



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

February 16, 2012

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

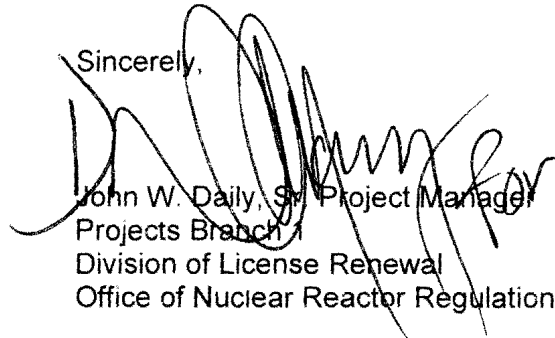
SUBJECT: PLAN FOR THE ALUMINUM-BRONZE AGING MANAGEMENT PROGRAM
REGULATORY AUDIT REGARDING THE SOUTH TEXAS PROJECT, UNITS 1
AND 2, LICENSE RENEWAL APPLICATION REVIEW (TAC NOS. ME4936 AND
ME4937)

Dear Mr. Rencurrel:

By letter dated October 25, 2010, STP Nuclear Operating Company (STPNOC or the applicant) submitted an application for renewal of operating licenses NPF-76 and NPF-80 for South Texas Project (STP), Units 1 and 2. The staff of the U.S. Nuclear Regulatory Commission (NRC or the staff) is reviewing this application in accordance with the guidance in NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants."

The staff plans to conduct a followup regulatory audit of your aluminum-bronze aging management program and associated issues at a Rockville, MD, location to be provided by STPNOC, on February 29, 2012, in accordance with the enclosed regulatory audit plan. If you have any questions, please contact me by telephone at 301-415-3873 or by e-mail at john.daily@nrc.gov.

Sincerely,



John W. Daily, Sr. 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



Audit Plan

Followup Audit on Aluminum-Bronze Aging Management Program for the South Texas Project, Units 1 and 2 License Renewal Application

February 29, 2012

**Division of License Renewal
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission**

ENCLOSURE

License Renewal Aging Management Program Audit Plan South Texas Project

1. Background

By letter dated October 25, 2010, STP Nuclear Operating Company (STPNOC or the applicant), submitted to the U.S. Nuclear Regulatory Commission (NRC or the staff) its application for renewal of Operating License Nos. NPF-76 and NPF-80 for South Texas Project (STP), Units 1 and 2, respectively. The applicant requested renewal of the operating licenses for an additional 20 years beyond the 40-year current license terms, which expires on August 20, 2027, for Unit 1 and December 15, 2028, for Unit 2. The staff from the Division of License Renewal will lead a followup regulatory audit to gain a better understanding of the applicant's Aging Management Program (AMP) B2.1.37, "Selective Leaching of Aluminum Bronze" (aluminum bronze AMP) and associated aging management reviews, bases, and documentation as applicable.

2. Regulatory Audit Bases

License renewal requirements are specified in Title 10 of the *Code of Federal Regulations* (10 CFR), Part 54 (10 CFR Part 54), "Requirements for Renewal of Operating Licenses for Nuclear Power Plants." Guidance is provided in NUREG-1800, Revision 2, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants" (SRP-LR), dated December 2010, and in NUREG-1801, Revision 2, "Generic Aging Lessons Learned (GALL) Report," dated December 2010.

3. Regulatory Audit Scope and Methodology

The scope of this audit is to: (a) examine the applicant's aluminum bronze AMP and supporting documentation for STP Units 1 and 2; and (b) determine the level of consistency with corresponding GALL program(s) and aging management review(s) (AMRs). As this program is a plant-specific AMP, it is evaluated on an individual basis for all 10 program elements, along with any associated issues. While portions of this review have been completed by the staff, this followup audit will examine issues as needed in order for the staff to complete its review. Results of this audit will be ultimately documented in the staff's safety evaluation report (SER).

The SRP-LR allows an applicant's license renewal application (LRA) to declare its AMPs as being consistent with the AMPs described in the GALL Report. An applicant can also choose to establish one or more plant-specific AMPs. For a plant-specific AMP, it is incumbent on the applicant to ensure that the plant program contains appropriate descriptions and bases for all 10 elements of an aging management program, in accordance with Branch Technical Position RLSB-1 in the SRP-LR, Appendix A.1. The applicant's evaluations and bases for this program shall be documented and maintained in an auditable, retrievable form.

During this audit, the staff will utilize the following Scope and Agenda as a guide. The staff will also examine the applicant's program basis documents and related references for this AMP, review background calculations and evaluations as needed, and interview applicant representatives to obtain additional clarification related to the AMP.

SCOPE AND AGENDA

1. Entrance, introduction of personnel, review overall purpose of meeting
2. Overview of current aluminum bronze management programs, operating experience, repair and replacement activities, inservice inspection results, and current status of components (by Applicant)
3. Review the methodology, inputs, assumptions, and conclusions for the flaw calculations that demonstrate structural integrity of welded joints and large castings affected by selective leaching, with an emphasis on:
 - a. modeling of flaw dimensions and orientation, crack growth, and crack stability
 - b. how material properties were obtained
 - c. Acceptance criteria in STP calculations versus ASME Sections III and XI requirements
4. Review and discuss (this could be a breakout session if needed), with technical personnel, the metallurgical factors which appear to cause the observed selective leaching to be associated with weld heat affected zones. This discussion should include cracking in aluminum bronze throttle valve(s) as described in LER 499/2005-004. The staff is also interested in any micrographs of heat affected zones (both cracked and uncracked) and of selective leaching/cracked areas.
5. Review the latest results of sectioned material specimens removed from the plant including having pictures available at the meeting
6. Review the aging management strategy for buried pipe welds where there could be multiple leak sites that have not yet been identified
7. Review adequacy of the number and timing of destructive examinations in relation to confirming degree of selective leaching prior to and during the period of extended operation
8. Align on what documents need to be provided on the docket and general outline of followup RAI questions
9. Exit and wrap-up

4. Information and Other Material Necessary for the Regulatory Audit

The project team will review the LRA, the AMPs, the AMP basis documents, and other applicant supporting documentation as appropriate. The project team would like for at least one hard-copy set of the aluminum bronze AMP, AMP basis documents, condition reports that are related to degradation of the aluminum bronze components, documents on repair/replacement of the subject components, flaw evaluation reports, and all other supporting background documentation (including but not limited to items such as calculations, engineering evaluations, 10 CFR 50.59 evaluations, and so on) to be available in the team's work room.

5. Special Requests

The staff emphasizes that, for a successful outcome, the applicant should make every effort to have available at the audit site: (a) copies of relevant materials; (b) management; and (c) technical personnel and expertise knowledgeable in aluminum bronze issues; so as to minimize the need for the applicant to contact the site, realizing that some contact, of course, may be necessary.

6. Team Assignments

NRC Staff participation is projected as follows (some deletions, additions or substitutions may occur on an as-needed basis):

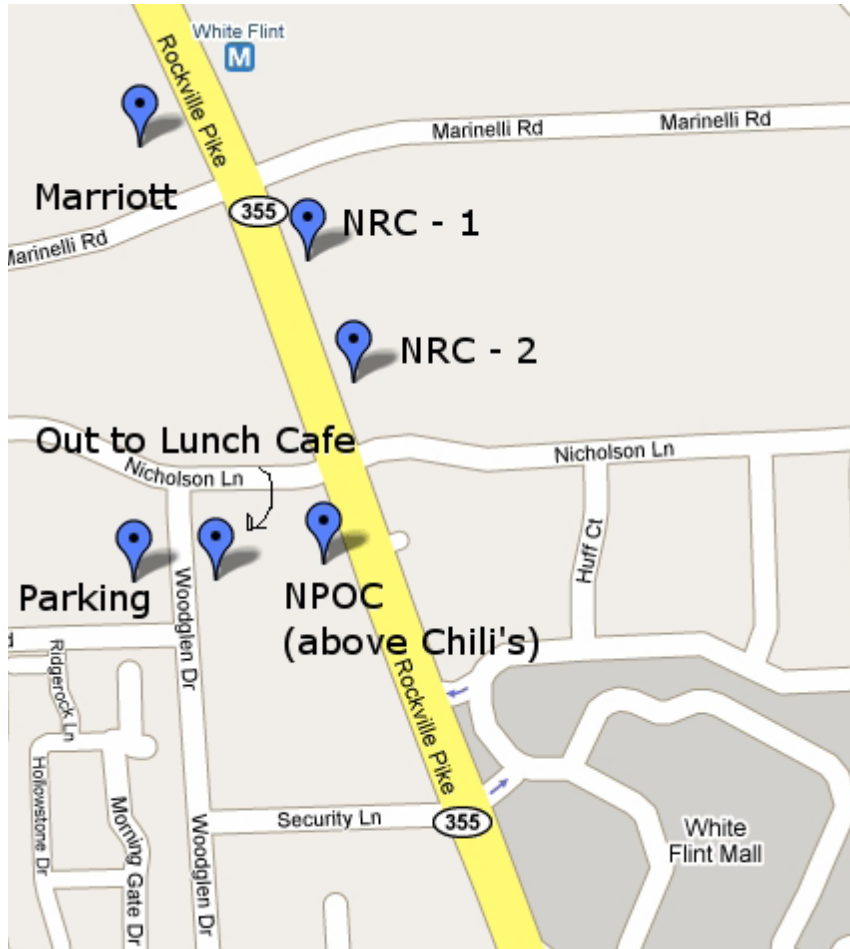
Area of Review	Assigned Auditor
Project Manager	John Daily
Branch Chief	Dennis Morey
Technical Lead	William Holston
Technical Reviewer	David Alley
Technical Reviewer	John Wise
Technical Reviewer	John Tsao
Technical Reviewer	Robert Hardies

7. Logistics

The audit will be conducted at a location near NRC HQ in Rockville, MD, at a place to be supplied by STPNOC. The designated location is NPOC Office (NEI), Suite 230, 11426 Rockville Pike (above the Chili's Restaurant), Rockville, MD 20852. A map is attached below.

Work space and team support logistics:

- Audit timeframe: 8:00 AM – 3:30 PM.
- One general team work area with seating and laptop space for up to 10 people.
- One break-out room for question/answer/small group sessions and meetings, so that work in the main room will not be disrupted.
- Telephone access for outside business-related calls. The break-out rooms should also have speaker phone capability for conference calls. External internet access as applicable.
- Access to printers for printing out drafts, draft requests for additional information (RAIs), review comments, schedules, and so on.
- Access to a copier for making duplicates for team use, meeting agendas.



8. Deliverables

RAI(s) may be issued as deemed necessary by the staff.

An audit summary report will be issued to the applicant, normally within 90 days from the end of the audit. Final evaluation of the aluminum bronze AMP and related issues will be presented in the staff's SER for the STP license renewal application.

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

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Sincerely,

/RA DMorey for/

John W. Daily, Sr. 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.: ML12039a054

*concurrence via email

OFFICE	LA: RPB1:DLR*	PM: DLR/RPB1	BC: DLR/RPB1	PM: DLR/RPB1
NAME	YEdmonds	JDaily	DMorey	JDaily/DMorey for
DATE	02 / 15 /2012	02 / 16 /2012	2 / 16 /2012	02 /16 /2012

OFFICIAL RECORD COPY

Letter to D.W. Rencurrel from John W. Daily dated February 16, 2012

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