



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

December 14, 2011

Mr. D. W. Rencurrel
Sr. Vice President, Technical Support and Oversight
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE SOUTH TEXAS PROJECT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION – AGING MANAGEMENT, SET 10 (TAC NOS. ME4936 AND ME4937)

Dear Mr. Rencurrel:

By letter dated October 25, 2010, STP Nuclear Operating Company (STPNOC or the applicant) submitted an application pursuant to Title 10 of the *Code of Federal Regulations*, Part 54, to renew operating licenses NPF-76 and NPF-80 for South Texas Project, Units 1 and 2, for review by the U.S. Nuclear Regulatory Commission (NRC or the staff). The staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review.

These requests for additional information were discussed with Gary Warner, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-3873 or by e-mail at john.daily@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "John W. Daily", written in a cursive style.

John W. Daily, Senior Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure:
As stated

cc w/encl: Listserv

SOUTH TEXAS PROJECT, UNITS 1 AND 2,
REQUEST FOR ADDITIONAL INFORMATION
AGING MANAGEMENT, SET 10
(TAC NOS. ME4936 AND ME4937)

STP One-Time Inspection of ASME Code Class 1 Small-Bore Piping (036)
RAI B2.1.19-3

Background

The applicant submitted its license renewal application (LRA), which included Appendix A1.19 and Appendix B2.1.19, on October 25, 2010. The applicant amended the LRA, along with Appendix A1.19 and Appendix B2.1.19, by letter dated June 16, 2011.

The staff issued request for additional information (RAI) B2.1.19-1 in a letter dated August 15, 2011, requesting the applicant to provide information on weld population and inspection sample size, and to update its UFSAR supplement accordingly.

In its response to RAI B2.1.19-1 dated Sept 15, 2011, the applicant stated that LRA Appendix A1.19 and Appendix B2.1.19 would be revised to include the weld population and inspection sample size. However, the applicant did not revise LRA Appendix B2.1.19 or the UFSAR Supplement in LRA Section A1.19.

By letter dated October 18, 2011, the staff issued RAI B2.1.19-2 requesting that the applicant revise Appendix A1.19 and Appendix B2.1.19 to include the weld population and inspection sample size information and to update its UFSAR supplement accordingly.

In its responses dated November 4 and 17, 2011, to RAI B2.1.19-2, the applicant provided the revised LRA Appendix A1.19 and Appendix B2.1.19.

Issue

The latest amendments to LRA Appendix A1.19 and Appendix B2.1.19 provided by the applicant contain an exception which was previously deleted in a June 16, 2011, amendment. They also contain NUREG-1801 consistency discussion and program conclusion which were in the original LRA but were also removed in the June 16, 2011, amendment. The staff needs clarification regarding why the applicant's latest amendments did not include previous changes provided in its June 16, 2011, submittal.

Request

Revise LRA Appendix A1.19 and Appendix B2.1.19 appropriately to reflect the latest changes, or provide technical basis to justify why previous changes were removed.

ENCLOSURE

Boric Acid Corrosion - (010)

RAI 3.3.1.88-2

Background

By letter dated September 22, 2011, the staff issued RAI 3.3.1.88-1, requesting the applicant to state why aluminum insulation in LRA Table 3.3.2-19 was not managed for loss of material due to boric acid corrosion.

In its response dated October 25, 2011, the applicant stated that the aging management evaluation for a treated borated water leakage environment is considered applicable only for components that contain treated borated water, and is not applicable for adjacent system components or insulation on the piping that contains the treated borated water. The applicant also stated that it is possible that the aluminum sheathing could be exposed to borated water leakage. The applicant further stated that boric acid corrosion caused by treated borated water leakage from the system onto the aluminum sheathing is managed by the Boric Acid Corrosion Program.

GALL Report, Revision 2, AMP XI.M10, "Boric Acid Corrosion Program," "scope of program" program element states that the program covers any structures or components on which boric acid corrosion may occur. The AMP XI.M10 program description also states that the scope of the evaluations, assessments, and corrective actions include all observed leakage sources and the affected structures and components. The GALL Report includes several items to manage boric acid corrosion for components that are adjacent to piping that contains treated borated water. These include, but are not limited to, item VII.E1.A-79 (steel external surfaces), VII.E1.AP-1 (aluminum piping), and VII.I.AP-66 (copper alloy >15% Zn or >8% Al piping).

SRP-LR, Revision 2, Section A.1.2.1 states "[a]lthough bolted connections are not supposed to leak, experience shows that leaks do occur, and the leakage could cause corrosion. Thus, the aging effects from leakage of bolted connections should be evaluated for license renewal."

Issue

1. Given that the applicant stated that it is possible that the aluminum sheathing could be exposed to borated water leakage, it is not clear to the staff why the appropriate AMR item for a borated water leakage environment does not appear in LRA Table 3.3.2-19.
2. Based on a review of the AMR Table 2s and general knowledge of the layout of PWR systems, the staff considers it possible that there are other in-scope systems that have components that are adjacent to piping that contains borated water and, therefore, are potentially exposed to borated water leakage. If this is the case, each applicable Table 2 should have AMR item(s) that reflect the aging management of these components in the borated water leakage environment.

Request

1. Include an AMR item for the aluminum sheathing exposed to air with borated water leakage in LRA Table 3.3.2-19.

2. Include AMR item(s) in all applicable AMR Table 2s for a borated water leakage environment for all in-scope, susceptible components that are adjacent to locations in borated water piping where leakage is most likely to occur (e.g., bolted joints, gasket and flanged connections).

RAI 4.7.3-2 (066)

Background

In a letter dated September 21, 2011, the staff issued RAI 4.7.3-1, requesting that the applicant state how visual inspections in the Open-Cycle Cooling Water System program are capable of ensuring that corrosion in the essential cooling water (ECW) system will not exceed the 40-mil corrosion allowance, given that LRA Section 4.7.3 documented the use of this program as the disposition for the related TLAA.

In its response dated November 21, 2011, the applicant stated that ECW corrosion is managed consistent with NRC Generic Letter 89-13. The applicant also stated that, when visual inspections identify corrosion, thickness measurements are taken as part of the corrective action program.

Issue

The staff lacks sufficient information to conclude that visual inspections alone will be capable of prompting follow-up thickness measurements such that the 40-mil corrosion allowance will not be exceeded during the period of extended operation. The staff believes that visual examinations may need to be augmented with physical measurements, using tools such as inside calipers, to ensure that corrosion is not approaching the limit. Given that physical measurements may be required to augment the visual inspections, the staff requires further details on how the program will manage this TLAA, such as how often physical measurements will be conducted, how many locations will be checked, how the most susceptible location will be selected, what devices will be used, and the criteria that would result in a follow-up volumetric examination.

Request

1. State how visual inspections of the ECW system, without augmented physical measurements, will be capable of detecting a 40-mil loss of material.
2. Alternatively, state what augmented inspection techniques will be used to detect loss of material. Include information such as how often physical measurements will be conducted, how many locations will be checked, how the most susceptible location will be selected, what devices will be used, and the criteria that would result in a follow-up volumetric examination in sufficient detail such that the staff can independently conclude that the inspection methodologies will adequately manage loss of material for this TLAA.

December 14, 2011

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Sincerely,
/RA/

John W. Daily, Senior Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure:
As stated

cc w/encl: Listserv

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ADAMS Accession No.: ML11332A100

*concurrence via e-mail

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NAME	SFiguroa	JDaily	DMorey	JDaily
DATE	11/29/11	12/13/11	12/14/11	12/14/11

OFFICIAL RECORD COPY

Letter to D. W. Rencurrel from John W. Daily dated December 14, 2011

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 APPLICATION – AGING MANAGEMENT, SET 10 (TAC NOS. ME4936 AND
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