and the reassessment did not identify any other misapplied criteria or rule sets or the need for any changes other than the new fire area F1102 and the fire rated doors to Rooms 111 and 118. Since the reassessment included the expanded damage footprints, it was put into the assessment report in place of the initial assessment. The results of the fuel cooling reassessment are documented in Revision 1 to ERIN report # C177080001-8762, dated August 5, 2010.

The structural assessment report was expanded to address issues identified during the inspection; however, the analyses described in the structural assessment report reviewed during the NRC inspection were not repeated. As described in the Reply to Notice of Violation, the additional structural analyses included confirmation of the 5 psid capability of damaged walls and evaluation of aircraft impact on the gantry crane. The additional assessment of the wall capability confirmed that the combination of the exterior wall and reinforced second wall is a stronger configuration than the n-wall rule set and is considered capable of resisting a 5 psid pressure pulse in the damaged condition. These walls will stop debris and wreckage and also prevent the spread of fire as long as there are no doors in the

wall for any bay of interest. Therefore, it was concluded that the 2nd wall has more pressure retaining capability than the nth wall in the NEI 07-13 rule set.

The assessment for the gantry crane impacting the shield blocks was based on a comparison to the existing assessment in the structural report of the direct impact on the shield blocks of an aircraft fuselage, and by comparison shows that the aircraft impact assessment on the shield blocks is bounding.

Extent of Condition

As stated above, the re-analysis of the fuel cooling assessment evaluated the extent of condition regarding the inspection findings and verified that they were not symptomatic of broader assessment deficiencies as the only change needed to the criteria applied in the initial assessment was to expand the fire damage footprints to ensure that once fire entered any portion of a fire area, all elevations of the fire area were considered fire damaged based on STPNOC's new understanding of NRC's interpretation of NEI 07-13, Revision 7.

The issues related to the structural assessment report did not invalidate the conclusions of the assessment but did result in expansion of the assessment report to include additional information. Therefore, these findings were not symptomatic of broader assessment deficiencies

In addition, as stated in the Reply to Notice of Violation, STPNOC revised the ABWR STP AIA Amendment to include, as key design features, the assumptions of the assessment reports without which the success criteria would not be met.

Additional Request #2:

Effects of an aircraft impact on the gantry crane - In Attachment 1, Issue 1, you stated that an assessment was performed assuming that the incoming aircraft dislodges and projects the crane directly onto the shield blocks.

Please summarize your basis for the assumption that the incoming aircraft dislodges and projects the crane directly onto the shield blocks and not onto other areas of the refueling floor.

Response:

Investigation of the gantry crane impact on the drywell shield blocks addressed the adequacy of the shield blocks to protect the drywell head from perforation and any resulting effect on maintenance of core cooling. In addition, investigation of the effects of a potential impact of gantry crane components on the spent fuel pool verified that the fuel pool maintains its integrity as required by the AIA rule.

There was no need to investigate gantry crane impact on other areas of the refueling floor because impacts at these other locations would not have affected the assessment results since there is no shutdown cooling equipment located on the refueling floor. It would also not be necessary to consider whether a drop of the gantry crane could impact shutdown cooling equipment on the floor below the refueling floor because no credit was taken for this equipment in the fuel cooling assessment. The fuel cooling assessment assumes that every strike at the 4F level would result in the loss of the 3F and 3.5F floor below the crane as a result of fire.