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

December 14, 2016
NOC-AE-16003425
10 CFR 54
File No. G25

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

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
STPNOC Review and Comment of License Renewal Application
Safety Evaluation Report with Open Items
(TAC NOS. ME4936 and ME4937)

References:

1. Letter; G. T. Powell to the NRC Document Control Desk; "License Renewal Application", NOC-AE-10002607; dated October 25, 2010. (ML103010257)
2. Letter; NRC to STP Nuclear Operating Company; "Safety Evaluation Report With Open Items Related to STP Nuclear Operating Company, Units 1 and 2 (TAC No. ME4936 and ME4937)"; dated October 14, 2016. (ML16271A011)

By Reference 1, STP Nuclear Operating Company (STPNOC) submitted an application to the Nuclear Regulatory Commission (NRC) for the renewal of Facility Operating Licenses NPF-76 and NPF-80, for South Texas Project (STP) Units 1 and 2, respectively. In Reference 2, the NRC transmitted the Safety Evaluation Report (SER) with Open Items related to the license renewal of the South Texas Project, Units 1 and 2. STPNOC is providing review comments to the License Renewal Safety Evaluation Report, Reference 2.

There are no regulatory commitments in this letter.

A147
NRR

STI: 34416560

Should you have any questions regarding this letter, please contact Arden Aldridge, STP License Renewal Project Lead, at (361) 972-8243, or Rafael Gonzales, STP License Renewal Project regulatory point-of-contact, at (361) 972-4779.

Michael P. Murray
Manager, Regulatory Affairs

rjg

Enclosure:

Comments Regarding the Safety Evaluation Report (SER) with Open Items Dated October 2016 Related to the License Renewal of South Texas Project, Units 1 and 2

cc:
(paper copy)

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
1600 East Lamar Boulevard
Arlington, TX 76011-4511

Lisa M. Regner
Senior Project Manager
U.S. Nuclear Regulatory Commission
One White Flint North (MS 8 G9A)
11555 Rockville Pike
Rockville, MD 20852

NRC Resident Inspector
U. S. Nuclear Regulatory Commission
P. O. Box 289, Mail Code: MN116
Wadsworth, TX 77483

Lois James
License Renewal Project Manager (Safety)
One White Flint North (MS O11-F1)
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Tam Tran
License Renewal Project Manager
(Environmental)
One White Flint North (MS O11F01)
U. S. Nuclear Regulatory Commission
Washington, DC 20555-0001

(electronic copy)

Morgan, Lewis & Bockius LLP
Steve Frantz

U.S. Nuclear Regulatory Commission
Lisa M. Regner
Lois James
Tam Tran

NRG South Texas LP
Chris O'Hara
Jim von Suskil
Skip Zahn

CPS Energy
Kevin Pollo
Cris Eugster
L. D. Blaylock

City of Austin
Elaina Ball
John Wester

Texas Dept. of State Health Services
Helen Watkins
Robert Free

Comments Regarding the Safety Evaluation Report (SER) with Open Items Dated October 2016 Related to the License Renewal of South Texas Project, Units 1 and 2

Comments Regarding the Safety Evaluation Report (SER) with Open Items Dated October 2016 Related to the License Renewal of South Texas Project, Units 1 and 2

No.	SER Location		Comment	Suggested Resolution (suggested text is shown by underlining/strikethrough formatting)
	Section	Page		
1	1.4	1-12	In Table 1.4-1, Current Interim Staff Guidance Item "Wall Thinning Due to Erosion Mechanisms" The SER Section listed 3.0.3.2.10 should be 3.0.3.2.4 and 3.0.3.2.6	SER Section ~~3.0.3.2.10~~ 3.0.3.2.4 3.0.3.2.6
2	1.4	1-13	In Table 1.4-1, "Aging Management of Loss of Coating or Lining Integrity for Internal Coating/Linings on In-Scope Piping, Piping Components, Heat Exchangers and Tanks" Add SER Sections 3.0.3.2.6 and 3.0.3.2.18	SER Section 3.0.3.2.6 3.0.3.2.10 3.0.3.2.18
3	3.0.3.2.10	3-86	Item (d) second paragraph, the reference to the AMP should be AMP XI.M42 as modified by LR-ISG-2013-01	The staff finds the applicant's response acceptable because the acceptance criteria for degraded coatings now includes all the aging mechanisms recommended in AMP XI.M42 ~~XI.M27~~, as modified by LR-ISG-2013-01 ~~LR-ISG-2012-012~~, and repairing the coatings based on any indication of the mechanisms helps ensure that degraded coatings are repaired prior to potentially affecting the component's or downstream component's intended function.
4	3.1.2	3-265	Table 3.1-1 (3.1.1.22) does not show the changes made to the Reactor (Rx) vessel internals AMP response in NOC-AE-15003270.	See STPNOC Letter NOC-AE-15003270 dated June 30, 2015. (ML15197A029)

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5	3.1.2	3-266	Table 3.1-1 (3.1.1.27) does not show the changes made to the Rx vessel internals AMP response in NOC-AE-15003270.	See STPNOC Letter NOC-AE-15003270 dated June 30, 2015. (ML15197A029)
6	3.1.2	3-267	Table 3.1-1 (3.1.1.30) does not show the changes made to the Rx vessel internals AMP response in NOC-AE-15003270.	See STPNOC Letter NOC-AE-15003270 dated June 30, 2015. (ML15197A029)
7	3.1.2	3-268	Table 3.1-1 (3.1.1.33) does not show the changes made to the Rx vessel internals AMP response in NOC-AE-15003270.	See STPNOC Letter NOC-AE-15003270 dated June 30, 2015. (ML15197A029)
8	3.1.2	3-269	Table 3.1-1 (3.1.1.37) does not show the changes made to the Rx vessel internals AMP response in NOC-AE-15003270.	See STPNOC Letter NOC-AE-15003270 dated June 30, 2015. (ML15197A029)
9	3.1.2	3-273	Table 3.1-1 (3.1.1.60) does not show the changes made to the Rx vessel internals AMP response in NOC-AE-15003270.	See STPNOC Letter NOC-AE-15003270 dated June 30, 2015. (ML15197A029)
10	3.1.2	3-273	Table 3.1-1 (3.1.1.63) does not show the changes made to the Rx vessel internals AMP response in NOC-AE-15003270.	See STPNOC Letter NOC-AE-15003270 dated June 30, 2015. (ML15197A029)
11	3.1.2	3-277	Table 3.1-1 (3.1.1.80) does not show the changes made to the Rx vessel internals AMP response in NOC-AE-15003270.	See STPNOC Letter NOC-AE-15003270 dated June 30, 2015. (ML15197A029)

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12	3.1.1	3-264	Table 3.1.1 (3.1.1.16) is applicable to STP for loss of material due to general, pitting and crevice corrosion of carbon steel. See AMR table 3.1.2.4. Since STP has Model Delta 94 steam generators the additional inspections for Westinghouse Model 44 and 51 steam generators are not applicable as stated in LRA Section 3.1.2.2.2.4.	Revise Staff Evaluation Column to read Consistent with NUREG-1801. See further evaluation in Section 3.1.2.2.2.4.
13	3.1.1	3-272	Table 3.1.1 (3.1.1.57) is not applicable to STP. STP does not have any CASS that is susceptible to thermal aging embrittlement. See SER Section 3.1.2.1.6.	Revise Staff Evaluation Column to read Not applicable to STP (see SER Section 3.1.2.1.6).
14	4.1.2.1.2	4-7	The SER section listed in the third paragraph last sentence on page 4-7 should be 3.0.3.2.22.	The staff's evaluation of the applicant's AMP B2.1.27 is provided in SER Section ~~3.0.3.1.9~~ 3.0.3.2.22.
15	4.4.2	4-107	The SER section listed in the first paragraph on page 4-107 should be 3.0.3.1.7.	On the basis of the AMP audit and as documented in SER Section ~~3.0.3.1.8~~ 3.0.3.1.7, "Environmental Qualification (EQ) of Electrical Components," the staff finds that the EQ Program is consistent with the GALL Report. The staff further concludes that the applicant's EQ of Electrical Equipment TLAA is implemented per the requirements in 10 CFR 54.21(c)(1)(iii).
16	4.5.2	4-109	The SER section listed in the fourth paragraph last sentence on page 4-109 should be 3.0.3.1.8.	The staff's review of the Concrete Containment Tendon Prestress Program is discussed in SER Section ~~3.0.3.1.9~~ 3.0.3.1.8.

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17	4.5.2	4-111	The SER section listed in the second paragraph last sentence on page 4-111 should be 3.0.3.1.8.	The results of the review are documented in the staff evaluation of the Concrete Containment Tendon Prestress Program in SER Section ~~3.0.3.1.9~~ 3.0.3.1.8.
18	4.5.2	4-112	The SER section listed in the second paragraph on page 4-112 should be 3.0.3.1.8.	This issue is discussed further in SER Section ~~3.0.3.1.9~~ 3.0.3.1.8, "Concrete Containment Prestress."
19	Appendix A Item No 4	A-2	The text "No later than the date the renewed operating license is issued" goes with commitment "Enhance the Open-Cycle Cooling Water System program procedures to:"	See STPNOC Letter NOC-AE-15003303 dated November 12, 2015. (ML15334A354
20	Appendix A Item No 4	A-3	Revise (NOS) to (NCS).	Require coating inspections and tests be performed by a qualified Nuclear Coating Specialist (NCS ~~NOS~~) as defined by ASTM D7108 endorsed in RG 1.54.
21	Appendix A Item No 13	A-9	Remove the added text "(procedures, inspections, or other, as appropriate) by doing the following". This text was not in the LRA or referenced letters.	Enhance plant specifications to ~~(procedures, inspections, or other, as appropriate) by doing the following~~:
22	Appendix A Item No 13	A-10	Remove the following duplicate bullet "Use of excessive cathodic protection polarized potential on coated piping should be avoided. The limiting critical potential should not be more negative than 1200 mV relative to a copper/copper sulfate reference electrode (CSE)."	Use of excessive cathodic protection polarized potential on coated piping should be avoided. The limiting critical potential should not be more negative than 1200 mV relative to a copper/copper sulfate reference electrode (CSE). ~~Use of excessive cathodic protection polarized potential on coated piping should be avoided. The limiting critical potential should not be more negative than 1200 mV relative to a CSE.~~

23	Appendix A Item No 13	A-12	Fix the formatting of the second bulleted item. See STPNOC Letter NOC-AE-16003385 dated June 28, 2016. (ML16190A135)	• Specify that Category E inspections be used when the cathodic protection system has been installed but the portions of the piping covered by that system fail to meet the acceptance criteria. Category E inspections are 5 percent, NTE 5. The following condition must be present. ○ Coatings and backfill are provided in accordance with STP backfill specification. ○ There have been no leaks in buried piping due to external corrosion and no significant coating degradation or metal loss in more than 10 percent of inspections conducted. ○ Soil has been demonstrated to be not corrosive for the material type using the following. ▪ A minimum of three sets of soil samples will be obtained in the vicinity where the cathodic protection system fails to meet the acceptance criteria. ▪ The soil will be tested for soil resistivity, corrosion accelerating bacteria, pH, moisture, chlorides, sulfates, and redox potential. ▪ The potential soil corrosivity will be determined for each material type of buried in-scope piping in the vicinity of the failed cathodic protection system. In addition to evaluating each individual parameter, the overall soil corrosivity will be determined. ▪ If portions of the installed cathodic protection system fail to meet the acceptance criteria, soil testing will be conducted at a minimum of once in each 10-year period starting at the time when it was determined that the cathodic protection system failed to meet the acceptance.

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24	Appendix A Item No 39	A-25	Revise Item 39 per STPNOC Letter NOC-AE-16003394 dated July 28, 2016. (ML16221A391)	Enhance the Selective Leaching of Aluminum Bronze procedures to: • Visually examine aluminum bronze materials exposed during inspection of the buried essential cooling water piping for evidence of ~~leakage~~ coating degradation and • If degradation is identified near a weld a volumetric examination will be performed to determine if cracking of the weld is occurring. • If a leak from buried aluminum bronze welds is discovered by surface water monitoring or during a buried ECW piping inspection, a section of each leaking weld will be removed for destructive metallurgical examination.