Nuclear Operating Company

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

January 22, 2014
NOC-AE-14003074
10 CFR 50.54(f)

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

South Texas Project
Units 1 & 2
Docket Nos. STN 50-498, STN 50-499
STPNOC Partial Response to Request for Additional Information
Associated With Near-Term Task Force Recommendation 2.1, Flood Hazard Reevaluation
(TAC Nos. MF1110 and MF1111)

References:

1. Letter from NRC to All Power Reactor Licensees, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3 and 9.3, of the Near-Term Task Force Review of the Insights from the Fukushima Dai-ichi Accident" March 12, 2012 (ML12056A046).

2. Letter from G.T. Powell, STPNOC, to NRC Document Control Desk, "Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 Flooding of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident, Enclosure 2, Required Response 2, Flood Hazard Reevaluation Report", March 11, 2013 (ML13079A806)

3. Letter from B. K. Singal, NRC, to D.L. Koehl, STPNOC, "South Texas Project, Units 1 and 2 – Request for Additional Information Regarding Fukushima Lessons Learned – Flooding Hazard Reanalysis Report ", January 14, 2014 (ML13358A065)

On March 12, 2012 (Reference 1), the U.S. Nuclear Regulatory Commission (NRC) staff issued a letter requesting additional information per Title 10 of the Code of Federal Regulations, Section 50.54(f) (hereafter called the 50.54(f) letter). The 50.54(f) letter requested that licensees reevaluate the flooding hazards at their sites against present-day regulatory guidance and methodologies. STPNOC submitted the requested Flood Hazard Reevaluation Report to the NRC on March 11, 2013 (Reference 2)

ADDI
NRR

STI: 33810702

By letter dated January 14, 2014 (Reference 3), the NRC requested additional information (RAI) related to the flooding reevaluations. Per an agreement with the NRC, STPNOC will be responding to the RAIs in two parts. The first part of the STPNOC response addresses RAIs 1, 2, 7, 8 and 9. The second part of the STPNOC response will address RAIs 3, 4, 5 and 6 and will be submitted by February 13, 2014.

The requested information for RAIs 1, 2, 7, 8 and 9 is included in the attachment and enclosures submitted along with this letter

There are no commitments in this letter.

If there are any questions regarding this letter, please contact 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 January 22, 2014

G.T. Powell
Site Vice President

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Attachment: 1. STPNOC Partial Response to Request for Additional Information Related to Fukushima Lessons Learned Flooding Hazard Reevaluation Report

Enclosures: 1. Input files for RAIs 1, 2, 7, 8 and 9 (DVD labeled NOC-AE-14003074 Disc 1)

cc:
(paper copy)

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* Digital media enclosure is only being transmitted to the NRC Document Control Desk and to STPNOC's NRC Project Manager, Balwant K. Singal, for distribution to the NRC staff reviewers

STPNOC Partial Response to Request for Additional Information Related to Fukushima Lessons Learned Flooding Hazard Reevaluation Report

RAI 1: Local Intense Precipitation and Associated Site Drainage

Please provide electronic versions of the input files used for HEC-HMS analysis in the flood hazard reevaluation report (FHRR) related to the local intense precipitation analyses.

STPNOC Response:

The requested information is provided in the enclosed digital media (Disc 1).

RAI 2: Local Intense Precipitation and Associated Site Drainage

Please provide electronic versions of the input files used for HEC-RAS analysis in the FHRR related to local intense precipitation analyses.

STPNOC Response:

The requested information is provided in the enclosed digital media (Disc 1).

RAI 3: Local Intense Precipitation and Associated Site Drainage

Please provide descriptions of the sources of elevation data, the methods used to incorporate elevation measurements into local intense precipitation flood analysis, and the likely magnitude of the errors associated with these elevations.

STPNOC Response:

The requested information will be provided by February 13, 2014 as part of the second partial RAI response.

RAI 4: Local Intense Precipitation and Associated Site Drainage

Please provide a description of the basis used to classify Probable Maximum Flood (PMF) flow as shallow concentrated flow used in the Natural Resources Conservation Service (NRCS) TR-55 methodology.

STPNOC Response:

The requested information will be provided by February 13, 2014 as part of the second partial RAI response.

RAI 5: Failure of Dams and Onsite Water Control/Storage Structures

Please provide details of the ineffective flow areas and levees that were removed from the Halff Associates, Inc. HEC-RAS model while developing the HEC-RAS model used to reevaluate the flood hazard from upstream dam failures at the South Texas Project (STP), Units 1 and 2 site. Also, please provide a justification for removal of these features.

STPNOC Response:

The requested information will be provided by February 13, 2014 as part of the second partial RAI response.

RAI 6: Failure of Dams and Onsite Water Control/Storage Structures

Please provide details of the intra-basin flows that were allowed to occur in the HEC-RAS model. Also, because allowing intra-basin flows would reduce the discharge at STP, Units 1 and 2 site, the licensee is requested to provide a justification how the flood hazard from upstream dam failures would still be conservative.

STPNOC Response:

The requested information will be provided by February 13, 2014 as part of the second partial RAI response.

RAI 7: Failure of Dams and Onsite Water Control/Storage Structures

Please provide electronic versions of the input files used for HEC-RAS analysis in the FHRR related to upstream dam failures.

STPNOC Response:

The requested information is provided in the enclosed digital media (Disc 1)

RAI 8: Failure of Dams and Onsite Water Control/Storage Structures

Please provide the electronic version of National Weather Service (NWS) BREACH model input files used in the recent Main Cooling Reservoir (MCR) breach analyses of the three postulated breach locations described in FHRR Section 2.3.

STPNOC Response:

The requested information is provided in the enclosed digital media (Disc 1).

Note: As described in the FHRR (Reference 2) there were no BREACH model simulations performed for the Unit 1 and 2 flood analysis. Rather, the output hydrograph of the BREACH model that had been developed for the Units 3 and 4 analyses was used. Also note that the same hydrograph was used for all three breach locations.

RAI 9: Failure of Dams and Onsite Water Control/Storage Structures

Please provide a description of model configuration, boundary conditions, and model parameters for the three RMA2 simulations. Also, Please provide the RMA2 input files, including the computational grids, used for the three simulations.

STPNOC Response:

The requested information is provided in the enclosed digital media (Disc 1).

Note: A separate input and grid file is provided for the Unit 1 BREACH model, the Unit 2 BREACH model, and the Office BREACH model.