PMSTPCOL PEmails

From: Paul Kallan
Sent: Friday, February 29, 2008 11:02 AM
To: 'Daniel C Mussatti'; Sara Bernal; Cristina Guerrero; Hosung Ahn; Richard Emch; Harriet Nash; Barry Zalcman; George Wunder; Irene Yu; 'Nona H Diediker'
Cc: William Burton; Brent Clayton; Richard Raione
Subject: Fwd:
Attachments: 2008-02-28 ABR-AE-08000027 (Audit Comments).pdf

Team,

Listed below are responses to 32 of the questions that we asked at the site audit. These responses were formally sent to the NRC yesterday from STP.

Nona, these may eliminate some the the RAIs we are generating for the applicant.

regards,

Paul

The attached letter, sent today to the NRC, submitted the STPNOC's response to 32 comments received during the STP Units 3 & 4 Environmental Site Audit.

If there are any questions regarding this submittal, please contact me by return e-mail or at (361) 972-4716.

Russell W. Kiesling, PMP

Senior Environmental Associate

Regulatory Affairs

STPNOC - Units 3 & 4

4000 Avenue F, Suite A

Bay City, Texas 77414

(361) 972-4716 (office)

(361) 972-4751 (fax)

(409) 939-5345 (cell)

rwkiesling@stpegs.com <BLOCKED::mailto:rwkiesling@stpegs.com>

Hearing Identifier: SouthTexas34Public_EX
Email Number: 1071

Mail Envelope Properties (CEEA97CC21430049B821E684512F6E5E4DA292E9A0)

Subject: Fwd:
Sent Date: 2/29/2008 11:02:18 AM
Received Date: 2/29/2008 11:02:18 AM
From: Paul Kallan

Created By: Paul.Kallan@nrc.gov

Recipients:
"William Burton" <William.Burton@nrc.gov>
Tracking Status: None
"Brent Clayton" <Brent.Clayton@nrc.gov>
Tracking Status: None
"Richard Raione" <Richard.Raione@nrc.gov>
Tracking Status: None
"'Daniel C Mussatti'" <dmussatti@embarqmail.com>
Tracking Status: None
"Sara Bernal" <Sara.Bernal@nrc.gov>
Tracking Status: None
"Cristina Guerrero" <>
Tracking Status: None
"Hosung Ahn" <Hosung.Ahn@nrc.gov>
Tracking Status: None
"Richard Emch" <Richard.Emch@nrc.gov>
Tracking Status: None
"Harriet Nash" <Harriet.Nash@nrc.gov>
Tracking Status: None
"Barry Zalcman" <Barry.Zalcman@nrc.gov>
Tracking Status: None
"George Wunder" <George.Wunder@nrc.gov>
Tracking Status: None
"Irene Yu" <Irene.Yu@nrc.gov>
Tracking Status: None
"'Nona H Diediker'" <nona.diediker@pnl.gov>
Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

Files	**Size**	**Date & Time**
MESSAGE	853	2/29/2008 11:02:18 AM
2008-02-28 ABR-AE-08000027 (Audit Comments).pdf		2643787

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

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

February 28, 2008
ABR-AE-08000027

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
One White Flint North
11555 Rockville Pike
Rockville MD 20852-2738

South Texas Project
Units 3 and 4
Docket Numbers: 52-012 and 52-013
Reponses to Environmental Report Site Audit Comments

Reference: Letter, M. A. McBurnett to Document Control Desk, "Combined License Application," dated September 20, 2007 (ABR-AE-07000004)

The referenced letter submitted an electronic Environmental Report (ER) as part of the Combined License Application (COLA). This letter transmits responses to 32 of the comments raised during the NRC Environmental Site Audit on February 4 – 8, 2008. The Attachment to this letter contains the specific comments and STPNOC responses. In addition, there are 31 appendices that contain supporting material or specific documents requested to respond to the audit comments.

There are no commitments in this letter.

If there are any questions regarding the contained responses, please contact Russell W. Kiesling at (361) 972-4716.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on February 28, 2008

Greg Gibson
Manager,
Regulatory Affairs

rwk

Attachments:

Attachment: STP 3 & 4 Site Audit - NRC Comments and STPNOC Responses.
Appendix 1. Comment 29. Calculation 2008-11820 Excerpt.

STI: 32272217

Appendix 2.	Comment 63A. ABR-AE-07000010, November 8, 2007, Environmental Report Outstanding Issues.
Appendix 3.	Comment 81. ABR-TX-07016154, May 22, 2007, Information in Support of Federal Consistency Certification.
Appendix 4.	Comment 81. Maps depicting location of alternative sites in relation to the Texas Coastal Zone.
Appendix 5.	Comment 87. Location of Indian Tribal Lands in Texas, NAUSA, 2008.
Appendix 6.	Comment 98. American Coal Ash Association Annual Coal Combustion Products Production and Use Survey, 2006.
Appendix 7.	Generic Comment A. Certificate of Adjudication # 14-5437, Texas Commission on Environmental Quality, July 19, 2006.
Appendix 8.	Generic Comment C. Location of STPNOC's permitted upland dredged material disposal area.
Appendix 9.	Generic Comment E. Excerpt from NUREG-1555, October 1999, Section 4.1.1(c).
Appendix 10.	Comment 101. Renewal Schedule for Existing STPNOC Environmental Permits, September 28, 2007.
Appendix 11.	Comment 104. Certificate of Adjudication # 14-5437, Texas Commission on Environmental Quality, July 19, 2006.
Appendix 12.	Comment 111. Confirmation statements from AEP regarding transmission ROW, Email dated February 26, 2008, D. Kidd to E. Heacock.
Appendix 13.	Comment 142. Water Conservation Plan for Certificate of Adjudication # 14-5437, May 1, 2005.
Appendix 14a.	Comment 180. STPNOC procedure 0PGP03-ZI-0008, Rev. 9, Control of Expendable Material, November 21, 2007.
Appendix 14b.	Comment 180. STONOC procedure 0PRP03-ZR-0002, Rev. 18, Radioactive Waste Shipments, March 27, 2007.
Appendix 15.	Comment 184A. Water Conservation Plan for Certificate of Adjudication # 14-5437, May 1, 2005.
Appendix 16.	Comment 184B. Groundwater Management Plan, Turner Collie & Braden, Inc. May, 2004.
Appendix 17a.	Comment 194. Threatened and Endangered Species List for Limestone
Appendix 17b.	Comment 194. Threatened and Endangered Species List for Malakoff
Appendix 17c.	Comment 194. Threatened and Endangered Species List for Allen's Creek
Appendix 18.	Comment 222C. ABR-TX-07016154, May 22, 2007, Information in Support of Federal Consistency Certification.
Appendix 19.	The Light Company. Houston Lighting and Power South Texas Electric Generating Station. 1990. South Texas Project Electric Generating Station Units 1 & 2, Dockets Nos. STN 50-498, STN 50-499 Fog Monitoring Program. October 1.

Appendix 20.	Civil/Structural Construction Specification for Houston Lighting & Power Company South Texas Project Electric Generating Station Specification 9Y230YS0024 Division C2 Section C2.9 Plant Area Roads and Grading, Rev. 5. 1986.
Appendix 21.	Amended and Restated Contract By and Between The Lower Colorado River Authority and STP Nuclear Operating Company, Effectives as of January 1, 2006. 28pp.
Appendix 22.	Texas Commission on Environmental Quality. 2005. Permit to Discharge Wastes: TPDES Permit No. WQ0001908000. Letter from TCEQ to STPNOC. July 21. 40pp.
Appendix 23.	Texas Commission on Environmental Quality. 2007. Letter from TCEQ Regarding Cooling Water Intake Structures Phase II Rules, TPDES Permit No. WQ0001908000. June 27. 1pp.
Appendix 24.	South Texas Project Nuclear Operating Company. 2007. Letter from STPNOC to Texas Commission on Environmental Quality Regarding Cooling Water Intake Structures Phase II Rules, TPDES Permit No. WQ0001908000. May 24. 3pp.
Appendix 25.	Ecological Survey Report – Threatened and Endangered Species, Unit 3 & 4 Licensing Project, ENSR Corp. (May 2007).
Appendix 26.	Rapid Bioassessment Report – Main Drainage Ditch, Unit 3 & 4 Licensing Project ENSR Corp (August 2007).
Appendix 27.	Ecological Survey Report – Unit 3 and 4 Licensing Project ENSR Corp (March 2007).
Appendix 28.	1987-1988 Special Ecological Studies for the South Texas Project, Matagorda County, Texas (March 1989).
Appendix 29.	Letter from Texas Parks and Wildlife to Sandra Dannhardt, (Aug. 3, 2007) RE: Rare Threatened and Endangered Species.
Appendix 30.	Letter from U.S.D.A. to Breck Sacra, NRG Energy RE: Inventory and Evaluation of Vegetation at South Texas Nuclear Project, Bay City Texas, January 30, 2008.
Appendix 31.	Letter from Department of the Army, Galveston District, Corps of Engineers to Ms. S.L. Dannhardt, STP Nuclear Operating Company, RE Permit No. 10570(06); Extension of Time. November 4, 2004

cc: w/o attachment except *

(paper copy)

Director, Office of New Reactors
U. S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738

Regional Administrator, Region IV
U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, Texas 76011-8064

Richard A. Ratliff
Bureau of Radiation Control
Texas Department of State Health Services
1100 West 49th Street
Austin, TX 78756-3189

*Steven P. Frantz
Morgan, Lewis & Bockius LLP
1111 Pennsylvania Ave. NW
Washington, DC 20004

*George F. Wunder
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852

*Paul Kallan
Two White Flint North
11545 Rockville Pike
Rockville, MD 20852

(electronic copy)

A. H. Gutterman, Esquire
Steve Frantz, Esquire
Morgan, Lewis & Bockius LLP

George F. Wunder
Loren R. Plisco
Paul B. Kallan
U. S. Nuclear Regulatory Commission

Thad Hill
Marty Ryan
Harry Holloway
Steve Winn
Eddy Daniels
NRG South Texas 3/4 LLC

Jon C. Wood, Esquire
Cox Smith Matthews

J. J. Nesrsta
R. K. Temple
Kevin Pollo
L. D. Blaylock
CPS Energy

STP 3 & 4 Site Audit
NRC Comments and STPNOC Responses

Rad/Fuel Cycle/Waste – Ernest Antonio	
29.	**NRC Comment:** Section 4.5.3.1. When discussing LTSF, how was the dose rate at 700 ft from the LTSF calculated. Ken Jah (Bechtel) was going to provide reference for those calculations. **STPNOC Response:** Dose rates from the LTSF are from a calculation for STP 1 & 2 that used the MicroShield and MicroSkyshine computer codes. Calculation 2006-11820 assesses the shielding requirements for the LTSF. Page 31 of this calculation shows a plot of dose rate as a function of distance from the LTSF. At a distance of 700 ft, the plot indicates a dose rate of 8.0E-6 mR/hr, which is equivalent to 0.07 mR/yr. Appendix 1 is a copy of the cited page of Calculation 2006-11820.
33.	**NRC Comment:** Section 4.5 Figures 4.5-1 and 4.5-2 have no scale to help determine distance. Figures are still not to scale. Will try to find better, possibly scaled figures or obtain distances from TLDs to buildings. **STPNOC Response:** A scale drawing can be found in COLA Part 3 (ER) Chapter 1, Figure 1.1-1 Site Layout. One is also available in COLA Part 2, Tier 2, Chapter 21, Figure 1.2-37. Both of these figures have previously been docketed via the referenced correspondence, ABR-AE-07000004, September 20, 2007. Perpendicular distances from the OSGSF walls to monitoring stations # 25, 26, 27 and 28 are 107 ft, 103 ft, 92 ft 8 in, and 208 ft 9 in, respectively.

Cultural Resources – Darby Stapp	
63A.	**NRC Comment:** 4.1.3. Will there be measures (i.e., procedures) in place to stop work and contact THC if archaeological remains are discovered during construction? **STPNOC Response:** STPNOC, in a November 8, 2007 letter to the NRC (Appendix 2), has committed to implement a procedure to stop work and contact THC if archaeological remains are discovered during construction.

Site Selection – Paul Hendrickson

65.

NRC Comment:

Section 9.3.2.3.2 of the ER does not identify any specific greenfield potential sites. Are the greenfield sites that were considered identified anywhere other than in Table 9.3-6? Need list of Greenfield sites considered by STP.

STPNOC Response:

Table 9.3-6 identifies greenfields and brownfields considered for review from the vast number of greenfield sites in Texas. The following sites were included in the review of potential greenfield sites:

- Allen's Creek, a proposed site in Austin County that would impound water from Allen's Creek, a small tributary of the Brazos River. Water from the Brazos River may also be piped into the reservoir, according to the Texas Water Development Board plan.
- Little River, in Milam County, proposed as an off-channel reservoir that would impound water from tributaries of the Little River, which is itself a tributary of the Brazos River.
- Bedias Creek, a proposed site in Madison and Grimes County. Bedias Reservoir is a proposed reservoir on Bedias Creek, a tributary of the Trinity River in the Trinity River Basin that is being considered jointly by the Trinity River Authority and the San Jacinto River Authority as a potential water supply project.
- STPNOC also listed reservoir or hydropower sites that already exist, as noted in Table 9.3-1 of the ER. These areas were considered as potential greenfield sites, because, like the proposed reservoir sites, any development of a site there is assumed to be on an undisturbed, pristine site.

    - Austin Reservoir in Travis County
    - Buchanan Reservoir in Burnet
    - Canyon reservoir in Comal County
    - Dunlap TP 1 in Guadalupe County
    - Eagle Pass reservoir in Maverick County
    - Gonzales Hydro Plant in Gonzales County
    - Granite Shoals in Burnet County
    - H 4, also known as Lake Gonzales in Gonzales County
    - H 5, also known as Lake Wood in Gonzales County
    - Inks Reservoir, in Burnet County
    - Lewisville Reservoir, in Denton County
    - Marble Falls Reservoir, in Burnet County
    - Marshall Ford Reservoir, in Travis County

	▪ Morris Sheppard Reservoir, in Palo Pinto County ▪ Nolte Reservoir, in Guadalupe County ▪ Ray Roberts Reservoir in Denton County ▪ Small Hydro of Texas, in DeWitt County ▪ TP 4, also known as Lake Placid, in Guadalupe County ▪ Whitney Reservoir, in Bosque County • Lone Star Wind Farm, Shackelford County, is the site of a proposed wind turbine generation facility. The proposed site is approximately 20,000 acres. This is considered a greenfield site because the site is essentially undeveloped and pristine, as is the area around it. • Austin Energy also operates a PV300kV solar array on the banks of Decker Lake near Austin, Texas. Each of these sites was reviewed in Table 9.3-4 to determine if any met population and other criteria.
74.	**<u>NRC Comment:</u>** 9.3.2.5 of the ER states that the alternative sites represent the best available alternative sites. Is this statement true of the Allen's Creek site when water for nuclear generating units would be contingent on future development of a reservoir? Given that the reservoir would not be completed until 2030, would cooling water for a new plant at Allen's Creek come from groundwater? Is there sufficient groundwater for wet cooling or would wet/dry or dry cooling be needed? **<u>STPNOC Response:</u>** NRC raises several questions in this request and they are answered individually below: <u>Question:</u> Is this statement true for the Allen's Creek site when water for nuclear generating units would be contingent on future development of a reservoir? <u>Response:</u> For the purposes of the environmental review of available sites, it was assumed that water would be available. This assumption included the Allen's Creek site. It would not be necessary to wait for the current owners to develop the reservoir. If this site had been selected, it is not unreasonable to expect that STPNOC would acquire the reservoir land and develop the water source to support the project's construction schedule. As a result, the lack of a reservoir presently does not affect the ability to license a nuclear facility at the site. <u>Question:</u> Given that the reservoir would not be completed until 2030, would cooling water for a new plant at Allen's Creek come from groundwater? <u>Response:</u> Reservoir completion at 2030 assumes that it would be built according to current plans prepared by the Brazos River Authority and the City of Houston. As discussed above, the reservoir could be completed earlier if it

	were part of this project. Regarding use of groundwater as a source for cooling water, the Texas Water Development Board (TWDB) notes that more than one million acre-feet of groundwater are available for development. It is not unreasonable to consider that groundwater could be developed for appropriate cooling system alternatives as described in Section 9.4 of the ER. Source: 2006. Water for Texas 2007 Volume II. August. Available at: http://www.twdb.state.tx.us/publications/reports/State_Water_Plan/2007/WATERFORTEXAS2007_VOL%20II.pdf <u>Question:</u> Is there sufficient groundwater for wet cooling or would wet/dry or dry cooling be needed? <u>Response:</u> As stated above, it is not unreasonable to consider that groundwater could be developed for appropriate cooling system alternatives as described in section 9.4. That section provides a reconnaissance view of water use and other environmental impacts of the cooling system. As noted in 9.4, it is expected that water use for cooling systems ranges from 43,000 (cooling pond alternative), 45,000 (mechanical draft - wet/dry) to 47,000 (spray canal) acre ft/year. While Section 9.3 does not perform a full environmental assessment of the alternative sites and heat dissipation technologies at each of the alternative sites (see RG 4.2 and NUREG-1555), the reconnaissance information available in section 9.4 should be sufficient for NRC to assess water needs at the Allen's Creek site.
74A.	**<u>NRC Comment:</u>** Section 9.3.2.3.2 of the STP ER says that STPNOC considered greenfield sites to be existing renewable energy sites, proposed reservoirs in the candidate area, and a generic greenfield site. Footnote 40 in the 11/20/07 Memorandum and Order from the Commission Granting the ESP for the North Anna Site (CLI-07-27) provides the following definition for a greenfield site: a greenfield site is assumed to be an undisturbed, pristine site. Footnote 40 in the Commission's decision cites a 2001 SEIS (the license renewal SEIS for the Arkansas Nuclear One plant). Why did the applicant chose a different definition for greenfield than what has been previously defined by the Commission? **<u>STPNOC Response:</u>** STPNOC looked at undisturbed sites for its greenfield analysis. As part of its analysis, STPNOC looked at the environment around "developed" hydropower facilities or proposed wind power sites as greenfields. Because the land around these sites was assumed to be largely undeveloped, STPNOC concluded that they would be more appropriate for greenfield review, rather than compared with fossil fuel sites, which are the antithesis of greenfields.

Land Use – Paul Hendrickson	
78.	**NRC Comment:** Are any of the alternative sites subject to zoning requirements? No information was provided at the site audit. **STPNOC Response:** In Texas, only municipalities have blanket zoning authorization from the legislature. Each municipality has the option of exercising this authority. None of the alternative sites lies within the jurisdiction of any municipality. Certain counties have been granted limited zoning authority by legislative action. None of the alternative sites are in these specific counties.
80.	**NRC Comment:** Are there existing transmission line rights-of-way passing through or adjacent to the Allen's Creek or Malakoff sites? Approximately, how long would new transmission corridors have to be to serve these sites? No information provided for Allen's Creek. Information was provided that a 345 kV line passes through the Malakoff site, but this information is not consistent with Section 9.3.3.3.1 of the ER. **STPNOC Response:** Regarding the Malakoff site: During the site audit, information was provided that a 345 kV line passed through the Malakoff site, and photographs of the ROW were provided. There is a 345 kV substation approximately one mile from the site, and during preliminary transmission studies it was assumed that a new ROW approximately 1 mile long would be required to connect with that substation. Interconnections from the new lines to other substations would be required. However, the new lines could be accommodated in the existing rights of way. Regarding the Allen's Creek Site: There are no existing rights of way passing through the Allen's Creek site. A 2007 preliminary study conservatively recommended two new ROW to accommodate the required 345 kV lines. Each of these corridors would follow a route of approximately 30 miles each to reach the existing 345 kV substations (Siemens 2007).

81.	**<u>NRC Comment:</u>** What is the status of compliance with the Texas Coastal Management Program for the proposed site? Would any of the alternative sites be subject to the Texas Coastal Management Program? No information provided for the proposed site. Tamar stated that the alternative sites would not be subject to the Texas Coastal Management Program. **<u>STPNOC Response:</u>** STPNOC has consulted with the Texas General Land Office (GLO) regarding compliance with the Texas Coastal Management Program (TCMP). On May 2, 2007, STPNOC participated in a meeting with GLO to introduce the proposed project. Based on discussions from that meeting, STPNOC submitted a "checklist" letter to GLO on May 22, 2007 detailing the specific information that GLO would require to conduct its consistency review. GLO reviewed this information and forwarded a concurrence letter on June 25, 2007. On August 15, 2007, STPNOC again met with GLO to discuss specific portions of the Environmental Report and the COLA prior to submittal to the NRC. Finally, STPNOC hosted a site tour for GLO staff on December 18 & 19, 2007 to help facilitate their review of the project. STPNOC anticipates submitting a consistency determination for GLO review in April-May, 2008. Copies of the "checklist' letter and GLO's concurrence are included as Appendix 3. None of the alternative sites are located within the Texas Coastal Management Program Boundary. Maps depicting location of alternate sites and the TCMP boundary are provided in Appendix 4.
83.	**<u>NRC Comment:</u>** Do any natural gas lines traverse the STP site? No information was provided at the site audit. **<u>STPNOC Response:</u>** No natural gas lines traverse the STP site. Source: STPEGS Updated Final Safety Analysis Report for Units 1 & 2, Rev. 13, May 2006.
87.	**<u>NRC Comment:</u>** Are there any Indian Tribal lands within 50 miles of the STP site? **<u>STPNOC Response:</u>** There are no Indian reservations within 50 miles of the STP site (NAUSA 2008 (Appendix 5)).

88.	**<u>NRC Comment:</u>** Page 2.2-6 of the ER says that 2% of land in the region is water. Is this fresh water? Figure 2.2-4 shows that a big percentage of the region is salt water. Bridget (Tetra Tech) said requested information could be provided. **<u>STPNOC Response:</u>** Yes, the 2% refers to freshwater.

Energy Alternatives – Paul Hendrickson

93. **NRC Comment:**

Section 9.2.1.3 of the ER provides general information, but no specific information on demand side management or conservation programs operated by STPNOC or the entities making up STPNOC. Is specific information available on this topic? Section 9.2.1.3 states NRG's purpose for the proposed project but does not state CPS Energy's purpose.

STPNOC Response:

Conservation Programs: STPNOC operates a merchant facility and sells electricity on the wholesale market. As such, STPNOC does not have a traditional customer base that would lend itself to demand side management or conservation programs.

CPS Energy maintains progressive programs for energy efficiency and demand response initiatives. CPS Energy's current conservation strategy defines a goal of approximately 115 MW cumulative reductions through 2011. CPS Energy intends to reduce 10%, 20%, 30%, and 40% of their peak demand growth in calendar years 2008, 2009, 2010, and 2011 respectively, via energy efficiency and demand response programs.

CPS Energy has conservation programs for commercial and residential customers, as well as incentives for solar power. These programs are summarized below:

Commercial Programs:

- Lighting retrofit programs, 2 available, one for fewer than 100 KW in reduction and the large program for retrofits producing more than 100 KW in reduced power consumption.
- Cool/thermal roof retrofits
- High efficiency HVAC and Chiller retrofits
- Efficient electric motors
- Window screening/tinting

Residential:

- High efficiency HVAC rebates for central and window units
- "Peak Saver" programmable thermostats free to clients that also allow cycling of compressors by CPS in summer months to reduce peak demand.
- CFL program with HEB and Home Depot
- Home Efficiency program which offers an array of rebates for attic insulation, duct work, wall insulation, solar powered attic fans, and window treatments. This comprehensive program deals with the thermal envelope of the structure. We are currently revamping this program with the new offering scheduled for completion by March 2008.

	Solar: • Solar Water heat incentives • PV installation incentives at $3.00 per watt for residential and small commercial up to $10,000 for residential and $50,000 for commercial • A "Large Commercial PV" program for actual power production exceeding 100 KW is in the draft stage now with expected completion spring to summer of 2008. CPS Energy's Purpose Statement: CPS Energy is a municipal utility with a certificated service area recognized by the Public Utility Commission of Texas. CPS Energy has an obligation to serve and be the sole provider of electric service for residential and commercial customers within that certificated service area. As a municipal utility, CPS Energy exists to benefit the customers they serve. CPS Energy has a diverse fuel sourced fleet of generating stations to serve its native load. This diversity includes coal, gas and nuclear powered generating units, which has resulted in CPS Energy offering its customers some of the lowest rates for electric service in ERCOT. Demand for electricity in the CPS Energy service territory is growing at a rate of about 3% per year, which is faster than the national average. If CPS Energy does not have sufficient generation for its native load, they must purchase energy at a higher cost to meet its obligation to serve. Accordingly, CPS Energy is participating in the development of STP 3 & 4 for the public purpose of providing low cost, reliable energy to meet the growing demand by customers in the CPS Energy certificated service area.
95.	**NRC Comment:** Would an alternative natural gas-fired plant have a solid waste impact from the spent selective catalytic reduction process to reduce NO_x emissions? Section 9.2.3.2.2 of the ER indicates there would be almost no solid waste generation. **STPNOC Response:** Yes, solid waste would be generated by the Selective Catalytic Reduction (SCR) process to reduce NO_x emissions from a natural gas fired facility; however, the volume would be small (around 1,700 cubic feet per year). This volume is based on the analysis from the License Renewal Environmental Report for the McGuire-Catawba generation stations which estimates an SCR waste volume of 1,500 cubic feet per year, and a total generation for the alternative of 2,410 MW (NRC 2008). The estimated waste volume for a 2,700 MW facility is illustrated below: Estimated waste volume = (2,700 MW)(1,500 ft^3) / (2,410 MW) = 1,700 cubic feet per year.

98.	**NRC Comment:** Section 9.2.3.1.2 of the ER indicates that 75% of the coal ash could be recycled. What is the basis for the 75% figure? Is this a reasonable percentage based on the experience of other coal-fired power plants in Texas? **STPNOC Response:** The 75% figure was an assumption used to estimate the expected coal ash volume to be recycled. This assumption was based on the experience from the ash recycling programs of coal-fired power plants in the state of South Carolina. This is not a reasonable percentage based on the experience of other coal-fired power plants in Texas. On August 24, 2007, the American Coal Ash Association (ACAA) released their annual Coal Combustion Products (CCP) Production and Use Survey (ACAA 2007) (Appendix 6). Based on voluntary responses from 58 utilities for year 2006, about 43 percent of the CCPs from coal combustion were used beneficially rather than landfilled. The EPA and industry have jointly targeted a goal of 50 percent beneficial use by 2011. The use of 50 percent would be more reasonable assumption.
98A.	**NRC Comment:** Section 9.2.3.1.2 of the ER refers to 105,000 tons of limestone; is this an annual figure? **STPNOC Response:** Yes, the 105,000 tons of limestone is an annual figure.

Issues Generic to the ER – Paul Hendrickson	
A.	**<u>NRC Comment:</u>** What is the size of the essential cooling pond? Page 2.3.1-4 of the ER says 46 ac and page 4.2-2 says 388 ac. Page 2.4-1 of the ER implies that is 68 ac. **<u>STPNOC Response:</u>** The ECP is accurately described on ER Page 2.3.1-4 as being 46 ac. in size. The reference to 388 ac. on ER Page 4.2-2 should have referred to 388 ac-ft which is the maximum authorized storage volume allowed under Certificate of Adjudication No. 14-5437 (Appendix 7). This was a typographical error, not a technical error. The estimates of lake habitat referenced in ER Page 2.4-1 were taken from the U.S. Fish & Wildlife Service's NWI Mapping units. The accuracy of these polygons is not equivalent to field survey data and is sometimes extrapolated from aerial photography. The 7,068 acre number was compiled from a GIS query of the NWI database and included the following water bodies: MCR – 6971 ac., ECP – 46 ac., and the Dredged Material Disposal Area – 51 ac.
B.	**<u>NRC Comment:</u>** Page 4.2-2 of the ER refers to Kelly Lake located in the northeast corner of the site. Is Kelly Lake included in the list of wetlands/water bodies at page 2.4-1 of the ER? If so, where is it captured? **<u>STPNOC Response:</u>** Kelly Lake is considered to be a combination of both freshwater pond and emergent wetlands. Kelly Lake is included in the discussion of wetlands/water bodies in the last paragraph on Page 2.4-1 of the STP Unit 3&4 ER.

C.	**NRC Comment:** Page 4.2-2 of the ER states that spoils from Colorado River dredging would be disposed in accordance with the STP site's dredging permits. Where would the spoils be located? **STPNOC Response:** Rev. 1.0 of the ER no longer refers to "spoil disposal" in reference to dredging in the Colorado River. Dredged material will be disposed of at the upland disposal site designated in USACE Permit No. 14848(4). This is located on uplands between the Main Cooling Reservoir and the Colorado River approximately 2000 ft to the southwest of the Reservoir Makeup Pumping Facility. Appendix 8 is a map exhibiting the approximate location and boundary limits of the USACE approved disposal area.
D.	**NRC Comment:** The maximum predicted salt deposition from operation of the mechanical draft cooling towers in Section 5.1.1.1 and 5.3.3.1.3 of the ER differ significantly. How can these predictions be reconciled? **STPNOC Response:** The predictions in Section 5.3.3.1.3 provide the correct values. The modeling supporting Section 5.3.3.1 was updated and Section 5.1.1.1 was inadvertently not corrected to reflect the updated predictions presented in Section 5.3.3.1.3.
E.	**NRC Comment:** What does "500" refer to in the last paragraph of Section 4.1.1.1 of the ER? **STPNOC Response:** The "500" refers to hectares as 500 hectares converts to 1235.5 acres. The word "hectare" was inadvertently omitted. The reference to 500 hectares is from NUREG-1555, Page 4.1.1-7, first bulleted item under "c" which states that "removal of less the 2% of such land, or up to 500 hectares, generally has minor effects, particularly if the land is not unique or otherwise distinguished." (Appendix 9).

F.	**NRC Comment:** Section 1.1.2.1 of the ER says that the proposed units would be baseload merchant generator plants. Would the portion of the units owned by CPS Energy also be merchant? **STPNOC Response:** The portion of the units owned by CPS Energy would not be used as merchant generator plants.

Surface Water Hydrology – Rajiv Prasad	
101.	**<u>NRC Comment:</u>** Renewal schedule for various permits (currently issued for Units 1 and 2). More detail to be provided in letter or ER revision. **<u>STPNOC Response:</u>** The permit renewal schedule for Units 1 and 2 is included as Appendix 10.
104.	**<u>NRC Comment:</u>** What is the seniority status of STP Units 3 & 4 water use rights? (Sec. 2.3.2). More detail to be provided in letter or ER revision. **<u>STPNOC Response:</u>** Water rights for STP Units 3 & 4 are not differentiated from water rights for STP Units 1 & 2. Water rights for the entire facility are described in the Certificate of Adjudication 14-5437 (Appendix 11). The priority date (seniority status) for the Main Cooling Reservoir is June 10, 1974 while the priority date for the Essential Cooling Pond is March 25, 1986.
111.	**<u>NRC Comment:</u>** Are additional rights-of-way needed to make modification to the existing transmission lines (Sec. 4.2.1). More detail to be provided in letter or ER revisions **<u>STPNOC Response:</u>** No additional temporary or permanent ROW will be required for proposed upgrades to the existing Transmission System according to AEP, the owners and operators of the system. Appendix 12 is a confirming statement from AEP, the owners and operators of the existing Transmission System.
142.	**<u>NRC Comment:</u>** Need the reference: STPNOC (South Texas Project Nuclear Operating Company) 2005. Water Conservation Plan, South Texas Project Electric Generating Station, Rev. 1, May 1. (Sec. 9.4.2). More detail to be provided in letter or ER Revision. **<u>STPNOC Response:</u>** This document is included as Appendix 13.

Groundwater Hydrology – Charley Kincaid	
180.	**<u>NRC Comment:</u>** Section 5.5.2.2 "Mixed Waste Storage and Disposal Plans." This section contains no mention of disposal plans. At a minimum, perhaps a statement that all mixed waste will be disposed offsite is in order. More detail to be provided in letter or ER revision. **<u>STPNOC Response:</u>** STPNOC's mixed waste management philosophy for STP Units 3&4 is to avoid generating mixed waste by controlling materials that could become mixed waste through substituting non-hazardous materials for those items via the Expendable Materials Control program (see Appendix 14a, 0PGP03-ZI-0008 CONTROL OF EXPENDABLE MATERIALS). Any mixed wastes that are generated will be stored or disposed of via a licensed disposal site in accordance with current regulations and site procedures (see Appendix 14b, 0PRP03-ZR-0002 RADIOACTIVE WASTE SHIPMENTS).
184A.	**<u>NRC Comment:</u>** Water Conservation Plan, STP Nuclear Operating Company, South Texas Project Electric Generating Station, Certificate of Adjudication 14-5437, May 1, 2005, Rev.1. **<u>STPNOC Response:</u>** This document is provided as Appendix 15.
184B.	**<u>NRC Comment:</u>** Turner, Collie & Braden, Inc., Groundwater Management Plan, Coastal Plain Groundwater Conservation District, TCB Project No. 052 321492.0001.02WRS 3702, May, 2004. **<u>STPNOC Response:</u>** This document is provided as Appendix 16.

Terrestrial Ecology – Janelle Downs	
194.	**<u>NRC Comment:</u>** A listing of the terrestrial threatened or endangered species that could potentially occur at alternative sties and whether habitat for these species currently exists at the sites. Tetra Tech report and letters to be provided by end of February. **<u>STPNOC Response:</u>** Listings of terrestrial threatened or endangered species that could potentially occur at the alternatives sites are included. • For Limestone: Please see Appendix 17a. • For Malakoff: Please see Appendix 17b. • For Allen's Creek: Please see Appendix 17c.

Aquatic Ecology – Amoret Bunn	
222C.	**<u>NRC Comment:</u>** Provide information on the application for the Coastal Consistency Determination for Units 3 & 4. **<u>STPNOC Response:</u>** STPNOC has consulted with the Texas General Land Office (GLO) regarding compliance with the Texas Coastal Management Program (TCMP). On May 2, 2007, STPNOC participated in a meeting with GLO to introduce the proposed project. Based on discussions from that meeting, STPNOC submitted a "checklist" letter to GLO on May 22, 2007 detailing the specific information that GLO would require to conduct its consistency review. GLO reviewed this information and forwarded a concurrence letter on June 25, 2007. On August 15, 2007, STPNOC again met with GLO to discuss specific portions of the Environmental Report and the COLA prior to submittal to the NRC. Finally, STPNOC hosted a site tour for GLO staff on December 18 & 19, 2007 to help facilitate their review of the project. STPNOC anticipates submitting a consistency determination for GLO review in April-May, 2008. Copies of the "checklist' letter and GLO's concurrence are included as Appendix 18.

Meteorology/Noise/Air Quality – Van Ramsdell	
253.	**NRC Comment:** Section 5.8.1.1 page 5.8-3 3rd paragraph. What are the distances to the closes point of the EAB and the closest residence? **STPNOC Response:** The closest residence is located approximately 2.5 miles away from the South Texas Project generating units.

Additional Documents Requested by NRC

No.	Previously Supplied to NRC	Document Reference	NRC Request Status
1.	Yes	Radwaste System (FSAR)	Previously Docketed. Additional Copy Not Requested
2.	Yes	The Light Company. Houston Lighting and Power South Texas Electric Generating Station. 1990. South Texas Project Electric Generating Station Units 1 & 2, Dockets Nos. STN 50-498, STN 50-499 Fog Monitoring Program. October 1, 1990.	Previously Docketed Additional Copy Requested Document included as Appendix 19
3.	Yes	South Texas Project Units 1 & 2 Environmental Report. 1975. Section 2.3, Appendix 2.3-A, Appendix 2.3-B, Appendix 2.3-C, Appendix 2.3-D	Previously Docketed. Additional Copy Not Requested
4.	Yes	Civil/Structural Construction Specification for Houston Lighting & Power Company South Texas Project Electric Generating Station Specification 9Y230YS0024 Division C2 Section C2.9 Plant Area Roads and Grading, Rev. 5. 1986.	Additional Copy Requested Document included as Appendix 20
5.	Yes	Amended and Restated Contract By and Between The Lower Colorado River Authority and STP Nuclear Operating Company, Effective as of January 1, 2006. 28pp.	Additional Copy Requested Document included as Appendix 21
6.	Yes	Texas Commission on Environmental Quality. 2005. Permit to Discharge Wastes: TPDES Permit No. WQ0001908000. Letter from TCEQ to STPNOC. July 21. 40pp.	Additional Copy Requested Document included as Appendix 22
7.	Yes	Texas Commission on Environmental Quality. 2007. Letter from TCEQ Regarding Cooling Water Intake Structures Phase II Rules, TPDES Permit No. WQ0001908000. June 27, 2007. 1pp.	Additional Copy Requested Document included as Appendix 23

8.	Yes	South Texas Project Nuclear Operating Company. 2007. Letter from STPNOC to Texas Commission on Environmental Quality Regarding Cooling Water Intake Structures Phase II Rules, TPDES Permit No. WQ0001908000. May 24, 2007. 3pp.	Additional Copy Requested Document included as Appendix 24
9.	Yes	Ecological Survey Report – Threatened and Endangered Species, Units 3 & 4 Licensing Project (May 2007), ENSR Corporation. Document No. 10720-008.	Additional Copy Requested Document included as Appendix 25
10.	Yes	Rapid Bioassessment Report – Main Drainage Ditch, Units 3 & 4 Licensing Project (August 2007), ENSR Corporation. Document Number 10720-010	Additional Copy Requested Document included as Appendix 26
11.	Yes	Ecological Survey Report – Units 3 and 4 Licensing Project (March 2007), ENSR Corporation. Document No. 10720-008.	Additional Copy Requested Document included as Appendix 27
12.	Yes	1987-1988 Special Ecological Studies for the South Texas Project, Matagorda County, Texas (March 1989). W.B. Baker and G.N. Greene.	Additional Copy Requested Document included as Appendix 28
13.	Yes	Letter from Texas Parks and Wildlife to Sandra Dannhardt, (Aug. 3, 2007), STI: 32194241. RE: Rare Threatened and Endangered Species.	Additional Copy Requested Document included as Appendix 29
14.	Yes	Letter from U.S.D.A. to Breck Sacra, NRG Energy RE: Inventory and Evaluation of Vegetation at south Texas Nuclear Project, Bay City Texas, January 30, 2008.	Additional Copy Requested Document included as Appendix 30
15.	Yes	Letter from Department of the Army, Galveston District, Corps of Engineers to Ms. S.L. Dannhardt, STP Nuclear Operating Company, RE Permit No. 10570(06); Extension of Time, November 4, 2004.	Additional Copy Requested Document included as Appendix 31