



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

June 21, 2011

Mr. G. T. Powell
Vice President, Technical Support and Oversight
STP Nuclear Operating Company
P. O. Box 289
Wadsworth, TX 77483

SUBJECT: PLAN FOR THE ENVIRONMENTAL AUDIT REGARDING THE SOUTH TEXAS
PROJECT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION REVIEW
(TAC NOS. ME4938 AND ME4939)

Dear Mr. Powell:

By letter, dated October 25, 2010, STP Nuclear Operating Company (STPNOC or the applicant) submitted an application, including an Environmental Report (ER), 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-1555, Supplement 1, "Environmental Standard Review Plan."

The staff plans to conduct its environmental audit at STP during the week of July 11, 2011, in accordance with the enclosed audit plan. If you have any questions, please contact me by telephone at 301-415-3617 or by e-mail at tam.tran@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Tam Tran".

Tam Tran, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure: Audit Plan

cc w/encl: Listserv



Audit Plan

Environmental Review for the South Texas Project License Renewal Application

July 11, 2011

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

ENCLOSURE

License Renewal Environmental 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. STP requested renewal of the operating licenses for an additional 20 years beyond the 40-year current license terms, which expire on August 20, 2027, for Unit 1 and December 15, 2028, for Unit 2. Staff from the Division of License Renewal will lead an environmental audit at the STP site to gain a better understanding of the license renewal documentation and current STP site and operating conditions.

2. Regulatory Audit Bases

License renewal requirements for environmental review are specified in Title 10 of the *Code of Federal Regulations* (CFR), Part 51 (10 CFR Part 51), "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." Guidance is provided in NUREG-1555, Supplement 1, "Environmental Standard Review Plan," dated October 1999.

3. Regulatory Audit Scope

The scope of this onsite regulatory audit is to interview cognizant personnel and to perform a facility survey (plant tour) of the site conditions and the surrounding environment in order to (a) obtain original reference material supporting the Environmental Report (ER), (b) review environmental compliance activities, and (c) document and assess any potential environmental issues. These site condition observation and information verification and validation activities are performed in accordance with 10 CFR 51.70.

4. Information and Other Material Necessary for the Regulatory Audit

The project team will review the ER and the applicant's other supporting documents as appropriate. Enclosure 1, "Audit Needs List" contains the specific audit needs for this review.

5. Team Assignments

Area of Review	Assigned Auditor
Project Manager	Tam Tran
Branch Chief	
Human Health (Health Physics)	Steve Klementowicz
Water Resources/Hydrology	PNNL/Kevin Folk
Alternatives	Kevin Folk/Michelle Moser

Area of Review	Assigned Auditor
Socioeconomic/Land Use/Environmental Justice	April BeBault/Jeff Rikhoff
Aquatic	Briana Balsam/Michelle Moser
Air Quality/Meteorology	Bill Rautzen/Steve Klementowicz
Terrestrial	April BeBault/Briana Balsam

6. Logistics

The audit will be conducted at the STP site in Matagorda County, Texas, during the week of July 11, 2011. Entrance and exit briefings will be held at the beginning and end of this audit, respectively.

7. Special Requests

Facility arrangement for the staff to conduct consultation with local officials and American Indian tribes, as necessary.

General discussion with the STP team on the new and significant determination process used for the ER.

General discussion with the STP team on the background and status of the Tritium plume.

A speaker phone line for remote participation of HQ staff on aquatic interviews with cognizant personnel.

8. Deliverables

An audit report should be issued to the applicant within 90 days from the end of the audit.

9. References

NA

**Enclosure 1, Audit Needs List
South Texas Project License Renewal
July 11, 2011**

Terrestrial (TER) Ecology

Interview with cognizant personnel:

Invasive Species

- TER-1. Describe what species of invasive plants and/or animals have been observed or documented on the STP site.
- TER-2. Describe any invasive species populations being managed.

Transmission Line ROWs & ROW Maintenance

- TER-3. Describe what capacity each of the STP's four transmission service providers, (Center Point Energy, American Electric Power Texas Central Company, the City of Austin, and the City Public Service Board of San Antonio) manage the T-line.
- TER-4. Clarify which companies maintain which transmission lines and transmission line rights-of-way (ROWs).
- TER-5. Describe what pesticides and/or herbicides are used in transmission line ROWs. What protocol do workers follow when applying chemicals near streams and wetlands?

Document request and related facility survey/tour:

Management Plans and Procedures

- TER-6. Provide any wildlife management plans that are used on site.
- TER-7. Provide any best management practices (BMPs) followed for ground-disturbing activities.
- TER-8. Provide vegetation management plans for any other company (if applicable, per question 4) that maintains in-scope transmission lines.

Maps

- TER-9. Provide a topographic map of STP site and vicinity that includes the following data, as available:
- The major STP site buildings and infrastructure
 - The Main Cooling Reservoir

- The location of the water intake and discharge to the Colorado River
- The full in-scope portions or lengths of transmission lines
- Transmission line points of intersection with major rivers and streams
- The 110-ac wetland on the northeast portion of the site (ER pg. 2-17)
- Drainage ditches and depression wetlands on site (ER pg. 2-17)
- Boundaries of jurisdictional wetlands per the U.S. Army Corps of Engineers (ER pg. 2-17)
- The radius that encompasses the Christmas Bird Count survey area (ER pg. 2-18)
- Location (or approximate location) of known bald eagle nests (ER pg. 2-19)
- Location(s) that American alligator have been observed on the site (ER pg. 2-19)
- Location(s) that brown pelicans have been observed on the site (ER pg. 2-19)
- Location of brown pelican breeding colony near Matagorda Bay (ER pg. 2-19)
- Piping plover critical habitat along Matagorda Bay and Matagorda Peninsula (ER pg. 2-19)
- Any state or Federal wildlife refuges, wildlife management areas, or significant natural heritage areas crossed by the in-scope transmission lines)

Facility survey/tour:

- TER-10. A representative sample of each habitat referred to in the ER (e.g., scrub-shrub, grass communities, bottomland forest, etc.)
- TER-11 A representative sample of the habitat along the T-lines

Environmental Justice (EJ) and Socioeconomics (SOC)

Interview with cognizant personnel:

Environmental Justice (EJ)

To help address the provisions of Section 4-4, "Subsistence Consumption of Fish and Wildlife," in Executive Order 12898, the following information is needed to assist the NRC in its environmental justice review:

- EJ-1. Information about any observed subsistence consumption behavior patterns—specifically fish and wildlife consumption—by minority and low-income populations in the vicinity of STP. This subsistence consumption behavior could consist of hunting, fishing, and trapping of game animals and any other general food gathering activities (e.g., collecting nuts, berries, and other plant material) conducted by minority and low-income individuals in the vicinity of STP.
- EJ-2. Information about current or past wildlife sampling and testing of game animals such as deer, squirrel, turkey, pheasant, duck, fish and other game birds and animals that may have been conducted in the vicinity of STP. Wildlife sampling and testing that may have been conducted before, during, and after plant construction and in the early days of plant operation, but was discontinued after determining that tissue samples consistently showed no significant or measurable radiological impact on the environment from plant operations.

Socioeconomics (SOC)

The following information is needed to assist the NRC in its socioeconomic impact review:

- SOC-1. In addition to property tax payment information presented in the ER, please describe any other major annual support payments, one-time payments, and other forms of non-tax compensation (if any) provided to local organizations, communities, and jurisdictions (e.g., county, municipality, townships, villages, incorporated places, and school districts) on behalf of STP.
- SOC-2. Also, please provide information about any changes in assessed property value or any other recent or anticipated payment adjustments that could result in notable increases or decreases in tax or other payments.
- SOC-3. Data on the height of the tallest (visible from offsite locations) structures at STP and general information on the visibility of plant facilities from various offsite locations.
- SOC-4. Provide possible noise emissions from the site that could be a nuisance in the vicinity of STP. Also, provide information if complaints have been received at STP concerning noise from operations heard offsite.

SOC-5. Provide information on the nearest residence to STP, such as: distance (in miles), the direction it is located from STP, and the type of residence (vacation home, farm, single family, etc.)

Water Resources/Hydrology (WR)

Interview with cognizant personnel:

WR-1. Provide a knowledgeable individual(s) to discuss the facility's cooling water system, storm water management system, firewater system, groundwater production and monitoring wells, water treatment facility, cooling pond and reservoir (i.e., STP Main Cooling Reservoir [MCR]), surface water withdrawals and discharges, onsite landfill, sanitary waste treatment facility, and the operational requirements and reporting for the site's environmental monitoring and compliance programs.

Document request:

WR-2. Please make available the following.

- Any Notices of Violation (NOVs), nonconformance notifications, or related infractions received from regulatory agencies associated with (Texas Pollutant Discharge Elimination System (TPDES) permitted discharges, septic or sewage systems, cooling pond, reservoir, onsite landfill, groundwater or soil contamination, including spills, leaks, and other inadvertent releases of fuel solvents, chemicals, or radionuclides (covering past 5 years).
- A summary of historic and current (past 5 years) total dissolved solids (TDS) data for groundwater produced by STP production wells from the Deep Chicot Aquifer.
- A current map or maps identifying the locations of all current STP production wells, monitoring wells, and any other wells such as for livestock watering and which show well locations relative to the STP property boundary and the MCR, as appropriate.
- Provide specific information for STP production wells installed, including locations, depths, design, and production yields. Include well logs, if available.
- TPDES Discharge Monitoring Reports (covering past 3 years).
- Annual groundwater use reports or equivalent (covering past 5 years).
- Documentation related to any remedial (cleanup) activities on the plant property.
- Surface water withdrawals reports (Colorado River; STPNOC ER: 4.22, p. 54) (covering past 5 years).

WR-3. Please make available copies of the following permits/authorizations/approvals.

- USACE Permit No. 10570 (Maintenance dredging of barge slip)
- USACE Permit No. SWG-1992-02707 (Maintenance dredging of intake)

- Current Texas Commission on Environmental Quality (TCEQ) issued TPDES permit
- TPDES permit renewal application (June 2009 and May 24, 2007 letter; referenced in STPNOC ER: 5.2, p. 3) and any correspondence regarding TCEQ's acknowledgement of application acceptance and timely submittal
- TCEQ ID No. 1610103/1610051 (Operation of public potable water system(s))
- TCEQ Certificate of Adjudication 14-5437A (Water rights for diversion and impoundment of water from Colorado River)
- Current groundwater operating permit issued by the Coastal Plains Groundwater Conservation District

Facility survey/tour:

WR-4. Please provide a hydrology tour(s) that includes the following.

- Production wells (e.g., 5, 6, 7, 8) relative to the STP site boundary
- Representative MCR relief wells and associated collection ditches
- Representative A, B, and C piezometers (MCR berm top, side, and base)
- Monitoring wells on the western, southern, and eastern sides of the MCR (proximity to MCR and site boundary of interest)
- Monitoring wells associated with the TDS pipeline and secondary system leak inside the Units 1 & 2 protected area
- Any livestock wells located on STP property (e.g., in the leased grazing area east of the MCR)
- Any offsite domestic wells completed in the Shallow Aquifer located down gradient of the STP site (e.g., wells at Exotic Isle, wells west and south of the MCR, wells completed in the alluvial aquifer near the intakes; [if wells are on private property, then provide a map and discussion of them while on the tour])
- TPDES outfalls including those to the Colorado River for ditches carrying the relief well discharge as well as storm water outfalls
- Sanitary waste disposal facility
- Essential Cooling Pond

(Note: If hydrologists or other knowledgeable persons are not on the tour, or if the tour requests are inaccessible, then a photo gallery of these sites with some annotation would suffice.)

Health Physics (HP)

Document request and related interview with cognizant personnel:

- HP-1. Information on any abnormal, unusual spills, and leaks of radioactive material that occurred on site that are applicable to the criteria in 10 CFR 50.75(g) and NEI 07-07, "Industry Ground Water Protection Initiative – Final Guidance Document"
- HP-2. Information on any onsite disposals of low-level radioactive waste
- HP-3. Information on the radiological groundwater protection program

Facility survey/tour:

- HP-4. Low-level radioactive waste storage
- HP-5. Radioactive effluent monitoring systems
- HP-6. Radiological environmental monitoring stations (air monitoring stations, including any co-located State monitoring stations)

Aquatic Ecology (AQ)

Interview with cognizant personnel:

- AQ-1. Provide diagram(s) of the intake structures and traveling screens within the Reservoir Makeup Pumping Facility (RMPF) and cooling water intake structure (CWIS).
- AQ-2. Describe the mesh size of traveling screens at the CWIS.
- AQ-3. Describe the intake velocity through the traveling screens at the CWIS.
- AQ-4. Describe the frequency for which STPNOC uses the traveling screens and fish return structures at the RMPF. Discuss estimates of survival rates for impinged or entrained species at RMPF. Discuss estimates of survival rates for fish that go through the return structure.
- AQ-5. Describe the cleaning and maintenance procedures at all intake and discharge structures on the Colorado River and the MCR, including the frequency of dredging, physical cleaning, and other maintenance procedures.

Document Requests:

- AQ-6. McAden, D.C., G. N. Greene, and W. B. Baker 1984. Colorado River Entrainment and Impingement Monitoring Program, Phase Two Studies – July, 1983–June, 1984 (Report #1). Prepared for South Texas Project by Ecology Division, Environmental Protection Department, Houston Lighting & Power Company. October.
- AQ-7. McAden, D.C., G. N. Greene, and W. B. Baker 1985. Colorado River Entrainment and Impingement Monitoring Program, Phase Two Studies - July – December, 1984 (Report #2). Prepared for South Texas Project by Ecology Division, Environmental Protection Department, Houston Lighting & Power Company. April.
- AQ-8. STPNOC 2009: Letter to TCEQ in support of TPDES renewal. According to the ER (Section 5.2), the letter should include descriptions of how the cooling water systems meet the best available technology standard.
- AQ-9. Citation and documentation is needed for the following sentence that was included in the ER, Section 5.2: Based upon best professional judgment (BPJ) the TCEQ Water Quality Division has determined that the CWIS reflects BTA for AEI through use of a closed-cycle recirculating system.
- AQ-10. "Essential Cooling Pond Fish Population Study." Prepared for STP Nuclear Operating Company by ENSR International, Houston, Texas, May 2002.
- AQ-11. Texas Commission on Environmental Quality (TCEQ). 2007. Letter from Mr. Kelly Holligan, TCEQ, to Mr. R. A. Gangluff, STPNOC, dated June 27, 2007, "Cooling Water Intake Structures Phase II Rules; South Texas Project Electric Generating

Station; TPDES Permit No. WQ000 1908000." This letter (or other documentation) should state that the MCR is not waters of the State.

- AQ-12. "South Texas Project, Units 1 and 2, Environmental Report," Docket Nos. 50-498 and 50-499, July 1, 1974, and Subsequent Amendments.

Facility survey/tour:

AQ-13. 7,000 acre MCR

AQ-14. 110 acre Texas Prairie Wetlands Project

AQ-15. A representative sample of the drainage ditches and depression wetlands referred to in the ER

AQ-16. Little Robbins Slough

AQ-17. MCR Spillway

AQ-18. Intake structure on the Colorado River

AQ-19. Any other unique ecological communities (or communities of special interest) not in the ER, as applicable

Alternatives (ALT)

Interview with cognizant personnel:

Coal-Fired Generation Alternative

- ALT-1. Describe how coal and other materials would be transported to the STP site. Would there be construction or modification of transportation infrastructure (e.g., rail lines, roads, etc.)?

- ALT-2. The ER states that after combustion, STPNOC assumed that 43 percent of the ash, approximately 193,000 tons per year, would be marketed for beneficial reuse. Please describe what beneficial uses you expect the ash would be used for.

June 21, 2011

Mr. G. T. Powell
Vice President, Technical Support and Oversight
STP Nuclear Operating Company
P. O. Box 289
Wadsworth, TX 77483

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Sincerely,

/RA/

Tam Tran, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket Nos. 50-498 and 50-499

Enclosure: Audit Plan

cc w/encl: Listserv

DISTRIBUTION:

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NAME	TTran	YEdmonds	Almboden	BPham	TTran
DATE	05/23/2011	06/07/2011	06/17/2011	06/21/2011	06/21/2011

OFFICIAL RECORD COPY

Letter to G. T. Powell from Tam Tran dated June 21, 2011

SUBJECT: PLAN FOR THE ENVIRONMENTAL AUDIT REGARDING THE SOUTH TEXAS
PROJECT, UNITS 1 AND 2, LICENSE RENEWAL APPLICATION REVIEW
(TAC NOS. ME4938 AND ME4939)

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