Bryan W. Shaw, Ph.D., *Chairman*
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Mark R. Vickery, P.G., *Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

February 13, 2012

Bridget Bohac, Office of the Chief Clerk
Texas Commission on Environmental Quality
MC-105
P O Box 13807
Austin, Texas 78711

RE: **Executive Director's Response to Hearing Request**
DOCKET NO. 2011-2199-IWD; PERMIT NO. WQ0002496000
SOUTHWESTERN ELECTRIC POWER COMPANY

Dear Ms. Bohac:

Enclosed for filing is the original and (7) seven copies of the Executive Director's Response to Hearing Request regarding SOUTHWESTERN ELECTRIC POWER COMPANY.

If you have any questions, please contact me at (512) 239-0611.

Sincerely,

Michael Parr,
Staff Attorney
Environmental Law Division

cc: Mailing List

TPDES Permit No. WQ0002496000

Application by Southwestern Electric Power Company for TPDES Permit No. WQ0002496000	§ § § § § § §	**BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

EXECUTIVE DIRECTOR'S RESPONSE TO HEARING REQUEST

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I. Introduction

The Executive Director of the Texas Commission on Environmental Quality (the TCEQ or Commission) files this Response to Hearing Requests (Response) on the application by Southwestern Electric Power Company ("SWEPCO") for a major amendment and renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0002496000. Casey Roberts (counsel for Sierra Club) and Eric Allmon (counsel for Public Citizen) submitted a timely joint hearing request on behalf of Sierra Club and Public Citizen. The Executive Director respectfully recommends that this hearing request be denied.

Attached for Commission consideration are the following:

Attachment A – GIS Map

Attachment B – Compliance History

Attachment C – Technical Summary and Draft Permit

Attachment D – Executive Director's Response to Public Comment

II. Background

A. Description of the Facility

SWEPCO operates the Henry W. Pirkey Power Plant, an electric power generation facility located adjacent to Red Oak Road at a point approximately six miles southeast of the City of Hallsville, Harrison County, Texas 75650. The major amendment with renewal would authorize: (a) an increase in the capacity of the Flue Gas Desulfurization & Fly Ash Landfill Retention Pond (Landfill Pond), (b) the diversion of wastewater from the Ash Pond into the Landfill Pond on an infrequent basis, (c) a reduction in the monitoring frequency for total suspended solids (TSS) at Outfalls 004 and 005 from once per month to once per quarter, (d) a reduction in the monitoring frequency for oil and grease (O&G) at Outfall 006 from once per month to once per quarter, (e) a reduction in the monitoring frequency for O&G at Outfall 102 from once per quarter to once per year, (f) a reduction in the monitoring frequency for biochemical oxygen demand, 5-day (BOD_5) at Outfall 302 from once per two months to once per quarter, and (g) a temporary reduction in the two-foot freeboard requirement for ponds during storm events.

The existing permit authorizes the discharge of once-through cooling water and previously monitored effluent (low volume wastewater on an intermittent and flow variable basis via Outfall 102; treated effluent from Plant "X" at a daily average flow not to exceed 800,000 gallons per day via Outfall 202; and domestic wastewater at a daily average flow not to exceed 15,000 gallons per day via Outfall 302) at a daily average flow not to exceed 600,000,000 gallons per day via Outfall 002; storm water from the Lignite Runoff Pond on an intermittent and flow variable basis via Outfall 003; storm water from the Landfill Pond on an intermittent and flow variable basis via Outfall 004; storm water from the Limestone Runoff Pond on an intermittent and flow variable basis via Outfall

005; and wastewater from the Ash Pond on an intermittent and flow variable basis via Outfall 006.

Once-through condenser cooling water and once-through miscellaneous cooling water (collectively referred to as "once-through cooling water" in the permit) receive no treatment prior to discharge at Outfall 002. Low volume wastes (demineralizer regenerant, floor drains, and yard drains) are routed to the Ecology Pit for settling, precipitation, and flocculation prior to discharge via Outfall 102.

Additionally, demineralizer regenerant is routed to a chemical sump and neutralization tank prior to being routed to the Ecology Pit. The permittee may route metal cleaning wastes, chemical metal cleaning wastes, wastewater from the Ash Pond, and wastewater from the Lignite Runoff Pond to Plant "X."

Plant "X" provides pH neutralization, filtration, settling, oil-water separation, and chemical wastewater treatment prior to discharge via Outfall 202. Additionally, metal cleaning wastes and chemical metal cleaning wastes are routed to the Metal Cleaning Waste Pond prior to being routed to Plant "X."

Domestic sewage is subject to pH neutralization, filtration, settling and clarifier solids separation, chlorination, and chemical wastewater treatment prior to discharge via Outfall 302.

Storm water from the lignite storage area is routed to the Lignite Runoff Pond where it is subject to settling, precipitation, and flocculation prior to discharge via Outfall 003. Storm water runoff from the FGD & fly ash sludge landfill (the landfill) is routed to the Landfill Pond where it is subject to settling, precipitation, and flocculation prior to discharge via Outfall 004. The permittee may transfer wastewater from the Lignite Runoff Pond to the Landfill Pond for treatment and discharge via Outfall 004. The permittee may divert wastewater from the Ash Pond into the Landfill Pond on an infrequent basis, on compliance with the technology-based effluent limitations at internal Outfall 104.

Storm water from the limestone storage area is routed to the Limestone Runoff Pond where it is subject to settling, precipitation, and flocculation prior to discharge via Outfall 005. Low volume wastes (boiler blowdown and demineralizer regenerant) and ash transport water are routed to the Ash Pond where they are subject to oil-water separation, pH adjustment, settling, precipitation, and flocculation prior to discharge via Outfall 006.

B. Effluent Limitations

Effluent limitations for discharges via Outfall 002 include: 600 million gallons per day (MGD) daily average and daily maximum flow, 122 degrees Fahrenheit (°F) daily maximum temperature, 0.2 milligrams per liter (mg/L) and 75.6 pounds per day (lbs/day) daily maximum total residual chlorine (TRC), and a report requirement for the daily average and the daily maximum dissolved oxygen (DO) concentrations.

Effluent limitations for discharges via Outfall 102 include: 30 mg/L for the daily average and 100 mg/L daily maximum for TSS, 15 mg/L daily average and 20 mg/L daily maximum for O&G, 0.012 mg/L daily average and 0.025 mg/L daily maximum for total selenium, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 202 include: 0.8 MGD daily average and daily maximum flow, 30 mg/L daily average and 50 mg/L daily maximum for TSS, 15 mg/L daily average and 20 mg/L daily maximum for O&G, 0.016 mg/L daily average and 0.033 mg/L daily maximum for total selenium, 1.0 mg/L daily average and daily maximum for total iron, 0.5 mg/L daily average and 1.0 mg/L daily maximum for total copper, and a range of 6.0 to 9.0 standard units for pH.

Effluent limitations for discharges via Outfall 302 include: 0.015 MGD daily average and 0.030 MGD daily maximum flow, 20 mg/L and 2.5 lbs/day daily average and 65 mg/L daily maximum for BOD_5, 20 mg/L and 2.5 lbs/day daily average and 65 mg/L daily maximum for TSS, a minimum of 1.0 mg/L for TRC, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily maximum concentration of the TRC.

Effluent limitations for discharges via Outfall 003 include: 50 mg/L daily maximum for TSS, 20 mg/L daily maximum for O&G, 0.033 mg/L daily maximum for total selenium, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 004 include: 50 mg/L daily maximum for TSS, 20 mg/L daily maximum for O&G, 0.036 mg/L daily maximum for total selenium, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 104 include: 30 mg/L daily average and 100 mg/L daily maximum for TSS, 15 mg/L daily average and 20 mg/L daily maximum for O&G, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 005 include: 50 mg/L daily maximum for TSS, 20 mg/L daily maximum for O&G, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 006 include: 30 mg/L daily average and 100 mg/L daily maximum for TSS, 15 mg/L daily average and 20 mg/L daily maximum for O&G, 0.006 mg/L daily average and 0.013 mg/L daily maximum for total selenium, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

C. Discharge Route

The effluent is discharged via Outfalls 002 and 003 to the Brandy Branch Reservoir; then to Brandy Branch Creek; via Outfalls 004, 005, and 006 to unnamed tributaries of Hatley Creek; then to Hatley Creek; then all to Sabine River above Toledo Bend Reservoir in Segment No. 0505 of the Sabine River Basin.

The unclassified receiving waters have high aquatic life use for the Brandy Branch Reservoir and the Hatley Creek and no significant aquatic life use for the Brandy Branch Creek and the unnamed tributaries of Hatley Creek. The designated uses for Segment No. 0505 are high aquatic life use, contact recreation, and public water supply.

Segment No. 0505 is currently listed on the State's inventory of impaired and threatened waters (the 2008 Clean Water Act Section 303(d) list. The listing is specifically for elevated levels of bacteria in a 22-mile reach near SH 149. Although domestic wastewater is authorized for discharge via Outfall 002, it is not expected to cause or contribute to the elevated bacteria levels in the receiving waters because: (a) domestic wastewater discharges are controlled at internal Outfall 302 with effluent limitations for BOD_5 and TRC, and (b) the permittee met the effluent limitations for BOD_5 and TRC concentration limits in the past five-year period.

D. Antidegradation Review

In accordance with 30 TAC §307.5 and the TCEQ implementation procedures (January 2003) for the Texas Surface Water Quality Standards (TSWQS), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Brandy Branch Reservoir and Hatley Creek, which have been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be re-examined and may be modified if new information is received.

III. Procedural Background

The TCEQ received the application on August 31, 2010, the application was declared administratively complete on October 25, 2010 and technically complete on May 11, 2011. The Applicant published the *Notice of Receipt of Application and Intent to Obtain Water Quality Permit Amendment* (NORI) in English in *The Marshall News Messenger* on October 29, 2010 and in Spanish in *La Opinion* on November 3, 2010. On July 13, 2011, the Applicant published the *Notice of Application and Preliminary Decision for Water Quality TPDES Permit Amendment and Renewal* (NAPD) in English in *The Marshall News Messenger* and in Spanish in *La Opinion*. The public comment period ended on August 12, 2011. The Executive Director's Response to Public Comment was filed on October 5, 2010 and the Final Decision Letter was mailed on October 7, 2011. The deadline to file a request for contested case hearing or request for reconsideration was November 7, 2011. This application was administratively complete on or after

September 1, 1999, therefore it is subject to the procedural requirements adopted pursuant to House Bill 801, 76th Legislature, 1999.

IV. The Evaluation Process for Hearing Requests

House Bill 801 established statutory procedures for public participation in certain environmental permitting proceedings. For those applications declared administratively complete on or after September 1, 1999, it established new procedures for providing public notice and public comment, and for the Commission's consideration of hearing requests. The Commission implemented House Bill 801 by adopting procedural rules in 30 Texas Administrative Code (30 TAC) Chapters 39, 50, and 55. The application was declared administratively complete on October 25, 2010, therefore it is subject to the procedural requirement of HB 801.

A. Response to Request

The Executive Director, the Public Interest Counsel, and the Applicant may each submit written responses to a hearing request. 30 TAC § 55.209(d).

Responses to hearing requests must specifically address:

a) whether the requestor is an affected person;
b) whether issues raised in the hearing request are disputed;
c) whether the dispute involves questions of fact or of law;
d) whether the issues were raised during the public comment period;
e) whether the hearing request is based on issues raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the Executive Director's Response to Comment;
f) whether the issues are relevant and material to the decision on the application; and
g) a maximum expected duration for the contested case hearing.
30 TAC § 55.209(e).

B. Hearing Request Requirements

In order for the Commission to consider a hearing request, the Commission must first determine whether the request meets certain requirements.

"A request for a contested case hearing by an affected person must be in writing, must be filed with the chief clerk within the time provided...and may not be based on an issue that was raised solely in a public comment withdrawn by the commenter in writing by filing a withdrawal letter with the chief clerk prior to the filing of the Executive Director's Response to Comment."
30 TAC § 55.201(c).

A hearing request must substantially comply with the following:

1) give the name, address, daytime telephone number, and, where possible, fax number of the person who files the request. If the request is made by a group or association, the request must identify one person by name, address, daytime telephone number, and, where possible fax number, who shall be responsible for receiving all official communications and documents for the group;

2) identify the person's personal justiciable interest affected by the application, including a brief, but specific, written statement explaining in plain language the requestor's location and distance relative to the proposed facility or activity that is the subject of the application and how and why the requestor believes he or she will be adversely affected by the proposed facility or activity in a matter not common to members of the general public;

3) request a contested case hearing;

4) list all relevant and material disputed issues of fact that were raised during the public comment period and that are the basis of the hearing request. To facilitate the commission's determination of the number and scope of issues to be referred to hearing, the requestor should, to the extent possible, specify any of the executive director's response to comments that the requestor disputes and the factual basis of the dispute and list any disputed issues of law or policy; and

5) provide any other information specified in the public notice of application. 30 TAC § 55.201(d).

C. Affected Person Determination

In order to grant a contested case hearing, the Commission must determine that a requestor is an "affected person." Section 55.203 sets out who may be considered an affected person.

a) For any application, an affected person is one who has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. An interest common to members of the general public does not qualify as a personal justiciable interest.

b) Governmental entities, including local governments and public agencies, with authority under state law over issues raised by the application may be considered affected persons.

c) In determining whether a person is an affected person, all factors shall be considered, including, but not limited to, the following:

1) whether the interest claimed is one protected by the law under which the application will be considered;
2) distance restrictions or other limitations imposed by law on the affected interest;
3) whether a reasonable relationship exists between the interest claimed and the activity regulated;
4) likely impact of the regulated activity on the health and safety of the person, and on the use of property of the person;
5) likely impact of the regulated activity on the use of the impacted natural resource by the person; and

6) for governmental entities, their statutory authority over or interest in the issues relevant to the application.

30 TAC § 50.203.

A group or association may also request a contested case hearing. In order for a group or association to request a contested case hearing, the group or association must show that it meets the following requirements:

1) one or more members of the group or association would otherwise have standing to request a hearing in their own right;

2) the interests the group or association seeks to protect are germane to the organization's purpose; and

3) neither the claim asserted nor the relief requested requires the participation of the individual members in the case.

30 TAC § 55.205(a). In addition the Executive Director, Public Interest Counsel, or the Applicant may request that a group or association provide an explanation of how the group or association meets the above requirements. 30 TAC § 55.205(b).

D. Referral to the State Office of Administrative Hearings

When the Commission grants a request for a contested case hearing, they are required to issue an order specifying the number and scope of issues to be referred to the State Office of Administrative Hearings (SOAH) for a hearing. 30 TAC § 50.115(b). Subsection 50.115(c) sets out the test for determining whether an issue may be referred to SOAH. "The commission may not refer an issue to SOAH for a contested case hearing unless the commission determines that the issue: 1) involves a disputed question of fact; 2) was raised during the public comment period; and 3) is relevant and material to the decision on the application." 30 TAC § 50.115(c).

V. Analysis of the Requests

The Executive Director has analyzed the hearing request for Public Citizen and Sierra Club to determine whether it complies with Commission rules, who qualifies as an affected person, what issues may be referred for a contested case hearing, and what is the appropriate duration of the hearing.

1. Whether the Requestors Complied with 30 TAC § 55.201(a), (c) and (d)

The public comment period for this permit application ended on August 12, 2011, the response to comment was filed on October 5, 2011, the ED final decision letter was mailed on October 20, 2011, and the deadline to file a request for contested case hearing ended on November 7, 2011. Public Citizen and Sierra Club filed a joint hearing request with the Office of the Chief Clerk on November 4, 2011. The request was timely filed and it was not based on "an issue that was raised solely in a public comment withdrawn by the commenter" before the ED's response to comment was filed. The request substantially complied with 30 TAC § 55.201(a) and (c).

The request contains the names, addresses, and daytime telephone numbers for Casey Roberts, Andrea Issod, and Eric Allmon. The requestors explicitly requested a contested case hearing. The hearing request incorporated relevant and material issues that were raised during the comment period. **Public Citizen and Sierra Club complied with 30 TAC § 55.201(d) (1), (3) and (4).**

However, Public Citizen's hearing request did not identify a member of the group that would be affected by the application, the member's personal justiciable interest that would be affected, a brief and specific statement explaining the member's location and distance relative to the facility and how and why the member believes he or she will be adversely affected by the facility or activity in a manner not common to members of the general public. **Accordingly, Public Citizen did not comply with 30 TAC § 55.201(d) (2).**

Sierra Club's hearing request identified Mr. Richard LeTourneau as its member that would potentially be affected by the application. Sierra Club stated that Mr. LeTourneau resides in Hallsville, approximately six miles from the facility and he "kayaked and fished in a section of the Sabine River approximately four miles downstream of Brandy Branch Reservoir." Sierra Club stated that: Mr. LeTourneau fishes in the identified area of Sabine River at least eight times a year, the wastewater discharged from the facility makes Sabine River unhealthy for contact while kayaking and fishing, and the fish he eats are contaminated and unsafe to consume.

Sierra Club has failed to identify Mr. LeTourneau's personal justiciable interest that would be adversely affected by the application in a manner not common to members of the general public. For perspective, Outfalls 002 is approximately 6.52 miles from the confluence of Brandy Branch Creek and Sabine River; Outfall 003 is approximately 6.11 miles from the confluence of Brandy Branch Creek and Sabine River; Outfall 004 is approximately 6.42 miles from the confluence of Hatley Creek and Sabine River; Outfall 005 is approximately 9.17 miles from the confluence of Brandy Branch Creek and Sabine River; and Outfall 006 is approximately 9.35 miles from the confluence of Brandy Branch Creek and Sabine River. Mr. LeTourneau claims he kayaks in the section of Sabine River approximately four miles downstream from Brandy Branch Creek. Four miles downstream from Brandy Branch Creek on the Sabine River is approximately 10 miles from the nearest outfall at SWEPCO. Mr. LeTourneau resides in Hallsville and does not have any greater privilege than any other member of the general public to kayak or fish in this section of the Sabine River. Mr. LeTourneau does not have a personal justiciable interest in the fish in Sabine River. His right to take and eat fish from the Sabine River is a right common to any member of the general public who want to avail themselves of the opportunity.

Additionally, Mr. LeTourneau's claim that the discharges from SWEPCO is responsible for contaminating fish in the area of the Sabine River, four miles downstream from Brandy Branch Reservoir is untenable. The bulk of the industrial wastewater from SWEPCO is discharged through Outfall 002. Outfall 002 discharges into the Brandy Branch Reservoir which is approximately 4.25 – 8.25 miles from the area of Sabine River where Mr. LeTourneau claims to kayak and fish. In May 1992, Texas Department of State Health Services ("DSHS") issued an advisory restricting the consumption of fish from the

Brandy Branch Reservoir. In response to the fish advisory, the TCEQ initiated a Total Maximum Daily Load project to determine whether the consumption of fish from Brandy Branch Reservoir still posed a threat to human health. The TCEQ collaborated with DSHS to "collect samples, conduct laboratory analyses, and prepare a characterization of the possible risks to consumers from all contaminants found in fish tissue samples.... After assessing all the data collected and characterizing the risks associated with all the contaminants found in fish tissue, the DSHS concluded that consumption of fish from Brandy Branch Reservoir does not pose a threat to human health. The fish consumption advisory was rescinded on October 14, 2004. The discharge of treated industrial wastewater from SWEPCO is not contaminating fish in Brandy Branch Reservoir and it is therefore not expected to contaminate fish eight miles downstream from the reservoir.

Sierra Club did not comply with 30 TAC § 55.201(d)(2) in that it failed to identify Mr. LeTourneau's personal justiciable interest that would be adversely affected by the application in a manner not common to members of the general public.[1]

The Executive Director recommends that the Commission finds that Public Citizen and Sierra Club's hearing request ***does not meet*** *the requirements of 30 TAC § 55.201(d)(2).*

2. Whether the Requestors are Affected Persons

A. Public Citizen

Public Citizen's hearing request does not provide sufficient information to establish either affected person status or group standing. For Public citizen to qualify as a group seeking an affected person status, it must demonstrate that a member or members of the association have standing to request a hearing in their own right. To have standing to request a hearing in their own right, the representative member of the association must be able to meet the requirements set forth in Section 55.203 of the Commission rules.

Public Citizen stated in its request that: (1) it is a nonprofit membership organization which advocates on behalf of citizens on environmental and energy issues, (2) its key purpose is to protect its members from environmental harm caused by coal-fired power plants, and (3) one or more members of its organization would otherwise have standing under 30 TAC § 55.205. Public Citizen raised a variety of relevant and material issues in its hearing request.

However, the request did not identify any member of the organization who would independently meet the affected person requirements in the commission rules. The request failed to identity a member of the association whose personal justiciable interest will be affected by the application. The request also did not provide the location and distance of any member of the association relative to the facility or the activity to be conducted at the facility. The Landowners map attached to the application does not identify Public Citizen as an adjacent landowner or an owner of property within a reasonable distance along the discharge route. The Executive Director's aerial map does

[1] The ED notes that issues relating to recreational interests such as kayaking and fishing were not raised during the public comment period. Neither Sierra Club nor its members can rely on this issue as a basis for requesting a contested case hearing. *See* 30 TAC § 55.201(d) (4).

not show that Public Citizen or any of its members own property downstream or upstream of the facility or the discharge route.

Public Citizen cannot demonstrate that it has standing in this case as it failed to identify a member whose personal justiciable interest will be affected by this application or draft permit. Therefore the ED recommends that the Commission finds that Public Citizen is not an affected person under 30 TAC §§ 55.203 and 55.205.

The Executive Director recommends that the Commission find that ***Public Citizen has not established group standing*** *under 30 TAC § 55.205 and* ***is not an affected person*** *under 30 TAC § 55.203.*

B. Sierra Club

For Sierra Club to qualify as a group seeking an affected person status, it must demonstrate that a member or members of the group have standing to request a hearing in their own right. To have standing to request a hearing in their own right, the representative member of the group must be able to meet the requirements set forth in Section 55.203 of the Commission rules.

Sierra Club stated in its request that: (1) it is the oldest and largest grassroots environmental organization in the country, (2) it has 24,000 members in Texas, (3) its goals include preservation and enhancement of the environment, protection of water quality, the protection of public health, and ensuring that the Pirkey permit complies with all applicable and regulatory requirements, (4) its key purpose is to protect its members from environmental harm caused by coal-fired power plants, and (5) one or more members of the organization would otherwise have standing under 30 TAC § 55.205. Sierra Club raised a variety of relevant and material issues in its hearing request.

Sierra Club identified Richard LeTourneau as its member. The request states that Mr. LeTourneau resides in Hallsville, Texas approximately six miles from the facility, and he kayaks and fishes in Sabine River approximately four miles downstream of Brandy Branch Reservoir between State Highways 149 and 43. The request did not provide the location and distance information about Mr. LeTourneau's property relative to the facility or discharge route. The Landowners map attached to the application does not identify Mr. LeTourneau or Sierra Club as an adjacent landowner or an owner of property within a reasonable distance along the discharge route. The Executive Director's GIS map does not show that Mr. LeTourneau or Sierra Club own property downstream or upstream of the facility or discharge route. Sierra Club did not identify any other members in its hearing request.

The unparticularized recreational interest claimed by Mr. LeTourneau is not an interest protected by the law under which this application is being considered; Mr. LeTourneau resides approximately six miles from the facility and therefore cannot demonstrate that a reasonable relationship exists between the interest claimed and the activity regulated at the facility; and Mr. LeTourneau's health and safety is not likely to be impacted by the regulated activity at SWEPCO in a manner different from the general public. *See* 30 TAC § 55.203(c).

As explained earlier, Mr. LeTourneau failed to identify a personal justiciable interest that would be adversely affected by the application in a manner not common to members of the general public. Mr. LeTourneau raised recreational interest issues for the first time during this permitting process in the hearing request. Issues relating to recreational interests such as kayaking and fishing were not raised during the public comment period. Therefore, neither Sierra Club nor its members can rely on this issue as a basis for requesting a contested case hearing. *See* 30 TAC § 55.201(d) (4). Assuming Mr. LeTourneau can overcome this regulatory requirement, his interests in kayaking and fishing in Sabine River are interests he has in common with members of the general public. He does not have a greater or lesser privilege to fish in Sabine River than any other member of the general public. He did not state how his recreational interest in fishing and kayaking would be particularly harmed by SWEPCO's application. He failed to demonstrate particularized harm to his recreational interest in a manner not common to the general public.

Several Texas courts have considered the issue of whether certain recreational uses can be used as a basis for establishing that a person has a personal justiciable interest in a matter. The totality of the cases lead to the conclusion that Mr. LeTourneau's professed unparticularized recreational interest in fishing and kayaking in the Sabine River without more is not enough to confer standing under Texas law. Mr. LeTourneau simply has not alleged an injury to his recreational interest sufficiently particularized and distinct from the public at large.

1. *Save Our Springs Alliance, Inc. v. City of Dripping Springs*

This case involved a challenge to development agreements between a city and several developers, a Texas Court of Appeals looked at whether the injuries alleged by SOS Alliance—"injury to its members' environmental, scientific, and recreational interests generally"—were sufficient to establish standing in a suit for a declaratory judgment.[2] The Court concluded that:

> There is no Texas authority for the proposition that the type of injury alleged by SOS Alliance in this case - injury to its members' environmental, scientific, and recreational interests generally and without any interest in or connection to the real property involved - is the type of interference with a legally protected interest or injury that confers standing as a matter of state law. SOS Alliance must show a particularized, legally protected interest that is actually or imminently affected by the alleged harm.[3]

In coming to this conclusion, the court reviewed Texas case law and federal case law regarding standing based on recreational use. The court explained that:

> In sum, [it did] not find any Texas case in which an alleged injury to a plaintiff's environmental, scientific, or recreational interests conferred

[2] 304 S.W. 3d 871 (Tex.App.--Austin 2010, pet.denied),
[3] *Id.* at 882.

> standing in the absence of allegations that the plaintiff has an interest in property affected by the defendants' actions.[4]

The court noted that in the case before it, SOS Alliance had not alleged either an environmental interest provided for or protected by statute, nor a property interest subject to the recreational or environmental harm, and concluded that:

> Absent such allegations, there is no particularized, legally protected interest at stake in this context, as there is nothing to distinguish the environmental, scientific, or recreational concerns of SOS Alliance's members from the same concerns experienced by the public in general. Based on the existing state and federal case law, to find standing under the circumstances here would, we think, be to expand Texas' standing jurisprudence, and it is not our proper role as an intermediate appellate court to do so.[5]

Thus, the court "decline[d] to conclude that the environmental, scientific, and recreational interests asserted by SOS Alliance result[ed] in a "concrete and particularized" injury in fact, as is necessary to establish standing under Texas law."[6]

2. *Stop the Ordinances Please v. City of New Braunfels*

In this case, the court evaluated the issue of standing for several tubing-related businesses that claimed their economic interests were adversely impacted by certain ordinances adopted by the City of New Braunfels.[7] In addressing standing, the court focused on the issue of whether the appellants in the case had alleged an injury to themselves that was sufficiently particularized and distinct from the public at large. With regard to standing, generally, the court explained that:

> Standing, at least in a constitutional sense, is a component of the trial court's subject-matter jurisdiction. The general test for constitutional standing in Texas courts is whether there is a "real" (i.e., justiciable) controversy between the parties that will actually be determined by the judicial declaration sought. Constitutional standing is thus concerned not only with whether a justiciable controversy exists, but whether the particular plaintiff has a sufficient personal stake in the controversy to assure the presence of an actual controversy that the judicial declaration sought would resolve. The requirement thereby serves to safeguard the separation of powers by ensuring that the judiciary does not encroach upon the executive branch by rendering advisory opinions, decisions on abstract questions of law that do not bind the parties.[8]

The court further explained that:

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[4] *Id.* at 880.
[5] *Id.* at 882.
[6] *Id.*
[7] 306 S.W.3d 919, (Tex.App.--Austin 2010, no pet.)
[8] *Id.* at 925-26. (internal citations omitted).

> For a party to have standing to challenge a governmental action, as a general rule, it must demonstrate a particularized interest in a conflict distinct from that sustained by the public at large...It is an established rule ... that...sufficiency of a plaintiff's interest (to maintain a lawsuit) comes into question when he intervenes in public affairs. *When the plaintiff, as a private citizen, asserts a public, as distinguished from a private, right, and his complaint fails to show that the matters in dispute affect him differently from other citizens, he does not establish a justiciable interest.*[9]

With regard to the issues in the case in front of it, the court stated that a "broad allegation that the ordinances collectively 'discourage tourists from visiting the Comal and Guadalupe Rivers,'" was not enough to support a claim of standing because "[t]he general economic impact from a decrease in tourism would be one that the [plaintiffs] would share with other New Braunfels citizens. Such an injury is not sufficiently particularized and distinct from the public at large to confer standing."[10] The court only found that the appellants had standing where their economic injuries were directly tied to their property rights:

> [T]he Outfitter Plaintiffs allege they had invested in ice chests with larger capacities for purposes of renting them to tubers and that the Cooler & Container Ordinance subsequently banned those coolers from...portions of the Comal and Guadalupe...By alleging that the [Ordinance] restricted the use of their property, caused them to incur additional expenses, and damaged or destroyed their market for larger cooler rentals within the City limits, the Outfitter Plaintiffs have demonstrated the required actual, concrete, and particularized infringement of their legally protected interests necessary for standing.[11]

The opinions issued by other Texas appellate courts that have looked at the issue of standing with regard to recreational interests appear to support the opinions in these two recent cases.

3. *Texas Rivers Protection Association v. Texas Natural Resource Conservation Commission*

In *Texas Rivers Protection Association v. Texas Natural Resource Conservation Comm'n,*[12] one of the cases reviewed in *Save our Springs Alliance,* the court held that an association member and another individual protesting a permitting action both had standing as "aggrieved" parties with a personal justiciable interest in the matter being considered. Both owned land fronting the affected area of the river, and both conducted canoeing trips for others on the affected area of the river.[13] Therefore, both had economic and riparian interests in addition to their recreational interests. The court noted that "[a]n injury need not affect 'vested' property rights to confer standing; the harm may be economic, recreational, or environmental," and concluded that the appellants in this case had standing because their "riparian ownership alone sufficiently

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[9] *Id.* at 926. (internal citations and quotation marks omitted, emphasis added).
[10] *Id.* at 930.
[11] *Id.* at 928.
[12] 910 S.W.2d 147 (Tex. App.–Austin 1995, writ denied).
[13] *Id.* at 151.

distinguishes their injury from that of the public at large."[14] Thus, as the court in *Save Our Springs Alliance* noted:

> The *Texas Rivers* case...does not stand for the proposition that an allegation of any type of recreational or environmental impact, by itself, constitutes an injury in fact sufficient to confer standing. Instead, this court in *Texas Rivers* concluded that while environmental harm may be a cognizable injury for purposes of standing, it was the harm to the plaintiff's riparian interests that made the injury sufficiently particularized so as to distinguish the harm from that experienced by the general public.[15]

4. *San Antonio Conservation Soc. v. City of San Antonio*

In *San Antonio Conservation Society v. City of San Antonio*,[16] in determining whether certain appellants had standing to challenge construction of a bridge near the San Antonio River, based in part on their right to enjoy the river and the parks along it, the court held that:

> The reason that appellants have no justiciable interest in this controversy is that any right which they have to enjoy the charm and beauty of the San Antonio River and its banks within the City of San Antonio is a right shared in common with all the people of San Antonio and with the public in general and any impairment of this right is an injury or damage sustained by appellants in common with the general public. Only lawfully constituted guardians of the public interest may maintain actions for the redress of such character of injuries.[17]

The court further clarified that "[t]he interests [the society's members] seek to protect are the same whether they are used or enjoyed much or little or none," and "common to those who avail themselves of the privilege as well as to those who do not or cannot."[18]

5. *Persons v. City of Fort Worth*

In *Persons v. City of Fort Worth*,[19] a case in which a private citizen brought an action to enjoin a city from continuing with the planned alteration of a city zoo and city park area, the court determined that the private citizen had not shown "that his uses of the park [we]re unique or peculiar to him as compared to the park uses by the public at large," and determined "that he d[id] not have a greater right to use the park than any other citizen of the City."[20] The court specifically held that the private citizen "ha[d] not shown that he has been damaged or injured as a result of the City's actions other than as a member of the general public," and thus lacked standing to maintain his action.[21]

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[14] *Id.* at 151-52.
[15] *Save Our Springs Alliance, Inc. v. City of Dripping Springs*, 304 S.W. 3d 871, 879-880 (Tex.App.--Austin 2010, pet.denied).
[16] 250 S.W.2d 259 (Tex. Civ. App.–Austin 1952, writ ref'd),
[17] *Id.* at 263.
[18] *Id.* at 263-4.
[19] 790 S.W.2d 865 (Tex. App.–Fort Worth 1990, no writ).
[20] *Id.* at 870.
[21] *Id.*

6. *Hix v. Robinson*

In *Hix v. Robertson*,[22] the court held that landowners had standing to pursue an action regarding their use of a stream that ran through their land for fishing, boating, and recreational purposes.[23]

7. *Lake Medina Conservation Society v. Texas Natural Resources Conservation Commission*

In *Lake Medina Conservation Society v. Texas Natural Resources Conservation Commission*,[24] an organization sued for review of an order authorizing a water control and improvement district to divert water from a lake. The Court held that:

> The members of LAMCOS have shown various interests in the lake, including ownership interest in lakefront property, which will be affected by the amendment. The impact of lower lake levels on owners of waterfront property, waterfront businesses, and private wells in the area constitutes a sufficiently particularized injury to distinguish the members' injury from that of the public at large.[25]

It is thus clear from these cases that the mere allegation of recreational interest in kayaking and fishing without a particularized allegation of how the requester's recreational interest is distinct from the public at large is not sufficient to confer standing under Texas jurisprudence. Mr. LeTourneau and Sierra Club are therefore not affected persons since Mr. LeTourneau cannot articulate his "personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application" in a manner not "common to members of the general public." 30 TAC § 55.203(a).

The Executive Director recommends that the Commission find that ***Sierra Club has not established group standing*** *under 30 TAC § 55.205 and* ***is not an affected person*** *under 30 TAC § 55.203.*

3. Whether the Issues raised are Referable to SOAH for a Contested Case Hearing?

The Executive Director has analyzed the issues raised in accordance with the regulatory criteria. The issues discussed were raised during the public comment period and addressed in the RTC. None of the issues were withdrawn. All identified issues in this response are considered disputed, unless otherwise noted.

1. Whether the draft permit includes adequate protections for the attainable and designated uses of the receiving waters, and whether it ensures adequate protection of surface water quality.

This issue was raised and addressed in the Executive Director's Response to Public Comment, Response No. 1. It involves a question of fact and it is relevant and material to the decision on this application.

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[22] 211 S.W.3d 423 (Tex. App.–Waco 2006, pet. denied).
[23] *Id.* at 426.
[24] 980 S.W.2d 511 (Tex.App.-Austin 1998, pet. denied),
[25] *Id.* at 516.

The Executive Director concludes that this issue ***is appropriate*** *for referral to SOAH.*

2. **Whether the draft contains adequate effluent limits and monitoring requirements to ensure the protection of aquatic life in the receiving waters.**

This issue was raised and addressed in the Executive Director's Response to Public Comment, Response No. 9. It involves a question of fact and it is relevant and material to the decision on this application.

The Executive Director concludes that this issue ***is appropriate*** *for referral to SOAH.*

3. **Whether increasing the capacity of the retention pond constitutes "new source" and should be subject to the new source performance standard.**

This issue was raised and addressed in the Executive Director's Response to Public Comment, Response No. 2. It involves a question of law and it is not relevant and material to the decision on this application.

The Executive Director concludes that this issue ***is not appropriate*** *for referral to SOAH*

Increasing the capacity of the retention pond does not constitute a "new source" under 40 CFR § 122.2. New source is defined as "any building, structure, facility, or installation from which there is or may be a 'discharge of pollutants,' the construction of which commenced ... [a]fter promulgation of standards of performance under section 306 of CWA which are applicable to such source. ..." Construction of a new source as defined under §122.2 commences if the owner or operator has started placing, assembling, or installing any facilities or equipment; or if "significant site preparation work including clearing, excavation or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment ..." has begun "as part of a continuous on-site construction program."[26] The standard of performance for the steam electric power generating point source category was adopted in 1982[27] and the facility commenced construction in 1979. According to the Draft Environmental Impact Statement (EIS) for the facility, the foundation areas for the wastewater ponds were built in 1979.[28] The retention pond is an existing facility. The construction of the facility and the retention ponds predates promulgation of the rules for steam electric power generating point source category, therefore any expansion of the pond would not constitute "new source."

Additionally, under the criteria for new source determination, a source is a new source only if it meets the definition of new source under § 122.2, and
(i) It is constructed at a site at which no other source is located; or

[26] 40 CFR § 122.29(b) (4).
[27] 40 CFR Part 423.
[28] See Draft Environmental Impact Statement, Henry W. Pirkey Power Plant, Unit-1/South Hallsville Surface Mine Project, Harrison County, Texas, EPA 906/9-82-004 (March 1982).

(ii) It totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
(iii) Its processes are substantially independent of an existing source at the same site.[29]

First, any construction related to expanding the capacity of the retention pond does not meet the definition of "new source" under § 122.2; second, the retention pond is located at a site where other sources are located; and third, the expansion does not totally replace a process or production equipment.

Finally, the rules are amply clear that construction at a site where an "existing source is located results in a modification subject to §122.62 rather than a new source ... if the construction does not create a new building, structure, facility, or installation meeting the criteria of paragraph (b) (1) (ii) or (iii) of this section but otherwise alters, replaces, or adds to existing process or production equipment."[30] The Executive Director considers the expansion of the retention pond as a modification requiring a major amendment to the existing permit under 30 TAC § 305.62(c) (1).

4. **Whether the draft permit contains adequate effluent limits to control barium and selenium.**

This issue was raised and addressed in the Executive Director's Response to Public Comment, Response No. 3. It involves a question of fact and it is relevant and material to the decision on this application.

The Executive Director concludes that this issue ***is appropriate*** *for referral to SOAH*

5. **Whether the draft permit should include technology-based effluent limits consistent with EPA's June 7, 2010 guidance for Flue Gas Desulphurization (FGD) wastewater; and whether effluent limits should be established based on biological treatment systems as stated in the guidance.**

This issue was raised and addressed in the Executive Director's Response to Public Comment, Response No. 4. It involves a question of law and it is not relevant and material to the decision on this application.

The Executive Director concludes that this issue ***is not appropriate*** *for referral to SOAH*

6. **Whether the existing cooling water intake structure located at Lake O' the Pines reflect the best technology available (BTA) to minimize adverse environmental impact.**

This issue was raised and addressed in the Executive Director's Response to Public Comment, Response No. 5. It involves a question of fact and it is relevant and material to the decision on this application.

The Executive Director concludes that this issue ***is appropriate*** *for referral to SOAH*

[29] 40 CFR § 122.29(b) (1).
[30] 40 CFR § 122.29(b) (3).

7. **Whether the Executive Director complied with applicable Commission rules in performing the antidegradation review for the SWEPCO permit.**

This issue was raised and addressed in the Executive Director's Response to Public Comment, Response No. 6. It involves a question of fact and it is relevant and material to the decision on this application.

The Executive Director concludes that this issue ***is appropriate*** *for referral to SOAH*

8. **Whether the Applicant has to demonstrate during the application review process for an industrial wastewater permit that Lone Star POTW has adequate capacity to treat the wastes it will receive from AEP Pirkey Power Plant.**

This issue was raised and addressed in the Executive Director's Response to Public Comment, Response No. 7. It involves a question of law and it is not relevant and material to the decision on this application.

The Executive Director concludes that this issue ***is not appropriate*** *for referral to SOAH*

9. **Whether the draft permit includes adequate protections for groundwater in the area of the plant and whether the landfill pond and other storage areas pose danger to groundwater.**

This issue was raised and addressed in the Executive Director's Response to Public Comment, Response No. 8. It involves a question of fact and it is relevant and material to the decision on this application.

The Executive Director concludes that this issue ***is appropriate*** *for referral to SOAH*

VI. Duration of the Contested Case Hearing

Should the Commission decide to refer this case to SOAH; the Executive Director recommends a nine-month duration for a contested case hearing from the date of the preliminary hearing to the presentation of a proposal for decision.

VII. Executive Director's Recommendation

The Executive Director recommends the following actions by the Commission:

a) Find that Public Citizen is not an affected person and deny the hearing request by the group.
b) Find that Sierra Club is not an affected person and deny the hearing request by the group.
c) Should the Commission find that either Public Citizen or Sierra Club meets the requirements of 30 TAC §§ 55.203 and 55.205, issues 1, 2, 4, 6, 7, and 9 should be referred to SOAH for a Contested Case Hearing for a duration of nine months:

Respectfully submitted,

Texas Commission on Environmental Quality

Mark R. Vickery, P.G.
Executive Director

Robert Martinez, Director
Environmental Law Division

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REPRESENTING THE EXECUTIVE DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CERTIFICATE OF SERVICE

I certify that on February 13, 2012, the original and seven copies of the "Executive Director's Response to Hearing Request" on the application for major amendment with renewal by Southwestern Electric Power Company, were filed with the TCEQ's Office of the Chief Clerk and a complete copy was forwarded to all persons listed on the attached mailing list via hand delivery, facsimile transmission, inter-agency mail, electronic submittal, or by deposit in the U.S. Mail.

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Texas Parks & Wildlife Department
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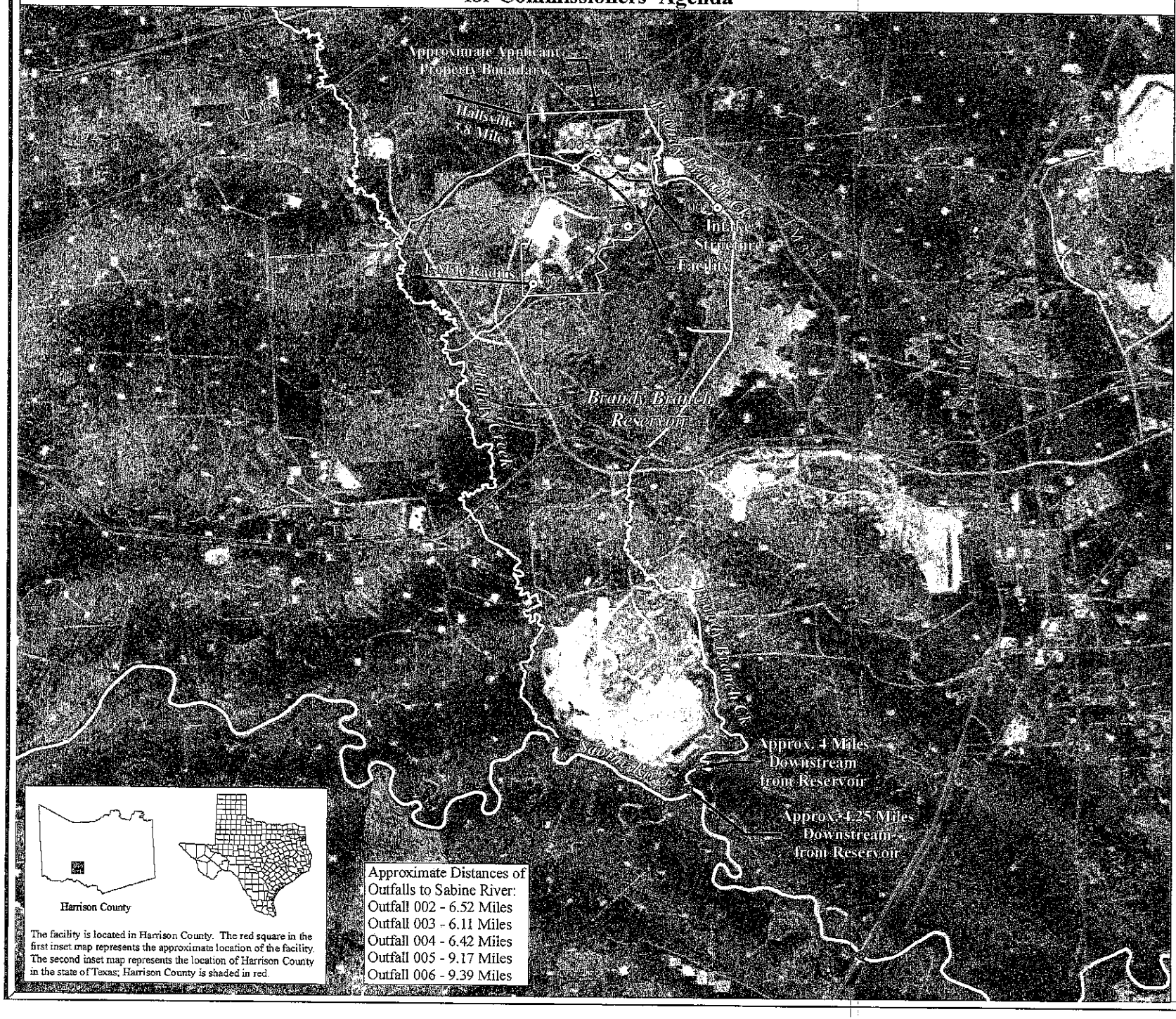
ATTACHMENT A

SWEPCO

Map Requested by TCEQ Office of Legal Services for Commissioners' Agenda



The facility is located in Harrison County. The red square in the first inset map represents the approximate location of the facility. The second inset map represents the location of Harrison County in the state of Texas; Harrison County is shaded in red.

Protecting Texas by Reducing and Preventing Pollution

TCEQ

Texas Commission on Environmental Quality
GIS Team (Mail Code 197)
P.O. Box 13087
Austin, Texas 78711-3087

December 6, 2011

0 0.25 0.5 1 1.5 Miles

Projection: Texas Statewide Mapping System (TSMS)

Scale 1:68,300

Legend

- Approximate Property Boundary
- Approximate Facility Boundary
- Outfalls

Source: The location of the facility was provided by the TCEQ Office of Legal Services (OLS). OLS obtained the site location information from the applicant and the requestor information from the requestor. The vector data are U.S. Census Bureau 1992 TIGER/Line Data (1:100,000). The background of this map is a one-half meter photograph from the 2008 Texas Orthoimagery Project.

This map depicts the following:

(1) The approximate location of the applicant boundary. This is labeled "Approximate Applicant Property Boundary".

(2) The approximate location of the facility. This is labeled "Facility".

(2) Points showing outfall locations. These are labeled with the outfall number.

Distance from confluence of Sabine River and Hatley Creek to State Hwy 43 is approximately 4.2 miles.

N

This map was generated by the Information Resources Division of the Texas Commission on Environmental Quality. This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries. For more information concerning this map, contact the Information Resource Division at (512) 239-0800.

M McDonough CRF-362237

ATTACHMENT B

Compliance History Report

Customer/Respondent/Owner-Operator:	CN600126767	Southwestern Electric Power Company	Classification: AVERAGE	Rating: 1.89
Regulated Entity:	RN100214287	AEP PIRKEY POWER PLANT	Classification: AVERAGE	Site Rating: 0.11

ID Number(s):

AIR OPERATING PERMITS	ACCOUNT NUMBER	HH0037F
AIR OPERATING PERMITS	PERMIT	31
POLLUTION PREVENTION PLANNING	ID NUMBER	P01698
INDUSTRIAL AND HAZARDOUS WASTE	SOLID WASTE REGISTRATION # (SWR)	33240
INDUSTRIAL AND HAZARDOUS WASTE	EPA ID	TXD000726380
AIR NEW SOURCE PERMITS	PERMIT	6269
AIR NEW SOURCE PERMITS	PERMIT	6270
AIR NEW SOURCE PERMITS	REGISTRATION	41433
AIR NEW SOURCE PERMITS	REGISTRATION	43466
AIR NEW SOURCE PERMITS	REGISTRATION	49226
AIR NEW SOURCE PERMITS	ACCOUNT NUMBER	HH0037F
AIR NEW SOURCE PERMITS	REGISTRATION	56601
AIR NEW SOURCE PERMITS	AFS NUM	4820300022
AIR NEW SOURCE PERMITS	REGISTRATION	76547
AIR NEW SOURCE PERMITS	REGISTRATION	78665
AIR NEW SOURCE PERMITS	REGISTRATION	80150
AIR NEW SOURCE PERMITS	REGISTRATION	81378
WASTEWATER	PERMIT	WQ0002496000
WASTEWATER	EPA ID	TX0087726
STORMWATER	PERMIT	TXR15QK89
STORMWATER	PERMIT	TXR05N745
AIR EMISSIONS INVENTORY	ACCOUNT NUMBER	HH0037F

Location: 2400 FM 3251, HALLSVILLE, TX, 75650

TCEQ Region: REGION 05 - TYLER

Date Compliance History Prepared: February 09, 2012

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Compliance Period: August 31, 2005 to February 09, 2012

TCEQ Staff Member to Contact for Additional Information Regarding this Compliance History

Name: Satya Dwivedula, P.E. Phone: (512) 239-3548

Site Compliance History Components

1. Has the site been in existence and/or operation for the full five year compliance period? YES
2. Has there been a (known) change in ownership/operator of the site during the compliance period? NO
3. If **YES**, who is the current owner/operator? N/A
4. If **YES**, who was/were the prior owner(s)/operator(s)? N/A
5. If **YES**, when did the change(s) in owner or operator occur? N/A
6. Rating Date: 9/1/2011 Repeat Violator: NO

Components (Multimedia) for the Site :

A. Final Enforcement Orders, court judgments, and consent decrees of the State of Texas and the federal government.

B. Any criminal convictions of the state of Texas and the federal government.

N/A

C. Chronic excessive emissions events.

N/A

D. The approval dates of investigations. (CCEDS Inv. Track. No.)

1 11/18/2005 (434263)

2 09/16/2005 (445526)

3	02/27/2006	(456790)
4	03/09/2006	(457960)
5	03/09/2006	(458363)
6	03/09/2006	(458599)
7	03/09/2006	(458660)
8	03/23/2006	(459414)
9	04/03/2006	(460339)
10	04/11/2006	(462119)
11	05/01/2006	(464211)
12	05/31/2006	(464257)
13	02/21/2006	(477107)
14	04/11/2006	(477108)
15	02/21/2006	(477109)
16	11/17/2005	(477110)
17	12/16/2005	(477111)
18	06/13/2006	(482287)
19	03/10/2006	(503832)
20	05/17/2006	(503833)
21	06/15/2006	(503834)
22	07/06/2006	(503835)
23	10/18/2006	(514646)
24	11/08/2006	(517233)
25	11/17/2006	(517314)
26	11/08/2006	(517360)
27	11/08/2006	(517393)
28	08/10/2006	(526199)
29	10/12/2006	(526200)
30	12/07/2006	(533276)
31	12/19/2006	(533391)
32	12/11/2006	(533564)
33	12/22/2006	(534859)
34	02/01/2007	(537427)
35	02/12/2007	(538899)
36	03/22/2007	(543851)
37	02/21/2007	(550493)
38	02/21/2007	(550494)
39	12/07/2006	(550495)
40	11/06/2006	(550496)
41	12/07/2006	(550497)
42	01/12/2007	(550498)
43	05/16/2007	(560899)
44	08/21/2007	(572323)
45	08/21/2007	(572381)
46	08/21/2007	(572395)
47	04/16/2007	(586747)
48	05/14/2007	(586748)
49	06/13/2007	(586749)
50	05/24/2007	(586750)

51	08/09/2007	(586751)
52	08/09/2007	(586752)
53	09/24/2007	(595140)
54	03/10/2008	(598693)
55	08/17/2007	(608550)
56	10/09/2007	(608551)
57	01/09/2008	(613877)
58	02/13/2008	(616762)
59	01/18/2008	(624772)
60	01/18/2008	(624773)
61	11/15/2007	(624774)
62	05/13/2008	(637555)
63	04/30/2008	(646625)
64	05/20/2008	(670698)
65	02/11/2008	(675472)
66	04/18/2008	(675473)
67	03/05/2008	(675474)
68	06/30/2008	(684423)
69	07/31/2008	(684988)
70	07/31/2008	(686655)
71	05/12/2008	(693808)
72	06/19/2008	(693809)
73	11/13/2008	(707933)
74	08/04/2008	(715141)
75	10/08/2008	(715142)
76	01/30/2009	(723691)
77	12/08/2008	(730964)
78	11/14/2008	(730965)
79	12/08/2008	(730966)
80	01/13/2009	(730967)
81	03/13/2009	(736785)
82	04/09/2009	(740894)
83	04/09/2009	(741012)
84	04/09/2009	(741144)
85	05/15/2009	(743950)
86	05/28/2009	(744955)
87	06/23/2009	(749308)
88	02/16/2009	(754204)
89	03/05/2009	(754205)
90	04/13/2009	(754206)
91	04/23/2009	(754207)
92	04/23/2009	(754208)
93	10/06/2009	(767519)
94	09/21/2009	(767911)
95	05/19/2009	(771512)
96	06/11/2009	(771513)
97	09/16/2009	(775752)
98	10/02/2009	(775922)

99	10/21/2009	(779469)
100	10/26/2009	(779576)
101	10/21/2009	(779583)
102	11/04/2009	(779606)
103	11/16/2009	(780260)
104	11/04/2009	(780322)
105	12/04/2009	(781840)
106	12/16/2009	(784561)
107	01/20/2010	(786889)
108	01/20/2010	(788313)
109	02/18/2010	(790828)
110	03/15/2010	(794436)
111	06/21/2010	(799905)
112	05/26/2010	(802612)
113	02/16/2010	(814641)
114	08/13/2009	(814642)
115	10/23/2009	(814643)
116	11/17/2009	(814644)
117	12/17/2009	(814645)
118	06/22/2010	(825922)
119	03/10/2010	(834340)
120	04/08/2010	(834341)
121	05/24/2010	(834342)
122	06/18/2010	(847332)
123	07/10/2010	(861770)
124	08/23/2010	(868181)
125	09/15/2010	(875102)
126	12/08/2010	(878003)
127	01/25/2011	(878092)
128	10/06/2010	(882714)
129	11/17/2010	(889124)
130	01/26/2011	(892106)
131	12/17/2010	(897502)
132	01/20/2011	(903390)
133	02/18/2011	(910305)
134	05/06/2011	(914804)
135	05/19/2011	(915828)
136	03/21/2011	(917519)
137	05/23/2011	(921275)
138	04/12/2011	(928581)
139	06/27/2011	(934791)
140	05/16/2011	(939214)
141	06/08/2011	(946633)
142	09/14/2011	(952415)
143	07/19/2011	(953890)
144	09/19/2011	(956217)
145	10/03/2011	(957757)
146	10/03/2011	(957991)

147 10/11/2011 (958643)
148 08/15/2011 (960483)
149 09/02/2011 (966543)
150 12/01/2011 (969997)
151 12/01/2011 (970072)
152 10/14/2011 (972556)
153 11/18/2011 (978702)
154 01/31/2012 (980299)
155 12/14/2011 (985519)

E. Written notices of violations (NOV). (CCEDS Inv. Track. No.)

Date: 01/31/2006 (477107) CN600126767
Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TWC Chapter 26 26.121(a)
Description: Failure to meet the limit for one or more permit parameter

Date: 02/28/2006 (503832) CN600126767
Self Report? YES Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
TWC Chapter 26 26.121(a)
Description: Failure to meet the limit for one or more permit parameter

Date: 03/24/2006 (459414) CN600126767
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(1)(B)
5C THC Chapter 382, SubChapter A 382.085(b)
Description: Failure to submit a timely notification of an excess opacity event.

Date: 07/31/2007 (608550) CN600126767
Self Report? YES Classification: Moderate
Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)
Description: Failure to meet the limit for one or more permit parameter

Date: 08/31/2008 (624773) CN600126767
Self Report? YES Classification: Moderate
Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)
30 TAC Chapter 305, SubChapter F 305.125(1)
Description: Failure to meet the limit for one or more permit parameter

Date: 01/30/2009 (723691) CN600126767
Self Report? NO Classification: Minor
Citation: 30 TAC Chapter 101, SubChapter F 101.201(a)(3)
30 TAC Chapter 122, SubChapter B 122.143(4)
5C THSC Chapter 382 382.085(b)
FOP O-00031 STC 2.F. OP
FOP O-00031 STC 2.I. OP
Description: Failure to report an emissions event, Incident #115573 (excess opacity) within 24 hours after the discovery of the emissions event.

Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 101, SubChapter A 101.20(1)
30 TAC Chapter 111, SubChapter A 111.111(a)(1)(B)
30 TAC Chapter 116, SubChapter B 116.115(c)
30 TAC Chapter 122, SubChapter B 122.143(4)
40 CFR Chapter 60, SubChapter C, PT 60, SubPT D 60.42(a)(2)
FOP O-00031, STC 1A OP
FOP O-00031, STC 3.A.I. OP
FOP O-00031, STC 9 OP
NSR Permit R6269 PERMIT
Description: Failure to control opacity below 20% over a six-minute period when an emissions event was not reported within the required 24 hour time period.

Date: 12/04/2009 (781840) CN600126767
Self Report? NO Classification: Moderate
Citation: 30 TAC Chapter 305, SubChapter F 305.125(1)
Description:
Failure to maintain a minimum freeboard of two feet in the retention ponds.

F. Environmental audits.

G. Type of environmental management systems (EMSs).

H. Voluntary on-site compliance assessment dates.

N/A

I. Participation in a voluntary pollution reduction program.

N/A

J. Early compliance.

N/A

Sites Outside of Texas

N/A

ATTACHMENT C

Request for Comments -- Draft Conditions
TCEQ – Water Quality Division
Phone: (512)239-4671
Fax: (512)239-4430
Mailing Address: TCEQ, Water Quality Division, P.O. Box 13087, Austin, TX 78711-3087

TO: Region: **5**
Submitted by: **Satya Dwivedula, P.E.** E-Mail ID: **Sdwivedu** Phone: **(512) 239-3548**
Date Request Submitted:
Comments Deadline: **Within 10 days**

Date Application Received by TCEQ in Austin: **August 31, 2010**

REGIONAL OFFICES: The entity below has submitted an application for the project referenced below in accordance with regulations of the TCEQ. Please return comments ASAP, but no later than the comments deadline which is 10 days from the submittal date. Permit disposition will proceed after comments are received or after the comments deadline has passed. If no comments are received within this time frame, we will assume you have no comments or objections to the project as proposed. Please return a complete copy of the form (both sides) with your comments.

PROJECT TYPE: **Major Amendment** TEAM ASSIGNED: **Industrial**
TPDES/TLAP: **TPDES** REGULATED ENTITY NO.: **RN100214287**
PERMIT NO.: **WQ0002496000**
COMPANY NAME: **Southwestern Electric Power Company** CUSTOMER REFERENCE NO.: **CN600126767**
PLANT NAME: **Henry W. Pirkey Power Plant**
ADDRESS: **2400 Farm-to-Market Road 3251, Hallsville, Texas 75650-7634**
SEGMENT: **0505** COUNTY: **Harrison**
TECHNICAL CONTACT: **Mr.Franklin L.Mills** PHONE: **214-777-1507**
MAJOR/MINOR: **Major**
COMPLIANCE RATING: **CN (Average=1.75); RN (Average=0.16)**
SUMMARY OF APPLICATION REQUEST: **Renewal of the exiting permit with a major amendment to authorize: (a) an increase in the capacity of the existing Flue Gas Desulphurization (FGD) & Fly Ash Landfill Retention Pond, (b) the diversion of wastewater from the Ash Pond into the FGD & Fly Ash Landfill Retention Pond during emergency conditions, (c) a reduction in the monitoring frequency for total suspended solids at Outfalls 004 and 005 from once per month to once per quarter, (c) a reduction in the monitoring frequency for oil and grease at Outfall 006 from once per month to once per quarter, (d) a reduction in the monitoring frequency for oil and grease at Outfall 102 from once per quarter to once per year, (e) a reduction in monitoring frequency for biochemical oxygen demand (5-day) at Outfall 302 from once per two months to once per quarter, and (f) a temporary reduction in two-foot freeboard requirement for ponds during storm events.**

PERMIT WRITER COMMENTS: **Compliance History is OK. The draft permit authorized all requested amendments.**

Request for Comments -- Draft Permit
RESPONSE

TO: **Satya Dwivedula**
FROM: Region:
Copy of Application Received by your Office: ___ YES ___ NO Date Received: __

COMPANY NAME: Southwestern Electric Power Company

PERMIT NO.: WQ0002496000

REGULATED ENTITY NO: RN100214287

Investigator's/Compliance Officer's Name (Please Print): _____

Phone: _____

Comments Deadline (from pg. 1):

Date of Last Site Visit: _____

COMMENTS ON CONDITIONS: (Please mark up draft special conditions with your comments. Please address applicability and enforceability. List any additional conditions below):

Compliance Determination Conditions: _____

Operational Limitations: _____

GENERAL COMMENTS: : _____

CERTIFIED MAIL

U.S. Environmental Protection Agency
Region 6
Attention: Evelyn Rosborough (6WQ-CA)
1445 Ross Avenue
Dallas, Texas 75202

Re: TPDES Draft Permit No. WQ0002496000, EPA ID No. TX0087726
CN600126767, RN100214287

Dear Ms. Rosborough:

Enclosed is the draft permit and Fact Sheet and Executive Director's Preliminary Decision for the draft TPDES Permit No. WQ0002496000 as required under the TCEQ/EPA Memorandum of Agreement. Please review and provide any written comments, objections (general or interim) or recommendations with respect to the draft permit within forty-five days from receipt of this draft permit to my attention.

If you need additional information or have any questions, please contact Satya Dwivedula of my staff by telephone at (512) 239-3548, by email at satya.dwivedula@tceq.texas.gov, by fax at (512) 239-4430, or if by correspondence, include MC 148 in the letterhead address following my name. Thank you for your cooperation in this matter.

Sincerely,

Yvonna Miramontes, Team Leader
Industrial Permits Team
Water Quality Division

YM/sd

Enclosures

Mr. Franklin L. Mills
American Electric Power
1201 Elm Street, Suite 800
Dallas, Texas, 75270

Re: Southwestern Electric Power Company
Proposed TPDES Permit No. WQ0002496000, EPA ID No. TX0087726
CN600126767, RN100214287

Dear Mr. Mills:

Enclosed for your review and comment is a copy of a draft proposed permit for the above-referenced operation. This draft is subject to further staff review and modification, however, we believe it generally includes the terms and conditions that are appropriate to your discharge. **Please read the entire draft carefully as there are changes from the existing permit.** Also enclosed for your review and comment is a copy of the draft second notice, the Fact Sheet and Executive Director's Preliminary Decision. Please provide comments if there are any inaccuracies or any information that is not consistent with your application. After the draft permit is filed with the Office of the Chief Clerk, you will receive instructions for publishing this notice in a newspaper and/or the notice will be published in the *Texas Register*.

Please read the enclosed "Draft Permit Form" and submit your comments prior to the deadline that is indicated by the form. If your comments are not received by the deadline, the draft permit will be transferred to the Chief Clerk's office and comments received after this date will not be considered. Please see the enclosed form for further details.

If you have comments or questions, please contact me prior to the "Draft Permit Form" deadline at (512) 239-3548, by E-mail at satya.dwivedula@tceq.texas.gov, or if by correspondence, include MC-148 in the letterhead address following my name.

Sincerely,

Satya Dwivedula, P.E.
Wastewater Permitting Section
Water Quality Division

SD
Enclosure

cc: TCEQ Region 5

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

NOTICE OF APPLICATION AND PRELIMINARY DECISION FOR WATER QUALITY TPDES PERMIT AMENDMENT AND RENEWAL FOR INDUSTRIAL WASTEWATER

TPDES PERMIT NO. WQ0002496000

APPLICATION AND PRELIMINARY DECISION. Southwestern Electric Power Company, 2400 Farm-to-Market Road 3251, Hallsville, Texas, 75650-7634, which operates Henry W. Pirkey Power Plant, has applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment to TPDES Permit No. WQ0002496000 to authorize: (a) an increase in the capacity of the existing Flue Gas Desulphurization (FGD) & Fly Ash Landfill Retention Pond, (b) the diversion of wastewater from the Ash Pond into the FGD & Fly Ash Landfill Retention Pond on an infrequent basis, (c) a reduction in the monitoring frequency for total suspended solids at Outfalls 004 and 005 from once per month to once per quarter, (c) a reduction in the monitoring frequency for oil and grease at Outfall 006 from once per month to once per quarter, (d) a reduction in the monitoring frequency for oil and grease at Outfall 102 from once per quarter to once per year, (e) a reduction in monitoring frequency for biochemical oxygen demand (5-day) at Outfall 302 from once per two months to once per quarter, and (f) a temporary reduction in two-foot freeboard requirement for ponds during storm events. The current permit authorizes the discharge of once-through cooling water and previously monitored effluent (low volume wastewater on an intermittent and flow variable basis via Outfall 102; treated effluent from Plant "X" at a daily average flow not to exceed 800,000 gallons per day via Outfall 202; and domestic wastewater at a daily average flow not to exceed 15,000 gallons per day via Outfall 302) at a daily average flow not to exceed 600,000,000 gallons per day via Outfall 002; storm water from the Lignite Runoff Pond on an intermittent and flow variable via Outfall 003; storm water from the FGD & Fly Ash Landfill Retention Pond on an intermittent and flow variable via Outfall 004; storm water from the Limestone Runoff Pond on an intermittent and flow variable via Outfall 005; and wastewater from the Ash Pond on an intermittent and flow variable basis via Outfall 006. This application was submitted to the TCEQ on August 31, 2010.

The facility is located adjacent to Red Oak Road at a point approximately six miles southeast of the City of Hallsville, Harrison County, Texas 75650. The effluent is discharged via Outfalls 002 and 003 to Brandy Branch Reservoir; thence to Brandy Branch Creek; via Outfalls 004, 005, and 006 to unnamed tributaries of Hatley Creek; thence to Hatley Creek; thence all to Sabine River Above Toledo Bend Reservoir in Segment No. 0505 of the Sabine River Basin. The unclassified receiving waters have high aquatic life use for Brandy Branch Reservoir, no significant aquatic life use for Brandy Branch Creek and the unnamed tributaries of Hatley Creek, and high aquatic life use for Hatley Creek. The designated uses for Segment No. 0505 are high aquatic life use, contact recreation, and public water supply.

In accordance with Title 30 Texas Administrative Code (TAC) §307.5 and the TCEQ implementation procedures (January 2003) for the Texas Surface Water Quality Standards, an antidegradation review of the receiving waters was performed.

A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Brandy Branch Reservoir and Hatley Creek, which have been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

The TCEQ Executive Director has completed the technical review of the application and prepared a draft permit. The draft permit, if approved, would establish the conditions under which the facility must operate. The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The permit application, Executive Director's preliminary decision, and draft permit are available for viewing and copying at Marshall Public Library, 300 South Alamo Street, Marshall, Texas.

PUBLIC COMMENT / PUBLIC MEETING. You may submit public comments or request a public meeting about this application. The purpose of a public meeting is to provide the opportunity to submit written or oral comment or to ask questions about the application. Generally, the TCEQ will hold a public meeting if the executive director determines that there is a significant degree of public interest in the application or if requested by a local legislator. A public meeting is not a contested case hearing.

OPPORTUNITY FOR A CONTESTED CASE HEARING. After the deadline for public comments, the executive director will consider the comments and prepare a response to all relevant and material, or significant public comments. **The response to comments, along with the executive director's decision on the application, will be mailed to everyone who submitted public comments or who requested to be on a mailing list for this application. If comments are received, the mailing will also provide instructions for requesting a contested case hearing or reconsideration of the executive director's decision.** A contested case hearing is a legal proceeding similar to a civil trial in a state district court.

TO REQUEST A CONTESTED CASE HEARING, YOU MUST INCLUDE THE FOLLOWING ITEMS IN YOUR REQUEST: your name; address; phone number; applicant's name and permit number; the location and distance of your property/activities relative to the facility; a specific description of how you would be adversely affected by the facility in a way not common to the general public; and the statement "[I/we] request a contested case hearing." If the request for contested case hearing is filed on behalf of a group or association, the request must designate the group's representative for receiving future correspondence; identify an individual member of the group who would be adversely affected by the propose facility or activity; provide the information discussed above regarding the affected member's location and distance from the facility or activity; explain how and why the member would be affected; and explain how the interests the group seeks to protect are germane to the group's purpose.

Following the close of all applicable comment and request periods, the Executive Director will forward the application and any requests for reconsideration or for a contested case hearing to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

The Commission will only grant a contested case hearing on disputed issues of fact that are relevant and material to the Commission's decision on the application. Further, the Commission will only grant a hearing on issues that were raised in timely filed comments that were not subsequently withdrawn.

EXECUTIVE DIRECTOR ACTION. The executive director may issue final approval of the application unless a timely contested case hearing request or a timely request for reconsideration is filed. If a timely hearing request or request for reconsideration is filed, the executive director will not issue final approval of the permit and will forward the application and requests to the TCEQ Commissioners for their consideration at a scheduled Commission meeting.

MAILING LIST. If you submit public comments, a request for a contested case hearing or a reconsideration of the Executive Director's decision, you will be added to the mailing list for this specific application to receive future public notices mailed by the Office of the Chief Clerk. In addition, you may request to be added to: (1) the permanent list for a specific applicant name and permit number; and/or (2) the mailing list for a specific county. If you wish to be placed on the permanent and/or the county mailing list, clearly specify which list(s) and send you request to TCEQ Office of the Chief Clerk at the address below.

All written public comments and public meeting requests must be submitted to the Office of the Chief Clerk, MC 105, TCEQ, P.O. Box 13087, Austin, TX 78711-3087 or electronically at www.tceq.state.tx.us/about/comments.html within 30 days from the date of newspaper publication of this notice.

AGENCY CONTACTS AND INFORMATION. If you need more information about this permit application or the permitting process, please call the TCEQ Office of Public Assistance, Toll Free, at 1-800-687-4040. Si desea información en Español, puede llamar al 1-800-687-4040. General information about the TCEQ can be found at our web site at www.TCEQ.state.tx.us.

Further information may also be obtained from Southwestern Electric Power Company at the address stated above or by calling Mr. Franklin L. Mills at 214-777-1507.

Issued:

Agenda Caption (save to I:/EVERYONEwq/caption/{"permit number" with no filename extension}:

AGENDA CAPTION FOR TPDES PERMIT NO. WQ0002496000

Southwestern Electric Power Company, which operates Henry W. Pirkey Power Plant, has applied for a major amendment to TPDES Permit No. WQ0002496000 to authorize: (a) an increase in the capacity of the existing Flue Gas Desulphurization (FGD) & Fly Ash Landfill Retention Pond, (b) the diversion of wastewater from the Ash Pond into the FGD & Fly Ash Landfill Retention Pond on an infrequent basis, (c) a reduction in the monitoring frequency for total suspended solids at Outfalls 004 and 005 from once per month to once per quarter, (c) a reduction in the monitoring frequency for oil and grease at Outfall 006 from once per month to once per quarter, (d) a reduction in the monitoring frequency for oil and grease at Outfall 102 from once per quarter to once per year, (e) a reduction in monitoring frequency for biochemical oxygen demand (5-day) at Outfall 302 from once per two months to once per quarter, and (f) a temporary reduction in two-foot freeboard requirement for ponds during storm events. The current permit authorizes the discharge of once-through cooling water and previously monitored effluent (low volume wastewater on an intermittent and flow variable basis via Outfall 102; treated effluent from Plant "X" at a daily average flow not to exceed 800,000 gallons per day via Outfall 202; and domestic wastewater at a daily average flow not to exceed 15,000 gallons per day via Outfall 302) at a daily average flow not to exceed 600,000,000 gallons per day via Outfall 002; storm water from the Lignite Runoff Pond on an intermittent and flow variable via Outfall 003; storm water from the FGD & Fly Ash Landfill Retention Pond on an intermittent and flow variable via Outfall 004; storm water from the Limestone Runoff Pond on an intermittent and flow variable via Outfall 005; and wastewater from the Ash Pond on an intermittent and flow variable basis via Outfall 006. The facility is located adjacent to Red Oak Road at a point approximately six miles southeast of the City of Hallsville, Harrison County, Texas 75650.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For proposed Texas Pollutant Discharge Elimination System TPDES Permit No. WQ0002496000, EPA ID No. TX0087726 to discharge to water in the state.

Issuing Office:	Texas Commission on Environmental Quality (TCEQ) P.O. Box 13087 Austin, Texas 78711-3087
Applicant:	Southwestern Electric Power Company 2400 Farm-to-Market Road 3251 Hallsville, Texas, 75650-7634
Prepared By:	Satya Dwivedula, P.E. Wastewater Permitting Section Water Quality Division (512) 239-3548
Date:	February 13, 2012
Permit Action:	Major Amendment; TPDES Permit No. WQ0002496000

I. EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. It is proposed the permit be issued to expire on April 1, 2016 following the requirements of Title 30 Texas Administrative Code (TAC) §305.71.

II. APPLICANT ACTIVITY

The applicant currently operates Henry W. Pirkey Power Plant.

III. DISCHARGE LOCATION

As described in the application, the plant site is located adjacent to Red Oak Road at a point approximately six miles southeast of the City of Hallsville, Harrison County, Texas. The effluent is discharged via Outfalls 002 and 003 to Brandy Branch Reservoir; thence to Brandy Branch Creek; via Outfalls 004, 005, and 006 to unnamed tributaries of Hatley Creek; thence to Hatley Creek; thence all to Sabine River Above Toledo Bend Reservoir in Segment No. 0505 of the Sabine River Basin.

IV. RECEIVING STREAM USES

The unclassified receiving waters have high aquatic life use for Brandy Branch Reservoir, no significant aquatic life use for Brandy Branch Creek and the unnamed tributaries of Hatley Creek, and high aquatic life use for Hatley Creek. The designated uses for Segment No. 0505 are high aquatic life use, contact recreation, and public water supply.

V. STREAM STANDARDS

The general criteria and numerical criteria that make up the stream standards are provided in 30 TAC §§307.1 - 307.10, effective August 17, 2000.

VI. DISCHARGE DESCRIPTION

The following is a quantitative description of the discharge described in the Monthly Effluent Report data for the period August 2005 through December 2010. The "Average of Daily Avg." values presented in the following table are the average of all daily average values for the reporting period for each parameter. The "Maximum of Daily Max." values presented in the following table are the individual maximum values for the reporting period for each parameter.

A. Flow

Outfall	Frequency	Average of Daily Avg., million gallons per day (MGD)	Maximum of Daily Max (MGD)
002	Continuous	424	633
102	Intermittent	23.51	33.13
202	Continuous	No Discharge	No Discharge
302	Continuous	0.002	0.009
003	Intermittent	0.05	0.1
004	Intermittent	1.0	5.0
005	Intermittent	0.45	2.0
006	Intermittent	1.72	4.0

B. Temperature (degrees F)

Outfall	Daily Avg.	Daily Max
002	92°F	115°F

C. Effluent Characteristics

Outfall	Parameter	Average of Daily Avg	Maximum of Daily Max
002	Total Residual Chlorine	N/A	0.2 mg/L 37.8 lbs/day
102	Total Suspended Solids	2 mg/L	4 mg/L
	Oil and Grease	< 5mg/L	< 5 mg/L
	Selenium, Total	0.006 mg/L	0.007 mg/L
	pH	6.1 standard units, min.	9.0 standard units, max.
202	Total Suspended Solids	No Discharge	No Discharge
	Oil and Grease	No Discharge	No Discharge
	Selenium, Total	No Discharge	No Discharge
	Iron, Total	No Discharge	No Discharge
	Copper, Total	No Discharge	No Discharge

Outfall	Parameter	Average of Daily Avg	Maximum of Daily Max
202	pH	No Discharge	No Discharge
302	Biochemical Oxygen Demand, 5-day	6.3 mg/L < 1.0 lbs/day	13 mg/L
	Total Suspended Solids	5 mg/L <1.0 lbs/day	14 mg/L
	Total Residual Chlorine	1.0 mg/L, min.	7.3 mg/L, max.
	pH	6.3 standard units, min.	8.1 standard units, max.
003	Total Suspended Solids	N/A	8 mg/L
	Oil and Grease	N/A	< 5 mg/L
	Selenium, Total	N/A	0.013 mg/L
	pH	7.2 standard units, min.	7.5 standard units, max.
004	Total Suspended Solids	N/A	18 mg/L
	Oil and Grease	N/A	< 5 mg/L
	Selenium, Total	N/A	0.057 mg/L
	pH	6.0 standard units, min.	8.5 standard units, max.
005	Total Suspended Solids	N/A	35 mg/L
	Oil and Grease	N/A	< 5 mg/L
	pH	6.4 standard units, min.	8.5 standard units, max.
006	Total Suspended Solids	7 mg/L	13 mg/L
	Oil and Grease	< 5 mg/L	< 5 mg/L
	Selenium, Total	0.0022 mg/L	0.0060 mg/L
	pH	6.4 standard units, min.	8.9 standard units, max.

A review of the Monthly Effluent Report data identified two self-reported effluent limitation violations - the daily maximum flow of 633 MGD at Outfall 002 in February 2006 exceeded its effluent limitation of 600 MGD, and the daily maximum total selenium concentration of 0.057 mg/L at Outfall 004 in August 2008 exceeded its effluent limitation of 0.036 mg/L. The permittee has clarified that the daily maximum flow Outfall 002 in February 2006 was recorded erroneously (as 633 MGD instead of 369 MGD) into the US Environmental Protection Agency's (EPA) database, and that there was no actual effluent limitation exceedance. No permit action is proposed for the single effluent limitation exceedance for total selenium.

In the past five years: (a) nineteen chronic biomonitoring tests were performed with no demonstrations of toxicity and (b) twenty 24-hour acute biomonitoring tests were performed with no demonstration of significant mortality. Therefore, no additional biomonitoring requirements are deemed necessary.

VII. PROPOSED EFFLUENT LIMITATIONS

Final effluent limitations are established in the draft permit as follows:

Outfall No	Parameter	Daily Average	Daily Maximum
002	Flow	600 MGD	600 MGD
	Temperature	Report, °F	122°F
	Total Residual Chlorine	N/A	0.2 mg/L 75.6 lbs/day
	Dissolved Oxygen	Report, mg/L	Report, mg/L
102	Flow	Report, MGD	Report, MGD
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Selenium, Total	0.012 mg/L	0.025 mg/L
	pH	6.0 standard units, min.	9.0 standard units, max.
202	Flow	0.8, MGD	0.8, MGD
	Total Suspended Solids	30 mg/L	50 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Selenium, Total	0.016 mg/L	0.033 mg/L
	Iron, Total	1.0 mg/L	1.0 mg/L
	Copper, Total	0.5 mg/L	1.0 mg/L
	pH	6.0 standard units, min.	9.0 standard units, max.
302	Flow	0.015 MGD	0.030 MGD
	Biochemical Oxygen Demand, 5-day	20 mg/L 2.5 lbs/day	65 mg/L
	Total Suspended Solids	20 mg/L 2.5 lbs/day	65 mg/L
	Total Residual Chlorine	1.0 mg/L, min.	Report, max.
	pH	6.0 standard units, min.	9.0 standard units, max.
003	Flow	Report, MGD	Report, MGD
	Total Suspended Solids	N/A	50 mg/L
	Oil and Grease	N/A	20 mg/L
	Selenium, Total	N/A	0.033 mg/L
	pH	6.0 standard units, min.	9.0 standard units, max.
004	Flow	Report, MGD	Report, MGD
	Total Suspended Solids	N/A	50 mg/L
	Oil and Grease	N/A	20 mg/L
	Selenium, Total	N/A	0.036 mg/L
	pH	6.0 standard units, min.	9.0 standard units, max.

Outfall No	Parameter	Daily Average	Daily Maximum
104	Flow	Report, MGD	Report, MGD
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
005	Flow	Report, MGD	Report, MGD
	Total Suspended Solids	N/A	50 mg/L
	Oil and Grease	N/A	20 mg/L
	pH	6.0 standard units, min.	9.0 standard units, max.
006	Flow	Report, MGD	Report, MGD
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Selenium, Total	0.006 mg/L	0.013 mg/L
	pH	6.0 standard units, min.	9.0 standard units, max.

VIII. SUMMARY OF CHANGES FROM APPLICATION

The following changes have been made from the application that make the draft permit more stringent.

1. A reporting requirement for the daily average and the daily maximum dissolved oxygen concentration at Outfall 002 is included in the draft permit based on the recommendation of the Water Quality Assessment Team, for the following reason:

   The existing permit authorizes the discharge of once-through cooling water at a daily average flow of 600 MGD, and includes an effluent limitation for the daily maximum temperature at 122°F. Based on information provided in the permit application, the level of oxygen demanding constituents in discharges via Outfall 002 is low. However, temperatures at the daily maximum allowable levels have the potential to suppress attainable dissolved oxygen levels in the reservoir, in the immediate vicinity of Outfall 002. Based on limited dissolved oxygen information provided in the application, the effluent at Outfall 002 contains high levels of dissolved oxygen. Since the available data on dissolved oxygen is limited, for a more detailed analysis of dissolved oxygen levels, a dissolved oxygen monitoring requirement for a period close to the permit term is included in the draft permit.

2. The daily maximum effluent limitation for total suspended solids at Outfall 202 is made more stringent by reducing it from 100 mg/L to 50 mg/L because: (a) Outfall 202 discharges treated effluent from Plant "X," (b) Plant X is authorized to receive wastewater from the Lignite Runoff Pond (coal pile runoff) and (c) the daily maximum effluent limitation for total suspended solids for coal pile runoff is 50 mg/L, per 40 CFR §423.12.

3. The daily maximum effluent limitation for total suspended solids at Outfall 004 is made more stringent by reducing it from 100 mg/L to 50 mg/L because: (a) Outfall 004 discharges storm water from the Flue Gas Desulphurization & Fly Ash Landfill Retention Pond (Landfill Pond),

(b) the Landfill Pond is authorized to receive wastewater from the Lignite Runoff Pond (coal pile runoff) and (c) the daily maximum effluent limitation for total suspended solids for coal pile runoff is 50 mg/L, per 40 CFR §423.12.

4. Revised Other Requirement No. 5.d to include more stringent liner requirements for all newly-constructed ponds in accordance with rules provided in Title 30 Texas Administrative Code (TAC) Chapter 217.

5. Revised Other Requirement No. 7 to include the revised definitions of mixing zones provided by the Water Quality Assessment Team. This revision includes: (a) reduction in the mixing zone at Outfall 002 from 200-foot radius from the point of discharge to 100-foot radius from the point of discharge, (b) the definition of human health mixing zone at Outfall 002, and (c) the definition of mixing zone at Outfall 003.

6. Revised Other Requirement No. 12 to include: (a) specific requirements for operating the cooling water intake structure(s) and (b) a clause specifying that the permit may be reopened to include additional requirements, if it is later determined that the Cooling Water Intake Structure configuration is not representative of the Best Technology Available (BTA) for minimizing Adverse Environmental Impact (AEI).

7. Included a new Other Requirement No. 13 to require the permittee to analyze Outfall 006 effluent after the first qualifying discharge event. This requirement is included because analytical data for discharges via Outfall 006 was not provided in the permit application since no discharges were made via this outfall since May 2008.

8. A new Other Requirement No. 14 is included to restrict the allowable days of discharge via Outfalls 003 and 004.

See the next section for additional changes to the existing permit.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

The permittee requested the following changes in their amendment request that the Executive Director has recommended granting.

1. An authorization to increase in the capacity of the existing Landfill Pond. This request is granted without additional conditions because it does not result in the discharge of any additional waste streams, pollutants, or flows than those authorized in the existing permit.

2. An authorization to divert wastewater from the Ash Pond into the Landfill Pond on an infrequent basis. This request is granted because: (a) it is anticipated to happen infrequently during periods of heavy precipitation events while the facility is offline due to extended emergency maintenance, or extended planned power outages, (b) a new internal Outfall 104 is included to ensure that the technology-based limits for total suspended solids and oil and grease for the Ash Pond effluent are met prior to their discharge into the Landfill Pond, (c) water quality-based effluent limitations for total selenium are included at the Landfill Pond, and (d) discharges from both the Ash Pond and the Landfill Pond are required to maintain their pH between 6.0 and 9.0 standard units.

3. A reduction in the monitoring frequency for total suspended solids at Outfalls 004 and 005 from once per month to once per quarter. This request is granted because the permittee has demonstrated full compliance with the effluent limitations for these parameters at Outfalls 004 and 005 in the past five-year period, with no reported effluent limitation violations.

4. A reduction in the monitoring frequency for oil and grease at Outfall 006 from once per month to once per quarter. This request is granted because the permittee has demonstrated full compliance with the effluent limitations for oil and grease at Outfall 006 in the past five-year period, with no reported detections or effluent limitation violations.

5. A reduction in the monitoring frequency for oil and grease at Outfall 102 from once per quarter to once per year. This request is granted because the permittee has demonstrated full compliance with the effluent limitations for oil and grease at Outfall 102 in the past five-year period, with no reported detections or effluent limitation violations.

6. A reduction in monitoring frequency for biochemical oxygen demand (5-day) at Outfall 302 from once per two months to once per quarter. This request is granted because the permittee has demonstrated full compliance with the effluent limitations for biochemical oxygen demand (5-day) at Outfall 302 in the past five-year period, with no reported effluent limitation violations.

7. A temporary reduction in two-foot freeboard requirement for ponds during storm events. This request is granted because: (a) freeboard reduction below two-foot is expected to happen intermittently during storm events and (b) Other Requirement No. 5.e. is revised to require the permittee to manage any pond level increases associated with storm water events promptly.

The following additional changes have been made to the draft permit.

1. On Page 2.e., clarified that wastewaters from Lignite Runoff Pond are also authorized at Outfall 004.

2. Other Requirement No. 2 is revised to accurately specify the condition related to polychlorinated biphenyls in Title 40 Code of Federal Regulations (CFR) Part 423.

3. Other Requirement No. 5.a. is revised specify that the Landfill Pond is authorized to receive wastewaters from the Ash Pond.

4. Included new Other Requirement No. 5.f. to: (a) authorize diversions of wastewaters from the Ash Pond into the Landfill Pond, and (b) to specify the conditions under which these diversions are authorized.

5. Removed Other Requirement No. 13 which required analytical data for discharges via Outfalls 004 and 005, because this data has been provided with the permit application.

X. DRAFT PERMIT RATIONALE

The following section sets forth the statutory and regulatory requirements considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guidelines and water quality standards.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

A. REASON FOR PERMIT ISSUANCE

The applicant has applied to the TCEQ for a major amendment to Permit No. WQ0002496000 to authorize: (a) an increase in the capacity of the existing Landfill Pond, (b) the diversion of wastewater from the Ash Pond into the Landfill Pond on an infrequent basis, (c) a reduction in the monitoring frequency for total suspended solids at Outfalls 004 and 005 from once per month to once per quarter, (c) a reduction in the monitoring frequency for oil and grease at Outfall 006 from once per month to once per quarter, (d) a reduction in the monitoring frequency for oil and grease at Outfall 102 from once per quarter to once per year, (e) a reduction in monitoring frequency for biochemical oxygen demand (5-day) at Outfall 302 from once per two months to once per quarter, and (f) a temporary reduction in two-foot freeboard requirement for ponds during storm events.

The current permit authorizes the discharge of once-through cooling water and previously monitored effluent (low volume wastewater on an intermittent and flow variable basis via Outfall 102; treated effluent from Plant "X" at a daily average flow not to exceed 800,000 gallons per day via Outfall 202; and domestic wastewater at a daily average flow not to exceed 15,000 gallons per day via Outfall 302) at a daily average flow not to exceed 600,000,000 gallons per day via Outfall 002 that will remain the same; storm water from the Lignite Runoff Pond on an intermittent and flow variable via Outfall 003 that will remain the same; storm water from the Landfill Pond and wastewaters from the Lignite Runoff Pond on an intermittent and flow variable via Outfall 004, which has been revised; storm water from the Limestone Runoff Pond on an intermittent and flow variable via Outfall 005 that will remain the same; and wastewater from the Ash Pond on an intermittent and flow variable basis via Outfall 006 that will remain the same.

B. WATER QUALITY SUMMARY

The discharge route is via Outfalls 002 and 003 to Brandy Branch Reservoir; thence to Brandy Branch Creek; via Outfalls 004, 005, and 006 to unnamed tributaries of Hatley Creek; thence to Hatley Creek; thence all to Sabine River Above Toledo Bend Reservoir in Segment No. 0505 of the Sabine River Basin. The unclassified receiving waters have high aquatic life use for Brandy Branch Reservoir, no significant aquatic life use for Brandy Branch Creek, no significant aquatic life use for the unnamed tributaries of Hatley Creek, and high aquatic life use for Hatley Creek. The designated uses for Segment No. 0505 are high aquatic life use, contact recreation, and public water supply. Effluent limitations and conditions established in the draft permit are in compliance with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses. Additional discussion of the water quality aspects of the draft permit will be found at Section X.D. of this fact sheet.

In accordance with 30 TAC §307.5 and the TCEQ implementation procedures (January 2003) for the Texas Surface Water Quality Standards, an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Brandy Branch Reservoir and Hatley Creek, which have been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

The discharge from this permit action is not expected to have an effect on any federal endangered or threatened aquatic or aquatic dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS) biological opinion on the State of Texas authorization of the Texas Pollutant Discharge Elimination System (TPDES; September 14, 1998; October 21, 1998 update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

Segment No. 0505 is currently listed on the State's inventory of impaired and threatened waters (the 2008 Clean Water Act Section 303(d) list. The listing is specifically for elevated levels of bacteria in a 22-mile reach near SH 149. Domestic wastewater discharges authorized via Outfall 002 can potentially impact bacteria levels in the receiving waters. However, discharges from the facility are not expected to cause or contribute to the elevated bacteria levels in the receiving waters because: (a) domestic wastewater discharges are controlled at internal Outfall No. 302 with effluent limitations for biochemical oxygen demand (5-day) and minimum total residual chlorine concentration limits, (b) the permittee met the effluent limitations for biochemical oxygen demand (5-day) and total residual chlorine concentration limits in the past five-year period, and (c) the discharge of once-through cooling water authorized via Outfall 002 at a daily average flow of 600 MGD is expected to rapidly dilute the domestic wastewaters that are authorized at a daily average flow of 0.015 MGD. Therefore, no additional permit conditions are proposed to address the inclusion of the receiving waters on 2008 Clean Water Act Section 303(d) list.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

Regulations promulgated in Title 40 of the Code of Federal Regulations (40 CFR) require technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, on best professional judgment (BPJ) in the absence of guidelines, or both.

The proposed draft permit authorizes the discharge of once-through cooling water and previously monitored effluent (low volume wastewater on an intermittent and flow variable basis via Outfall 102; treated effluent from Plant 'X' at a daily average flow not to exceed 0.8 MGD via Outfall 202; domestic wastewater at a daily average flow not to exceed 0.015 MGD via Outfall 302) at a daily average flow not to exceed 600 million gallons per day (MGD) via Outfall 002; storm water from the Lignite Runoff Pond on an intermittent and flow variable via Outfall 003; storm water from the Landfill Pond and previously monitored effluent (wastewaters from the Ash Pond on an intermittent and flow variable basis via Outfall 104) on an intermittent and flow variable via Outfall 004; storm water from the Limestone Runoff Pond on an intermittent and flow variable via Outfall 005; and wastewater from the Ash Pond on an intermittent and flow variable basis via Outfall 006.

Discharges of once-through cooling water via Outfall 002; low volume wastewater via Outfall 102; treated effluent from Plant "X" via Outfall 202; wastewater from the Lignite Runoff Pond via Outfall 003; wastewater from the Landfill Pond via Outfall 004; wastewater from the Ash Pond via Outfall 104; and wastewater from the Ash Pond via Outfall 006 are subject to federal effluent limitation guidelines under 40 CFR Chapter 122, 40 CFR Chapter 423, or both.

A new source determination was performed and the above listed discharges are not new sources as defined at 40 CFR § 122.2. Therefore new source performance standards (NSPS) are not applicable to the discharges from this facility.

The discharge of wastewater from Limestone Runoff Pond via Outfall 005 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment.

The source water for cooling operations at the Pirkey Power Plant is obtained from Brandy Branch Reservoir. Outfalls 002, 102, 202, 302, and 003 discharge to Brandy Branch Reservoir. Outfalls 004, 104, 005, and 006 discharge to unnamed tributaries of Hatley Creek.

Once-through condenser cooling water and once-through miscellaneous cooling water (collectively referred to as "once-through cooling water" in the permit) receive no treatment prior to discharge at Outfall 002. Low volume wastes (demineralizer regenerant, floor drains, and yard drains) are routed to the Ecology Pit for settling, precipitation, and flocculation prior to discharge via Outfall 102.

Additionally, demineralizer regenerant is routed to a chemical sump and neutralization tank prior to being routed to the Ecology Pit. The permittee may route metal cleaning wastes, chemical metal cleaning wastes, wastewater from the Ash Pond, and wastewater from the Lignite Runoff Pond to Plant "X."

Plant "X" provides pH neutralization, filtration, settling, oil-water separation, and chemical wastewater treatment prior to discharge via Outfall 202. Additionally, metal cleaning wastes and chemical metal cleaning wastes are routed to the Metal Cleaning Waste Pond prior to being routed to Plant "X." Domestic sewage is subject to pH neutralization, filtration, settling and clarifier solids separation, chlorination, and chemical wastewater treatment prior to discharge via Outfall 302. Storm water from the lignite storage area is routed to the Lignite Runoff Pond where it is subject to settling and precipitation & flocculation prior to discharge via Outfall 003. Storm water runoff from the flue gas desulfurization & fly ash sludge landfill is routed to the Landfill Pond where it is subject to settling, precipitation, and flocculation prior to discharge via Outfall 004. The permittee may transfer wastewater from the Lignite Runoff Pond to the Landfill Pond for treatment and discharge via Outfall 004. The permittee may divert wastewater from the Ash Pond into the Landfill Pond on an infrequent basis, on compliance with the technology-based effluent limitations at internal Outfall 104. Storm water from the limestone storage area is routed to the Limestone Runoff Pond where it is subject to settling, precipitation, and flocculation prior to discharge via Outfall 005. Low volume wastes (boiler blowdown and demineralizer regenerant) and ash transport water are routed to the Ash Pond where they are subject to oil-water separation, pH adjustment, settling, precipitation, and flocculation prior to discharge via Outfall 006.

2. CALCULATIONS

See Appendix A of this fact sheet for calculations and further discussion of technology-based effluent limitations proposed in the draft permit.

Technology-based effluent limitations for total residual chlorine at Outfall 002; total suspended solids and oil and grease at Outfall102; total suspended solids, oil and grease, total iron and total copper at Outfall 202; total suspended solids and oil and grease at Outfalls 003, 004, 005, and 006 are continued from the existing permit.

A new internal Outfall 104 is established to provide technology-based effluent limitations for total suspended solids and oil and grease for wastewaters in the Ash Pond, when they are diverted to the Landfill Pond on an infrequent basis.

The following technology-based effluent limitations are proposed in the draft permit:

Outfall No.	Parameter	Daily Average	Daily Maximum
002	Total Residual Chlorine	N/A	0.2 mg/L
		N/A	75.6 lbs/day
102	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Total Selenium	0.0125 mg/L	0.025 mg/L
	pH	Between 6.0 and 9.0 standard units	
202	Total Suspended Solids	30 mg/L	50 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Total Iron	1.0 mg/L	1.0 mg/L
	Total Copper	0.5 mg/L	1.0 mg/L
	Total Selenium	0.016 mg/L	0.033 mg/L
	pH	Between 6.0 and 9.0 standard units	
003	Total Suspended Solids	N/A	50 mg/L
	Oil and Grease	N/A	20 mg/L
	pH	Between 6.0 and 9.0 standard units	
004	Total Suspended Solids	N/A	50 mg/L
	Oil and Grease	N/A	20 mg/L
	pH	Between 6.0 and 9.0 standard units	
104	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
005	Total Suspended Solids	N/A	50 mg/L
	Oil and Grease	N/A	20 mg/L
	pH	Between 6.0 and 9.0 standard units	
006	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	Between 6.0 and 9.0 standard units	

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

The Texas Surface Water Quality Standards found at 30 TAC Chapter 307 state that "surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life." The methodology outlined in the "Procedures to Implement the Texas Surface Water Quality Standards" is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater that: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health. Calculated water quality-based effluent limits can be found in Appendix B of this fact sheet.

Numerical temperature criteria are not applied for discharges via Outfall 002 into Brandy Branch Reservoir because: (a) Brandy Branch Reservoir is an industrial cooling lake impoundment and (b) temperature criteria have not been specifically established for industrial cooling lake impoundments, as provided in 30 TAC § 307.4(f).

Wastewater impoundments at this facility are determined to be compliant with the EPA's interim guidance *National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residuals (CCR) Impoundments at Steam Electric Power Plants* dated June 7, 2010. This determination is made based on the following information provided along with the permit application: (a) the FGD and CCR wastewater impoundments authorized in the permit are lined with clay, as specified in the permit application, (b) the permittee has been monitoring groundwater data since January 1985 as an internal control measure, to determine if the groundwater is impacted by the wastes in FGD and CCR wastewater impoundments, and (c) the groundwater monitoring data does not indicate any adverse impact to the groundwater quality from FGD and CCR wastewater impoundments.

TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations, conditions, or both are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity databases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls. A comparison of technology-based effluent limits and calculated water quality-based effluent limits is provided in Appendix C of this fact sheet.

2. AQUATIC LIFE CRITERIA

a. SCREENING

Water quality-based effluent limitations are calculated from freshwater and marine aquatic life criteria found in Table 1 of the Texas Surface Water Quality Standards (30 TAC Chapter 307).

Outfalls 002: Acute freshwater criteria are applied at the edge of the zone of initial dilution (ZID) and chronic freshwater criteria are applied at the edge of the aquatic life mixing zone. The ZID is defined as radius of 25 feet from the point of discharge. The aquatic life mixing zone is defined as a radius of 100 feet from the point of discharge.

TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edges of the ZID and aquatic life mixing zone for discharges greater than 10 MGD into lakes or reservoirs. General assumptions used in the horizontal jet plume model are: a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentages are calculated based on the permitted flow of > 100 MGD:

Acute Effluent %: 100 Chronic Effluent %: 100

Outfalls 003: Because Outfall 003 discharges on an intermittent and flow variable basis, the discharge is screened using acute freshwater criteria only. Acute freshwater criteria are applied at the edge of the zone of initial dilution (ZID). The ZID for discharges into lakes and reservoirs is defined as radius of 25 feet from the point where the discharge enters Brandy Branch Reservoir.

The TCEQ's practice is to establish minimum estimated effluent percentages at the edges of the ZID and aquatic life mixing zone for discharges that are 10 MGD or less into sections of lakes or reservoirs that are at least 200 feet wide. These critical effluent percentages are as follows:

Acute Effluent %: 60 Chronic Effluent %: N/A

Outfall 004: Because Outfall 004 discharges on an intermittent and flow variable basis, the discharge is screened using acute freshwater criteria only. There is no mixing zone or zone of initial dilution (ZID) for this discharge directly to an intermittent stream; acute freshwater criteria apply at the end of pipe. The following critical effluent percentages are being used:

Acute Effluent %: 100% Chronic Effluent %: N/A

Outfall 005: There is no mixing zone or zone of initial dilution (ZID) for this discharge directly to an intermittent stream; acute freshwater criteria apply at the end of pipe. Chronic freshwater criteria are applied in the perennial freshwater stream.

For the intermittent stream, the percent effluent for acute protection of aquatic life is 100% since the 7Q2 of the intermittent stream is 0.0 cfs. This effluent percentage also provides acute protection of aquatic life in the perennial stream. TCEQ uses the mass balance equation to estimate dilution in the perennial stream during critical conditions.

The estimated dilution for chronic protection of aquatic life is calculated using the two-year maximum monthly average flow of 0.85 MGD and the 7-day, 2-year (7Q2) flow of 0.36 cfs for Hatley Creek, the perennial stream. The following critical effluent percentages are being used:

Acute Effluent %	100%	Chronic Effluent %	79%

Outfall 006: There is no mixing zone or zone of initial dilution (ZID) for this discharge directly to an intermittent stream; acute freshwater criteria apply at the end of pipe. Chronic freshwater criteria are applied in the perennial freshwater stream.

For the intermittent stream, the percent effluent for acute protection of aquatic life is 100% since the 7Q2 of the intermittent stream is 0.0 cfs. This effluent percentage also provides acute protection of aquatic life in the perennial stream. TCEQ uses the mass balance equation to estimate dilution in the perennial stream during critical conditions. The estimated dilution for chronic protection of aquatic life is calculated using the two-year maximum monthly average flow of 2.27 MGD and the 7-day, 2-year (7Q2) flow of 0.36 cfs for Hatley Creek, the perennial stream.

The following critical effluent percentages are being used:

Acute Effluent %	100%	Chronic Effluent %	91%

Wasteload allocations (WLAs) are calculated using the above estimated effluent percentages, criteria outlined in the Texas Surface Water Quality Standards, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures).

The WLA is the end-of-pipe effluent concentration that can be discharged when after mixing in the receiving stream, the instream numerical criteria will not be exceeded. From the WLA, a long term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level, for discharges via Outfalls 002 and 003 into the Brandy Branch Reservoir.

For discharges via Outfalls 004, 005, and 006 to Hatley Creek, the lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12).

Assumptions used in deriving the effluent limitations include segment values for hardness, chlorides, pH and total suspended solids (TSS) according to the segment-specific values contained in the TCEQ guidance document, *Procedures to Implement the Texas Surface Water Quality Standards (IPs).*

The segment values are 41 mg/L $CaCO_3$ for hardness, 42 mg/L Chlorides, 6.7 standard units for pH, and 16 mg/L for TSS. For additional details on the calculation of water quality-based effluent limitations, refer to the TCEQ guidance document.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

No analytical data is available for screening against water quality-based effluent limitations for discharges via Outfall 006 since no discharges were made after May 2008. As shown in Appendices B and C, effluent limitations calculated at Outfall 006 are the same as those in the existing permit and are continued in the draft permit. A new Other Requirement No. 13 is included to require the permittee to analyze Outfall 006 effluent after the first qualifying discharge event.

Analytical data reported at Outfalls 002 and 005 in the application was screened against calculated water quality-based effluent limitations for the protection of aquatic life. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for aquatic life protection for all analytes at these outfalls.

The existing permit includes effluent limitations for total selenium at Outfalls 003 and 004. As shown in Appendices B and C, the calculated effluent limitations for total selenium at these outfalls are the same as those in the existing permit and are continued in the draft permit. Since effluent limitations at Outfalls 003 and 004 in the existing permit are calculated for intermittent discharges, the draft permit is made more stringent by including a new Other Requirement No. 14 to restrict continuous discharges.

3. AQUATIC ORGANISM TOXICITY CRITERIA (7-DAY CHRONIC)

a. SCREENING

The existing permit includes chronic freshwater biomonitoring requirements at Outfall 002. There have been no lethal or sublethal test failures reported in eleven tests performed in the last five years for the *Ceriodaphnia dubia* test species and no lethal or sublethal test failures reported in eight tests performed in the last five years for the *Pimephales promelas* test species. Analytical data submitted with the application does not indicate violation of any numerical water quality-based effluent limitation for aquatic life protection, therefore minimum chronic freshwater biomonitoring conditions required for EPA classified major facilities are proposed in the draft permit as outlined below.

b. PERMIT ACTION

The provisions of this section apply to Outfall 002.

Based on information contained in the permit application, TCEQ has determined that there may be pollutants present in the effluent(s) that may have the potential to cause toxic conditions in the receiving stream.

Whole effluent biomonitoring is the most direct measure of potential toxicity, which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit are as follows:

CHRONIC FRESHWATER

i) Chronic static renewal 7-day survival and reproduction test using the water flea (*Ceriodaphnia dubia*). The frequency of the testing is once per quarter.

ii) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*). The frequency of testing shall be once per quarter.

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition*, EPA/600/4-90/027F. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the state water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

If none of the first four consecutive quarterly tests demonstrates significant lethal or sub-lethal effects, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species. If one or more of the first four consecutive quarterly tests demonstrates significant sub-lethal effects, the permittee shall continue quarterly testing for that species until four consecutive quarterly tests demonstrate no significant sub-lethal effects. At that time, the permittee may apply for the appropriate testing frequency reduction for that species. If one or more of the first four consecutive quarterly tests demonstrates significant lethal effects, the permittee shall continue quarterly testing for that species until the permit is reissued.

c. DILUTION SERIES

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 32%, 42%, 56%, 75%, and 100%. The low-flow effluent concentration (critical dilution) is defined as 100% effluent.

The dilution series outlined above was calculated using a 0.75 factor applied to the critical dilution. The critical dilution is the estimated effluent dilution at the edge of the aquatic life mixing zone, which is calculated in section X.D.2.a. of this fact sheet.

4. AQUATIC ORGANISM TOXICITY CRITERIA (24-HOUR ACUTE)

a. SCREENING

The existing permit includes 24-hour acute freshwater biomonitoring language for Outfall 002. In the past five years, the permittee has performed twenty 24-hour acute tests with no demonstrations of significant mortality; ten of these tests used *Daphnia pulex* as the test species and ten of these tests used *Pimephales promelas* as the test species. Minimum 24-hour acute freshwater biomonitoring requirements are proposed in the draft permit as outlined below.

b. PERMIT ACTION

24-hour 100% acute biomonitoring tests are required at Outfall 002 at a frequency of once per six months for the life of the permit.

The biomonitoring procedures stipulated as a condition of this permit are as follows:

FRESHWATER

i) Acute 24-hour static toxicity test using a water flea (*Ceriodaphnia dubia* or *Daphnia pulex*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

ii) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIA

a. SCREENING

Outfall 002: Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of freshwater fish tissue found in Table 3 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). Freshwater fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into lakes and reservoirs.

The human health mixing zone for this discharge is defined as a 200-foot radius from the point where the discharge enters Brandy Branch Reservoir. TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edge of the human health mixing zone for discharges greater than 10 MGD into lakes or reservoirs, or discharges into sections of lakes or reservoirs that are less than 200 feet wide, or both.

General assumptions used in the horizontal jet plume model are: a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentage is calculated based on the permitted flow that is greater than 100 MGD:

Human health Effluent %: 100

Outfall 003: Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of freshwater fish tissue found in Table 3 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). Freshwater fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into lakes and reservoirs. The human health mixing zone for this discharge is defined as a 200-foot radius from the point where the discharge enters Brandy Branch Reservoir. TCEQ practice is to establish a minimum estimated effluent percentage at the edge of the human health mixing zone for discharges that are 10 MGD or less into sections of lakes or reservoirs that are at least 200 feet wide. This critical effluent percentage is:

Human Health Effluent %: 8

Outfalls 004, 005, and 006:

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of freshwater fish tissue found in Table 3 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). Freshwater fish tissue bioaccumulation criteria are applied for human health protection in the perennial stream. TCEQ uses the mass balance equation to estimate dilution in the perennial stream during average flow conditions.

The estimated dilution for human health protection is calculated using the two-year monthly average effluent flow of 0.82 MGD at Outfall 004, 0.41 MGD at Outfall 005, and 1.17 MGD at Outfall 006, and the harmonic mean flow of 0.53 cfs for unnamed tributaries of Hatley Creek. The following critical effluent percentages are being used:

Human Health Effluent % at Outfall 004: 71%
Human Health Effluent % at Outfall 005: 54%
Human Health Effluent % at Outfall 006: 77%

Water quality-based effluent limitations for human health protection against the consumption of fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection. A 99th percentile confidence level in the long-term average calculation is used with only one long-term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70 percent and 85 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for human health protection.

6. DRINKING WATER SUPPLY PROTECTION

a. SCREENING

Water Quality Segment No. 0505 which receives the discharges from this facility is designated as a public water supply. An identical screening procedure is used to calculate water quality-based effluent limitations and determine the need for effluent limitations or monitoring requirements as outlined in section X.D.5.a of this fact sheet. Criteria used in the calculation of water quality-based effluent limitations for the protection of a drinking water supply are outlined in Table 3 (Water and Fish) of the Texas Surface Water Quality Standards (30 TAC Chapter 307). These criteria are developed from either drinking water maximum contaminant level (MCL) criteria outlined in 30 TAC Chapter 290, or from the combined human health effects of exposure to consumption of fish tissue and ingestion of drinking water.

b. PERMIT ACTION

Criteria in the "Water and Fish" section of Table 3 do not distinguish if the criteria are based on a drinking water standard or the combined effects of ingestion of drinking water and fish tissue. Effluent limitations or monitoring requirements to protect the drinking water supply (and other human health effects) were previously calculated and outlined in section X.D.5.a of this fact sheet.

XI. PRETREATMENT REQUIREMENTS

This facility is not defined as a publicly owned treatment works (POTW). Pretreatment requirements are not proposed in the draft permit.

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application.
This notice informs the public about the application, and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment, and is not a contested case proceeding. After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's Response to Comments and Final Decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's Response to Comments and Final Decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response. For additional information about this application contact Satya Dwivedula, P.E. at (512) 239-3548.

XIV. ADMINISTRATIVE RECORD

The following section is a list of the fact sheet citations to applicable statutory or regulatory provisions and appropriate supporting references.

A. PERMIT

TPDES Permit No. WQ0002496000 (TX0087726) issued on May 14, 2007.

B. APPLICATION

TPDES wastewater permit application received on August 31, 2010.

C. 40 CFR CITATIONS

40 CFR Part 122
40 CFR Part 125
40 CFR Part 423

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

Interoffice memorandum from Mr. Michael Pfeil, Water Quality Standards Implementation Team to the Industrial Permits Team, dated December 15, 2010.

Interoffice memorandum from Mr. Mark A Rudolph, P.E., Water Quality Assessment Team to the Industrial Permits Team, dated December 15, 2010.

Interoffice memorandum from Mr. Graham Webb, Water Quality Assessment Team to the Industrial Permits Team, dated December 7, 2010.

Interoffice memorandum from Ms. Brittany Lee, Water Quality Standards Implementation Team to the Industrial Permits Team, dated April 26, 2011.

E-mail from Ms. Brittany Lee, Water Quality Standards Implementation Team, March 16, 2011.

E-Mail from Mr. Robert Hansen, Water Quality Standards Implementation Team, May 6, 2011.

Information from Mr. Frank Mills, American Electric Power, via e-mails dated January 12, 2011, March 7, 2011, March 10, 2011, March 25, 2011, April 15, 2011, April 19, 2011, April 25, 2011, April 26, 2011, April 27, 2011, May 18, 2011, May 25, 2011, and June 13, 2011.

E. MISCELLANEOUS

Quality Criteria for Water (1986), EPA 440/5-86-001, 5/1/86.

The State of Texas Water Quality Inventory, 13th Edition, Publication No. SFR-50, Texas Commission on Environmental Quality, December 1996.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, effective August 17, 2000, and Appendix E, effective February 27, 2002.

Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fourth Edition, EPA/600/4-90/027F.

Procedures to Implement the Texas Surface Water Quality Standards, Texas Commission on Environmental Quality, January 2003.

Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits," TCEQ Document No. 98-001.000-OWR-WQ, May 1998.

Appendix A
Calculated Technology-Based Effluent Limits

Outfall 002

The discharge at Outfall 002 consists of once-through cooling water (once-through condenser water and once-through miscellaneous cooling water) and previously monitored effluent. Previously monitored effluent consists of low volume wastewater permitted at internal Outfall 102; treated effluent from Plant "X" permitted at internal Outfall 202; and domestic wastewater permitted at internal Outfall 302. Technology-based effluent limitations are applied to the discharges of low volume wastewater, treated effluent from Plant "X", and treated domestic wastewater at internal Outfalls 102, 202, and 302 respectively.

The discharge of once-through cooling water is subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category). Because the discharge of once-through cooling water comprises over 99% of the discharge at Outfall 002, effluent limitations applicable to once-through cooling water are applied to the entire discharge at Outfall 002.

Technology-based effluent limitations are listed as follows:

Best practicable control technology currently available (BPT) at 40 CFR §423.12 and best available technology economically achievable (BAT) at 40 CFR §423.13.

Parameter	Daily Average	Daily Maximum
Total Residual Chlorine	N/A	0.2 mg/L

* Total residual chlorine may not be discharged from any single generating unit for more than two hours per day.

Mass-based effluent limitation is derived multiplying the concentration-based limit by a conversion factor of 8.345, using a two-year maximum daily average flow of 544.3 MGD, and dividing by twelve because the discharge is limited to two hours per day.

Total Residual Chlorine

Daily Maximum = [0.2 mg/L] * [8.345] * [544.3 MGD / 12] = 75.7 lbs/day

The daily average reporting requirement and the daily maximum limitation for temperature are continued from the existing permit, based on best professional judgment (BPJ).

The technology-based effluent limitations established at Outfall 002 are provided below.

Parameter	Daily Average	Daily Maximum
Total Residual Chlorine	N/A	0.2 mg/L
	N/A	75.7 lbs/day
Temperature (°F)	(Report)	(122)

Outfall 102

Discharges via Outfall 102 consist of low volume wastewater and are subject to categorical guidelines provided in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category).

Technology-based effluent limitations are listed as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L
pH	Between 6.0 and 9.0 standard units	

Effluent limitations and monitoring requirements for total selenium were established based on best professional judgment because of the use of lignite at the facility, and are continued from the existing permit.

The BPT limitations outlined above are the same as those in the existing permit, and are continued in the draft permit as follows:

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L
Selenium, total	0.012 mg/L	0.025 mg/L
pH	Between 6.0 and 9.0 standard units.	

Outfall 202

Discharges via Outfall 202 consists of Plant "X" treated effluent (treated metal cleaning wastes, treated chemical metal cleaning wastes, wastewater from the Lignite Runoff Pond, wastewater from the Flue Gas Desulfurization & Fly Ash Sludge Landfill Pond, and wastewaters from the Ash Pond. The discharges of metal cleaning wastes, chemical metal cleaning wastes, coal pile runoff (Lignite Runoff Pond), and ash transport water (Ash Pond) are subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category).

Technology-based effluent limitations for metal cleaning wastes are as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L
Copper, Total	1.0 mg/L	1.0 mg/L
Iron, Total	1.0 mg/L	1.0 mg/L
pH	Between 6.0 and 9.0 standard units	

Technology-based effluent limitations for chemical metal cleaning wastes are as follows:

BAT (40 CFR §423.13)

Parameter	Daily Average	Daily Maximum
Copper, Total	1.0 mg/L	1.0 mg/L
Iron, Total	1.0 mg/L	1.0 mg/L

Technology-based effluent limitations for coal pile run off are as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	N/A	50 mg/L
pH	Between 6.0 and 9.0 standard units	

Technology-based effluent limitations for ash transport water are as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L
pH	Between 6.0 and 9.0 standard units	

Technology-based effluent limitations established based on rules provided at 30 Texas Administrative Code (TAC) 319.22 at Outfall 202 are continued from the existing permit as follows:

Parameter	Daily Average	Daily Maximum
Copper, Total	0.5 mg/L	1.0 mg/L

Contributions of metal cleaning waste, chemical metal cleaning waste, coal pile runoff, and ash transport water to Plant "X" are intermittent and flow variable. For this reason, the more stringent of the applicable technology-based effluent limitations from each categorical waste stream is applied at Outfall 202. Effluent limitations for total copper and total iron are applicable only when discharging metal cleaning wastes or chemical metal cleaning wastes. Effluent limitations for total selenium were established based upon best professional judgment, and were included in the existing permit as a result of the discharges of coal pile runoff and ash transport water; these limits are continued in the draft permit.

The following technology-based effluent limitations are established at Outfall 002 in the draft permit.

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	50 mg/L
Oil and Grease	15 mg/L	20 mg/L
Selenium, Total	0.016 mg/L	0.033 mg/L
Iron, Total	1.0 mg/L	1.0 mg/L
Copper, Total	0.5 mg/L	1.0 mg/L
pH	Between 6.0 and 9.0 standard units	

Outfall 302

The discharge at Outfall 302 consists of treated domestic wastewater. The discharge of treated domestic wastewater is not subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category). However, effluent limitations provided in 30 Texas Administrative Code Chapter 309 were established as technology-based limits for discharges via this outfall, based on BPJ. These limits are continued in the draft permit.

30 TAC 309

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	20 mg/L	65 mg/L
Biochemical Oxygen Demand (5-day)	20 mg/L	65 mg/L
Total Residual Chlorine	1.0 mg/L (minimum)	N/A
pH	Between 6.0 and 9.0 standard units	

The technology-based effluent limitations outlined above are equal to those included in the existing permit, and are continued in the draft permit as follows:

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	20 mg/L	65 mg/L
	2.5 lbs/day	N/A
Biochemical Oxygen Demand (5-day)	20 mg/L	65 mg/L
	2.5 lbs/day	N/A
Total Residual Chlorine	1.0 mg/L (minimum)	Report mg/L (maximum)
pH	Between 6.0 and 9.0 standard units	

Mass-based effluent limitations are calculated by multiplying the concentration based effluent limitation by the permitted flow and a conversion factor of 8.345.

Outfall 003

Discharges via Outfall 003, which consist of wastewater from the Lignite Runoff Pond (coal pile runoff) are subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category).

Technology-based effluent limitations are provided as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	N/A	50 mg/L
pH	Between 6.0 and 9.0 standard units	

Additionally, a daily maximum effluent limitation for oil and grease was established at 20 mg/L based on best professional judgment, and is continued in the draft permit.

The technology-based effluent limitations outlined above are equal to those included in the existing permit, and are continued in the draft permit as follows:

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	N/A	50 mg/L
Oil and Grease	N/A	20 mg/L
pH	Between 6.0 and 9.0 standard units.	

Outfall 004

The discharges via Outfall 004 consist of storm water from the Landfill Pond, wastewater from the Lignite Runoff Pond, and previously monitored effluent (wastewaters from the Ash Pond monitored at the internal Outfall 104). Storm water discharges via Landfill Pond are not subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category). Wastewaters from the Lignite runoff are subject to categorical guidelines provided at 40 CFR §423.12 (BPT). Wastewaters from the Ash Pond are controlled at internal Outfall 104.

The following effluent limitations apply for wastewater discharges from the Lignite Runoff Pond (coal pile runoff):

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	N/A	50 mg/L
pH	Between 6.0 and 9.0 standard units	

The final technology-based effluent limitations at Outfall 004 are established as follows:

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	N/A	50 mg/L
Oil and Grease	N/A	20 mg/L
pH	Between 6.0 and 9.0 standard units.	

The daily maximum effluent limitation for oil and grease is continued from the existing permit based on BPJ. The daily maximum effluent limitation for total suspended solids is reduced from 100 mg/L to 50 mg/L because Discharges via Outfall 004 include storm water from coal pile runoff.

Outfall 104

Discharges via internal Outfall 104 consist of wastewaters from the Ash Pond. Wastewaters in the Ash Pond consist of ash transport waters and low volume wastewaters. Both ash transport waters and low volume wastewaters are subject to subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category).

Technology-based effluent limitations for ash transport waters are as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L
pH	Between 6.0 and 9.0 standard units	

Technology-based effluent limitations for low volume wastewaters are as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L
pH	Between 6.0 and 9.0 standard units	

The final technology-based effluent limitations at internal Outfall 104 are established as follows:

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L

Effluent limitation for pH is not established at internal Outfall 104 because: (a) Outfall 104 is established to facilitate transfer of wastewaters from the Ash Pond into the Landfill Pond on an infrequent basis, (b) Outfall 104 does not discharge to waters in the state, and (c) technology-based effluent limitations for pH are established at both the Landfill Pond (Outfall 004) and the Ash Pond (Outfall 006) to require the permittee to maintain pH between 6.0 and 9.0 standard units.

Outfall 005

Discharges via Outfall 005 consist of storm water from the Limestone Runoff Pond. Discharges of storm water from the Limestone Runoff Pond are not subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category), and the following effluent limitations are continued from the existing permit and based on best professional judgment:

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	N/A	50 mg/L
Oil and Grease	N/A	20 mg/L
pH	Between 6.0 and 9.0 standard units.	

Outfall 006

Discharges via Outfall 006 consist of wastewater from the Ash Pond (low volume wastewaters including boiler blowdown and demineralizer regenerant and ash transport water). Discharges of low volume wastewaters and ash transport waters are subject to categorical guidelines in 40 CFR Part 423 (Steam Electric Power Generating Point Source Category).

Technology-based effluent limitations for low volume wastewaters and fly ash transport waters are provided as follows:

BPT (40 CFR §423.12)

Parameter	Daily Average	Daily Maximum
Total Suspended Solids	30 mg/L	100 mg/L
Oil and Grease	15 mg/L	20 mg/L
pH	Between 6.0 and 9.0 standard units	

The technology-based effluent limitations outlined above are equal to those included in the draft permit, and are continued in the draft permit.

Other Requirements

Definitions for 10-year, 24-hour rainfall event, total residual chlorine, ash transport water, low volume wastes, metal cleaning wastes, chemical metal cleaning wastes, once-through cooling water, and coal pile runoff, as defined by 40 CFR 423.11, are included in Other Requirement No. 3 of the draft permit.

Other Requirement No. 2 is continued from the existing permit to prohibit the discharge of polychlorinated biphenyl compounds is included in the draft permit, as required by 40 CFR 423.12(b)(2) and 423.13(a).

Other Requirement No. 3.b. prohibiting the discharged from any single generating unit for more than two hours per day (unless the discharger demonstrates to the TCEQ that discharge for more than two hours is required for macroinvertebrate control) is included in the draft permit as required in 40 CFR § 423.12(b)(8) and 40 CFR § 423.13(d)(2).

Outfall 002: Determination of BPJ-Based Section 316(b) Permit Conditions

On July 6, 2004, EPA promulgated Phase II regulations in accordance with section 316(b) of the CWA. On Jan. 25, 2007, the Second U.S. Circuit Court of Appeals remanded most provisions of the Phase II rule. On March 29, 2007, EPA issued a memo stating that the rule should be considered suspended. On July 9, 2007, EPA published a Federal Register notice suspending all parts of the Phase II regulations except 40 CFR 125.90 (b) which provides for regulating existing cooling water intake structures on a case-by-case basis using BPJ.

A TPDES permit for any new or existing facility operating a cooling water intake structure (CWIS) must contain permit conditions meeting the requirements applicable to CWISs under section 316(b) of the Clean Water Act (CWA). Section 316(b) of the CWA requires that the location, design, construction, and capacity of CWISs reflect the Best Technology Available (BTA) for minimizing Adverse Environmental Impact (AEI). In accordance with the *EPA Draft Fact Sheet for Development of BPJ-Based Section 316(b) NPDES Permit Conditions* (Draft Fact Sheet), existing facilities are subject to section 316(b) conditions that reflect BTA for minimizing AEI on a case-by-case, Best Professional Judgment (BPJ) basis.

Therefore, in accordance with the *EPA Draft Fact Sheet for Development of BPJ-Based Section 316(b) NPDES Permit Conditions* (Draft Fact Sheet, 12/07 EPA FS), this existing facility is subject to section 316(b) conditions. The permittee has submitted the document, titled *Pirkey Power Plant Impingement Monitoring Data Report* dated March 2007, as a supplement to the application received on August 31, 2010, in which a description of how the facility meets Best Technology Available (BTA) for minimizing Adverse Environmental Impact (AEI) is included.

The Pirkey Power Plant withdraws cooling water from Brandy Branch Reservoir (also referred to as Hallsville or Pirkey Lake) located on Brandy Branch Creek in Harrison County, Texas.

The Pirkey Power Plant has a total design withdrawal capacity (flow) of 390,000 gallons per minute (gpm)(1,476 cubic meters per minute). Cooling water is withdrawn through three vertical wet pit circulating-water pumps, each rated at 126,000 gpm (478 cubic meters per minute), which also provide service water. The circulating- water pumps are designed to operate between reservoir elevations ranging from 325.0 to 340.0 feet (99.0 to 103.6 meters) mean sea level (msl). Traveling water screens (screens) serve the circulating-water pumps and bar grills are located in front of the screens. Stop logs are in place that isolate each of the three crib-house bays.

The screens have 3/8-inch-square (9.5 millimeter) stainless steel mesh. Normal operating pool elevation of Brandy Branch Reservoir is 340 (104 meters) msl. Calculated maximum through-screen velocity for the screens at low reservoir operating levels is 2.28 feet per second (0.7 meters per second).

The screens stay stationary under normal operating conditions except for periodic cleaning. The screen-wash system is operated two times a day for approximately thirty minutes to remove accumulated debris. Wash water is flushed into a sluice which drains into the reservoir. All three circulating-water pumps are required to operate the unit efficiently for most of the year, although during cooler months only two circulating-water pumps may be used due to lower inlet water temperatures.

Impingement samples were collected once every two weeks beginning on October 6, 2005 and ending on September 21, 2006. A total of 4,832 fish were impinged during this period. Threadfin shad and bluegill constituted about 94% of the total impinged fish. Impingement of sport fish was low, with largemouth bass making up about 1% of the total fish impinged.

Based on BPJ the existing facility currently meets BTA for minimizing AEI. Based upon the final review of the *Impingement Characterization Study (IMECS)* or a revised 316(b) Phase II regulation, if it is later determined that the current CWIS configuration is not representative of BTA for minimizing AEI, the permit may be reopened to incorporate additional requirements.

Appendix B
Calculated Water Quality-Based Effluent Limits

TEXTOX MENU #4 - LAKE OR RESERVOIR

The water quality-based effluent limitations demonstrated below are calculated using:

Table 1, 2000 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 3, 2000 Texas Surface Water Quality Standards for Human Health
"Procedures to Implement the Texas Surface Water Quality Standards," Texas Commission on Environmental Quality, January 2003.

PERMITTEE INFORMATION:

Permittee Name:	Southwestern Electric Power Company
TPDES Permit No:	WQ0002496000
Outfall No:	002
Prepared by:	Lindsay Purifoy
Date:	January 10, 2011

DISCHARGE INFORMATION:

Receiving Waterbody:	Brandy Branch Reservoir
Segment No.:	0505
TSS (mg/L):	16
pH (Standard Units):	6.7
Hardness (mg/L as $CaCO_3$):	41
Chloride (mg/L):	42
Effluent Flow for Aquatic Life (MGD):	>100
Percent Effluent for Mixing Zone:	100
Percent Effluent for Zone of Initial Dilution:	100
Effluent Flow for Human Health (MGD):	>100
Percent Effluent for Human Health:	100
Public Water Supply Use?:	Yes

CALCULATE TOTAL/DISSOLVED RATIO:

Lake Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*		*Water Effects Ratio (WER)*	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	63240.08	0.50		1.00	Assumed
Cadmium	6.55	-0.92	276827.75	0.18		1.00	Assumed
Chromium (Total)	6.34	-0.27	1034874	0.06		1.00	Assumed
Chromium (+3)	6.34	-0.27	1034874	0.06		1.00	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.9	232429.91	0.21		1.00	Assumed
Lead	6.31	-0.53	469695.51	0.12		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	265992.15	0.19		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	137961.03	0.31		1.00	Assumed
Zinc	6.52	-0.68	502572.14	0.11		1.00	Assumed

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Acute Standard (perennial) (ug/L)*	*Chronic Standard (ug/L)*	*WLAa*	*WLAc*	*LTAa*	*LTAc*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Aldrin	3.000	N/A	3.00	N/A	0.96	N/A	1.41	2.99
Aluminum	991.000	N/A	991.00	N/A	317.12	N/A	466.17	986.24
Arsenic	360.000	190.000	724.26	382.25	231.76	233.17	340.69	720.79
Cadmium	11.991	0.512	65.10	2.78	20.83	1.70	2.49	5.27
Carbaryl	2.000	N/A	2.00	N/A	0.64	N/A	0.94	1.99
Chlordane	2.400	0.004	2.40	0.00	0.77	0.00	0.004	0.008
Chlorpyrifos	0.083	0.041	0.08	0.04	0.03	0.03	0.04	0.08
Chromium (+3)	264.384	85.763	4642.05	1505.83	1485.46	918.56	1350.28	2856.72
Chromium (+6)	15.700	10.600	15.70	10.60	5.02	6.47	7.39	15.62
Copper	7.954	5.734	37.54	27.06	12.01	16.51	17.66	37.35
Cyanide	45.780	10.690	45.78	10.69	14.65	6.52	9.59	20.28
4,4'-DDT	1.100	0.001	1.10	0.00	0.35	0.00	9.0E-04	2.0E-03
Dementon	N/A	0.100	N/A	0.10	N/A	0.06	0.09	0.19
Dicofol	59.300	19.800	59.30	19.80	18.98	12.08	17.75	37.56
Dieldrin	2.500	0.002	2.50	0.00	0.80	0.00	0.002	0.004
Diuron	210.000	70.000	210.00	70.00	67.20	42.70	62.77	132.80
Endosulfan I (alpha)	0.220	0.056	0.22	0.06	0.07	0.03	0.05	0.11
Endosulfan II (beta)	0.220	0.056	0.22	0.06	0.07	0.03	0.05	0.11
Endosulfan sulfate	0.220	0.056	0.22	0.06	0.07	0.03	0.05	0.11
Endrin	0.180	0.002	0.18	0.00	0.06	0.00	0.00	0.00
Guthion	N/A	0.010	N/A	0.01	N/A	0.01	0.01	0.02
Heptachlor	0.520	0.004	0.52	0.00	0.17	0.00	0.002	0.004
Hexachlorocyclohexane (Lindane)	2.000	0.080	2.00	0.08	0.64	0.05	0.07	0.15
Lead	23.330	0.810	198.65	6.90	63.57	4.21	6.18	13.08
Malathion	N/A	0.010	N/A	0.01	N/A	0.01	0.01	0.02
Mercury	2.400	1.300	2.40	1.30	0.77	0.79	1.13	2.39
Methoxychlor	N/A	0.030	N/A	0.03	N/A	0.02	0.03	0.06
Mirex	N/A	0.001	N/A	0.00	N/A	0.00	0.001	0.002
Nickel	665.727	73.934	3498.98	388.59	1119.67	237.04	348.45	737.19
Parathion (ethyl)	0.065	0.013	0.07	0.01	0.02	0.01	0.01	0.02
Pentachlorophenol	6.709	4.235	6.71	4.24	2.15	2.58	3.16	6.68
Phenanthrene	30.000	30.000	30.00	30.00	9.60	18.30	14.11	29.86
Polychlorinated Biphenyls (PCBs)	2.000	0.014	2.00	0.01	0.64	0.01	0.01	0.03
Selenium	20.000	5.000	20.00	5.00	6.40	3.05	4.48	9.49
Silver, (free ion)	0.800	N/A	9.60	N/A	3.07	N/A	4.52	9.56
Toxaphene	0.780	0.000	0.78	0.00	0.25	0.00	1.8E-04	3.8E-04
Tributlytin (TBT)	0.130	0.024	0.13	0.02	0.04	0.01	0.02	0.05
2,4,5 Trichlorophenol	136.000	64.000	136.00	64.00	43.52	39.04	57.39	121.41
Zinc	53.767	49.098	486.12	443.90	155.56	270.78	228.67	483.78

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Water and FW Fish (ug/L)*	*FW Fish Only (ug/L)*	*WLAh*	*LTAh*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Acrylonitrile	1.280	10.900	1.28	1.19	1.75	3.70
Aldrin	0.004	0.004	0.00	0.00	0.01	0.01
Arsenic	50.000	N/A	100.59	93.55	137.52	290.94

Barium	2000.000	N/A	2000.00	1860.00	2734.20	5784.60
Benzene	5.000	106.000	5.00	4.65	6.84	14.46
Benzidine	0.001	0.003	0.00	0.00	0.001	0.003
Benzo(a)anthracene	0.099	0.810	0.10	0.09	0.14	0.29
Benzo(a)pyrene	0.099	0.810	0.10	0.09	0.14	0.29
Bis(chloromethyl)ether	0.005	0.019	0.00	0.00	0.01	0.01
Cadmium	5.000	N/A	27.15	25.25	37.11	78.52
Carbon Tetrachloride	3.760	8.400	3.76	3.50	5.14	10.88
Chlordane	0.021	0.021	0.02	0.02	0.03	0.06
Chlorobenzene	776.000	1380.000	776.00	721.68	1060.87	2244.42
Chloroform	100.000	1292.000	100.00	93.00	136.71	289.23
Chromiumd	100.000	3320.000	1755.80	1632.89	2400.35	5078
Chrysene	0.417	8.100	0.42	0.39	0.57	1.21
Cresols	3313.000	13116.000	3313.00	3081.09	4529.20	9582.19
Cyanide	200.000	N/A	200.00	186.00	273.42	578.46
4,4'-DDD	0.010	0.010	0.01	0.01	0.01	0.03
4,4'-DDE	0.007	0.007	0.01	0.01	0.01	0.02
4,4'-DDT	0.007	0.007	0.01	0.01	0.01	0.02
2,4'-D	70.000	N/A	70.00	65.10	95.70	202.46
Danitol	0.709	0.721	0.71	0.66	0.97	2.05
Dibromochloromethane	9.200	71.600	9.20	8.56	12.58	26.61
1,2-Dibromoethane	0.014	0.335	0.01	0.01	0.02	0.04
1,3-Dichloropropene (1,3- Dichloropropylene)	22.800	161.000	22.80	21.20	31.17	65.94
Dieldrin	0.002	0.002	0.00	0.00	0.002	0.005
p-Dichlorobenzene	75.000	N/A	75.00	69.75	102.53	216.92
1,2-Dichloroethane	5.000	73.900	5.00	4.65	6.84	14.46
1,1-Dichloroethylene	1.630	5.840	1.63	1.52	2.23	4.71
Dicofol	0.215	0.217	0.22	0.20	0.29	0.62
Dioxins/Furans (TCDD Equivalents)	1.34E-07	1.40E-07	1.34E-07	1.25E-07	1.83E-07	3.88E-07
Endrin	1.270	1.340	1.27	1.18	1.74	3.67
Fluoride	4000.000	N/A	4000.00	3720.00	5468.40	11569.20
Heptachlor	0.003	0.003	0.00	0.00	0.004	0.008
Heptachlor Epoxide	0.159	1.100	0.16	0.15	0.22	0.46
Hexachlorobenzene	0.019	0.020	0.02	0.02	0.03	0.06
Hexachlorobutadiene	2.990	3.600	2.99	2.78	4.09	8.65
Hexachlorocyclohexane (alpha)	0.163	0.413	0.16	0.15	0.22	0.47
Hexachlorocyclohexane (beta)	0.570	1.450	0.57	0.53	0.78	1.65
Hexachlorocyclohexane (gamma) (Lindane)	0.200	2.000	0.20	0.19	0.27	0.58
Hexachloroethane	84.200	278.000	84.20	78.31	115.11	243.53
Hexachlorophene	0.053	0.053	0.05	0.05	0.07	0.15
Lead	4.980	25.300	42.41	39.44	57.97	122.65
Mercury	0.012	0.012	0.01	0.01	0.02	0.04
Methoxyclor	2.210	2.220	2.21	2.06	3.02	6.39
Methyl Ethyl Ketone	5.29E+04	9.94E+06	5.29E+04	4.92E+04	7.23E+04	1.5E+05
Nitrate-Nitrogen (as Total Nitrogen)	10000.000	N/A	10000.00	9300.00	13671.00	28923.00
Nitrobenzene	37.300	233.000	37.30	34.69	50.99	107.88
N-Nitrosodiethylamine	0.038	7.680	0.04	0.04	0.05	0.11
N-Nitroso-di-n-Butylamine	1.840	13.500	1.84	1.71	2.52	5.32
PCB's (Polychlorinated Biphenyls)	0.001	0.001	0.00	0.00	0.002	0.004
Pentachlorobenzene	6.100	6.680	6.10	5.67	8.34	17.64
Pentachlorophenol	1.000	135.000	1.00	0.93	1.37	2.89
Pyridine	88.100	13333.000	88.10	81.93	120.44	254.81
Selenium	50.000	N/A	50.00	46.50	68.36	144.62
1,2,4,5-Tetrachlorobenzene	0.241	0.243	0.24	0.22	0.33	0.70
Tetrachloroethylene	5.000	323.000	5.00	4.65	6.84	14.46

Toxaphene	0.005	0.014	0.01	0.00	0.007	0.014
2,4,5-TP (Silvex)	47.000	50.300	47.00	43.71	64.25	135.94
2,4,5-Trichlorophenol	953.000	1069.000	953.00	886.29	1302.85	2756.36
Trichloroethylene	5.000	612.000	5.00	4.65	6.84	14.46
1,1,1-Trichloroethane	200.000	12586.000	200.00	186.00	273.42	578.46
TTHM (Sum of Total Trihalomethanes)	100.000	N/A	100.00	93.00	136.71	289.23
Vinyl Chloride	2.000	415.000	2.00	1.86	2.73	5.78

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	*70%*	*85%*
Aquatic Life		
Aldrin	0.988	1.200
Aluminum	326.316	396.241
Arsenic	238.485	289.589
Cadmium	1.745	2.119
Carbaryl	0.659	0.800
Chlordane	2.7E-03	3.3E-03
Chlorpyrifos	0.026	0.031
Chromium (+3)	945.20	1147.74
Chromium (+6)	5.170	6.277
Copper	12.360	15.008
Cyanide	6.710	8.148
4,4'-DDT	6.3E-04	7.6E-4
Dementon	0.063	0.076
Dicofol	12.428	15.091
Dieldrin	1.2E-03	1.4E-03
Diuron	43.938	53.354
Endosulfan (alpha)	0.035	0.043
Endosulfan (beta)	0.035	0.043
Endosulfan sulfate	0.035	0.043
Endrin	0.001	0.002
Guthion	0.006	0.008
Heptachlor	0.002	0.003
Hexachlorocyclohexane (Lindane)	0.050	0.061
Lead	4.329	5.257
Malathion	0.006	0.008
Mercury	0.790	0.960
Methoxychlor	0.019	0.023
Mirex	6.3E-04	7.6E-04
Nickel	243.914	296.181
Parathion (ethyl)	0.008	0.010
Pentachlrophenol	2.209	2.683
Phenanthrene	9.878	11.995
Polychlorinated Biphenyls (PCBs)	0.009	0.011
Selenium	3.138	3.811
Silver, (free ion)	3.162	3.840
Toxaphene	1.3E-04	1.5E-04
Tributlytin (TBT)	0.015	0.018
2,4,5 Trichlorophenol	40.172	48.780
Zinc	160.069	194.369
Human Health		
Acrylonitrile	1.225	1.487
Aldrin	0.004	0.005
Arsenic	96.264	116.891

Barium	1913.940	2324.070
Benzene	4.785	5.810
Benzidine	1.0E-04	1.2E-03
Benzo(a)anthracene	0.095	0.115
Benzo(a)pyrene	0.095	0.115
Bis(chloromethyl)ether	0.004	0.005
Cadmium	25.978	31.545
Carbon Tetrachloride	3.598	4.369
Chlordane	0.020	0.024
Chlorobenzene	742.609	901.739
Chloroform	95.697	116.204
Chromium	1680.25	2040.30
Chrysene	0.399	0.485
Cresols	3170	3850
Cyanide	191.394	232.407
4,4'-DDD	0.010	0.012
4,4'-DDE	0.007	0.008
4,4'-DDT	0.007	0.008
2,4'-D	66.988	81.342
Danitol	0.678	0.824
Dibromochloromethane	8.804	10.691
1,2-Dibromoethane	0.013	0.016
1,3-Dichloropropene (1,3- Dichloropropylene)	21.819	26.494
Dieldrin	0.002	0.002
p-Dichlorobenzene	71.773	87.153
1,2-Dichloroethane	4.785	5.810
1,1-Dichloroethylene	1.560	1.894
Dicofol	0.206	0.250
Dioxins/Furans (TCDD Equivalents)	1.28E-07	1.56E-07
Endrin	1.215	1.476
Fluoride	3827.88	4648.14
Heptachlor	0.002	0.003
Heptachlor Epoxide	0.152	0.185
Hexachlorobenzene	0.019	0.023
Hexachlorobutadiene	2.861	3.474
Hexachlorocyclohexane (alpha)	0.156	0.189
Hexachlorocyclohexane (beta)	0.545	0.662
Hexachlorocyclohexane (gamma) (Lindane)	0.191	0.232
Hexachloroethane	80.577	97.843
Hexachlorophene	0.051	0.062
Lead	40.581	49.276
Mercury	0.012	0.014
Methoxyclor	2.115	2.568
Methyl Ethyl Ketone	5.06E+04	6.15E+04
Nitrate-Nitrogen (as Total Nitrogen)	9569.70	11620.35
Nitrobenzene	35.695	43.344
N-Nitrosodiethylamine	0.037	0.044
N-Nitroso-di-n-Butylamine	1.761	2.138
PCB's (Polychlorinated Biphenyls)	0.001	0.002
Pentachlorobenzene	5.838	7.088
Pentachlorophenol	0.957	1.162
Pyridine	84	102
Selenium	47.849	58.102
1,2,4,5-Tetrachlorobenzene	0.231	0.280
Tetrachloroethylene	4.785	5.810
Toxaphene	0.005	0.006

2,4,5-TP (Silvex)	44.978	54.616
2,4,5-Trichlorophenol	911.992	1107.419
Trichloroethylene	4.785	5.810
1,1,1-Trichloroethane	191	232
TTHM (Sum of Total Trihalomethanes)	95.697	116.204
Vinyl Chloride	1.914	2.324

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

The water quality-based effluent limitations demonstrated below are calculated using:

Table 1, 2000 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 3, 2000 Texas Surface Water Quality Standards for Human Health
"Procedures to Implement the Texas Surface Water Quality Standards," Texas Commission on Environmental Quality, January 2003.

PERMITTEE INFORMATION:

Permittee Name:	Southwestern Electric Power Company
TPDES Permit No:	WQ0002496000
Outfall No:	003
Prepared by:	Lindsay Purifoy
Date:	January 10, 2011

DISCHARGE INFORMATION:

Receiving Waterbody:	Brandy Branch Reservoir
Segment No.:	0505
TSS (mg/L):	16
pH (Standard Units):	6.7
Hardness (mg/L as $CaCO_3$):	41
Chloride (mg/L):	42
Effluent Flow for Aquatic Life (MGD):	<10
Percent Effluent for Mixing Zone:	15
Percent Effluent for Zone of Initial Dilution:	60
Effluent Flow for Human Health (MGD):	<10
Percent Effluent for Human Health:	8
Public Water Supply Use?:	yes

CALCULATE TOTAL/DISSOLVED RATIO:

Lake Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*		*Water Effects Ratio (WER)*	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	63240.08	0.50		1.00	Assumed
Cadmium	6.55	-0.92	276827.75	0.18		1.00	Assumed
Chromium (Total)	6.34	-0.27	1034874	0.06		1.00	Assumed
Chromium (+3)	6.34	-0.27	1034874	0.06		1.00	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.9	232429.91	0.21		1.00	Assumed
Lead	6.31	-0.53	469695.51	0.12		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	265992.15	0.19		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	137961.03	0.31		1.00	Assumed
Zinc	6.52	-0.68	502572.14	0.11		1.00	Assumed

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Acute Standard (perennial) (ug/L)*	*WLAa*	*LTAa*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Aldrin	3.000	5.00	1.60	2.35	4.98
Aluminum	991.000	1651.67	528.53	776.94	1643.74
Arsenic	360.000	1207.10	386.27	567.82	1201.31
Cadmium	11.991	108.50	34.72	51.04	107.98
Carbaryl	2.000	3.33	1.07	1.57	3.32
Chlordane	2.400	4.00	1.28	1.88	3.98
Chlorpyrifos	0.083	0.14	0.04	0.07	0.14
Chromium (+3)	264.384	7736.75	2475.76	3639.37	7699.61
Chromium (+6)	15.700	26.17	8.37	12.31	26.04
Copper	7.954	62.56	20.02	29.43	62.26
Cyanide	45.780	76.30	24.42	35.89	75.93
4,4'-DDT	1.100	1.83	0.59	0.862	1.825
Dementon	N/A	N/A	N/A	N/A	N/A
Dicofol	59.300	98.83	31.63	46.49	98.36
Dieldrin	2.500	4.17	1.33	1.96	4.15
Diuron	210.000	350.00	112.00	164.64	348.32
Endosulfan I (alpha)	0.220	0.37	0.12	0.17	0.36
Endosulfan II (beta)	0.220	0.37	0.12	0.17	0.36
Endosulfan sulfate	0.220	0.37	0.12	0.17	0.36
Endrin	0.180	0.30	0.10	0.14	0.30
Guthion	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.520	0.87	0.28	0.41	0.86
Hexachlorocyclohexane (Lindane)	2.000	3.33	1.07	1.57	3.32
Lead	23.330	331.09	105.95	155.74	329.50
Malathion	N/A	N/A	N/A	N/A	N/A
Mercury	2.400	4.00	1.28	1.88	3.98
Methoxychlor	N/A	N/A	N/A	N/A	N/A
Mirex	N/A	N/A	N/A	N/A	N/A
Nickel	665.727	5831.63	1866.12	2743.20	5803.64
Parathion (ethyl)	0.065	0.11	0.03	0.05	0.11
Pentachlorophenol	6.709	11.18	3.58	5.26	11.13
Phenanthrene	30.000	50.00	16.00	23.52	49.76
Polychlorinated Biphenyls (PCBs)	2.000	3.33	1.07	1.57	3.32
Selenium	20.000	33.33	10.67	15.68	33.17
Silver, (free ion)	0.800	16.01	5.12	7.53	15.93
Toxaphene	0.780	1.30	0.42	0.612	1.294
Tributlytin (TBT)	0.130	0.22	0.07	0.10	0.22
2,4,5 Trichlorophenol	136.000	226.67	72.53	106.62	225.58
Zinc	53.767	810.20	259.26	381.12	806.31

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Water and FW Fish (ug/L)*	*FW Fish Only (ug/L)*	*WLAh*	*LTAh*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Acrylonitrile	1.280	10.900	16.00	14.88	21.87	46.28
Aldrin	0.004	0.004	0.05	0.05	0.07	0.15
Arsenic	50.000	N/A	1257.40	1169.38	1718.99	3636.78

Barium	2000.000	N/A	25000.00	23250.00	34177.50	72307.50
Benzene	5.000	106.000	62.50	58.13	85.44	180.77
Benzidine	0.001	0.003	0.01	0.01	0.02	0.04
Benzo(a)anthracene	0.099	0.810	1.24	1.15	1.69	3.58
Benzo(a)pyrene	0.099	0.810	1.24	1.15	1.69	3.58
Bis(chloromethyl)ether	0.005	0.019	0.06	0.05	0.08	0.17
Cadmium	5.000	N/A	339.33	315.57	463.89	981.44
Carbon Tetrachloride	3.760	8.400	47.00	43.71	64.25	135.94
Chlordane	0.021	0.021	0.26	0.24	0.36	0.76
Chlorobenzene	776.0	1380.0	9700.0	9021.0	13260.9	28055.3
Chloroform	100.0	1292.0	1250.0	1162.5	1708.9	3615.4
Chromiumd	100.0	3320.0	21947.5	20411.2	30004.4	63478.7
Chrysene	0.417	8.100	5.21	4.85	7.13	15.08
Cresols	3313	13116	41413	38514	56615	119777
Cyanide	200	N/A	2500	2325	3418	7231
4,4'-DDD	0.010	0.010	0.13	0.12	0.18	0.37
4,4'-DDE	0.007	0.007	0.09	0.08	0.12	0.26
4,4'-DDT	0.007	0.007	0.09	0.08	0.12	0.26
2,4'-D	70.000	N/A	875.00	813.75	1196.21	2530.76
Danitol	0.709	0.721	8.86	8.24	12.12	25.63
Dibromochloromethane	9.200	71.600	115.00	106.95	157.22	332.61
1,2-Dibromoethane	0.014	0.335	0.18	0.16	0.24	0.51
1,3-Dichloropropene (1,3- Dichloropropylene)	22.800	161.000	285.00	265.05	389.62	824.31
Dieldrin	0.002	0.002	0.02	0.02	0.03	0.06
p-Dichlorobenzene	75.000	N/A	937.50	871.88	1281.66	2711.53
1,2-Dichloroethane	5.000	73.900	62.50	58.13	85.44	180.77
1,1-Dichloroethylene	1.630	5.840	20.38	18.95	27.85	58.93
Dicofol	0.215	0.217	2.69	2.50	3.67	7.77
Dioxins/Furans (TCDD Equivalents)	1.34E-07	1.40E-07	1.68E-06	1.56E-06	2.29E-06	4.84E-06
Endrin	1.270	1.340	15.88	14.76	21.70	45.92
Fluoride	4000	N/A	50000	46500	68355	144615
Heptachlor	0.003	0.003	0.03	0.03	0.04	0.09
Heptachlor Epoxide	0.159	1.100	1.99	1.85	2.72	5.75
Hexachlorobenzene	0.019	0.020	0.24	0.23	0.33	0.70
Hexachlorobutadiene	2.990	3.600	37.38	34.76	51.10	108.10
Hexachlorocyclohexane (alpha)	0.163	0.413	2.04	1.89	2.79	5.89
Hexachlorocyclohexane (beta)	0.570	1.450	7.13	6.63	9.74	20.61
Hexachlorocyclohexane (gamma) (Lindane)	0.200	2.000	2.50	2.33	3.42	7.23
Hexachloroethane	84.200	278.000	1052.50	978.83	1438.87	3044.15
Hexachlorophene	0.053	0.053	0.66	0.62	0.91	1.92
Lead	4.980	25.300	530.07	492.96	724.65	1533.11
Mercury	0.012	0.012	0.15	0.14	0.21	0.44
Methoxyclor	2.210	2.220	27.63	25.69	37.77	79.90
Methyl Ethyl Ketone	5.29E+04	9.94E+06	6.61E+05	6.15E+05	9.04E+05	1.91E+06
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	125000.0	116250	170887.5	361537.5
Nitrobenzene	37.300	233.000	466.25	433.61	637.41	1348.53
N-Nitrosodiethylamine	0.038	7.680	0.48	0.44	0.65	1.38
N-Nitroso-di-n-Butylamine	1.840	13.500	23.00	21.39	31.44	66.52
PCB's (Polychlorinated Biphenyls)	0.001	0.001	0.02	0.02	0.02	0.05
Pentachlorobenzene	6.100	6.680	76.25	70.91	104.24	220.54
Pentachlorophenol	1.000	135.000	12.50	11.63	17.09	36.15
Pyridine	88.1	13333.0	1101.3	1024.2	1505.5	3185.1
Selenium	50.0	N/A	625.0	581.3	854.4	1807.7
1,2,4,5-Tetrachlorobenzene	0.241	0.243	3.01	2.80	4.12	8.71
Tetrachloroethylene	5.000	323.000	62.50	58.13	85.44	180.77

Toxaphene	0.005	0.014	0.06	0.06	0.09	0.18
2,4,5-TP (Silvex)	47.000	50.300	587.50	546.38	803.17	1699.23
2,4,5-Trichlorophenol	953.000	1069.000	11912.50	11078.63	16285.58	34454.52
Trichloroethylene	5.000	612.000	62.50	58.13	85.44	180.77
1,1,1-Trichloroethane	200.000	12586.000	2500.00	2325.00	3417.75	7230.75
TTHM (Sum of Total Trihalomethanes)	100.000	N/A	1250.00	1162.50	1708.88	3615.38
Vinyl Chloride	2.000	415.000	25.00	23.25	34.18	72.31

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	*70%*	*85%*
Aquatic Life		
Aldrin	1.646	1.999
Aluminum	543.861	660.402
Arsenic	397.475	482.649
Cadmium	35.727	43.383
Carbaryl	1.098	1.333
Chlordane	1.317	1.599
Chlorpyrifos	0.046	0.055
Chromium (+3)	2547.56	3093.46
Chromium (+6)	8.616	10.462
Copper	20.599	25.013
Cyanide	25.124	30.508
4,4'-DDT	0.604	0.733
Dementon	N/A	N/A
Dicofol	32.544	39.518
Dieldrin	1.372	1.666
Diuron	115.248	139.944
Endosulfan (alpha)	0.121	0.147
Endosulfan (beta)	0.121	0.147
Endosulfan sulfate	0.121	0.147
Endrin	0.099	0.120
Guthion	N/A	N/A
Heptachlor	0.285	0.347
Hexachlorocyclohexane (Lindane)	1.098	1.333
Lead	109.021	132.383
Malathion	N/A	N/A
Mercury	1.317	1.599
Methoxychlor	N/A	N/A
Mirex	N/A	N/A
Nickel	1920.239	2331.719
Parathion (ethyl)	0.036	0.043
Pentachlrophenol	3.682	4.471
Phenanthrene	16.464	19.992
Polychlorinated Biphenyls (PCBs)	1.098	1.333
Selenium	10.976	13.328
Silver, (free ion)	5.270	6.400
Toxaphene	4.3E-01	5.2E-01
Tributlytin (TBT)	0.071	0.087
2,4,5 Trichlorophenol	74.637	90.630
Zinc	266.781	323.949
Human Health		
Acrylonitrile	15.312	18.593
Aldrin	0.049	0.059
Arsenic	1203.295	1461.144

Barium	23924.250	29050.875
Benzene	59.811	72.627
Benzidine	0.013	0.015
Benzo(a)anthracene	1.184	1.438
Benzo(a)pyrene	1.184	1.438
Bis(chloromethyl)ether	0.055	0.067
Cadmium	324.726	394.311
Carbon Tetrachloride	44.978	54.616
Chlordane	0.251	0.305
Chlorobenzene	9282.609	11271.740
Chloroform	1196.213	1452.544
Chromium	21003.09	25503.75
Chrysene	4.988	6.057
Cresols	39631	48123
Cyanide	2392.425	2905.088
4,4'-DDD	0.123	0.150
4,4'-DDE	0.087	0.106
4,4'-DDT	0.087	0.106
2,4'-D	837.349	1016.781
Danitol	8.481	10.299
Dibromochloromethane	110.052	133.634
1,2-Dibromoethane	0.167	0.203
1,3-Dichloropropene (1,3- Dichloropropylene)	272.736	331.180
Dieldrin	0.020	0.025
p-Dichlorobenzene	897.159	1089.408
1,2-Dichloroethane	59.811	72.627
1,1-Dichloroethylene	19.498	23.676
Dicofol	2.572	3.123
Dioxins/Furans (TCDD Equivalents)	1.60E-06	1.95E-06
Endrin	15.192	18.447
Fluoride	47848.50	58101.75
Heptachlor	0.031	0.038
Heptachlor Epoxide	1.902	2.310
Hexachlorobenzene	0.232	0.282
Hexachlorobutadiene	35.767	43.431
Hexachlorocyclohexane (alpha)	1.950	2.368
Hexachlorocyclohexane (beta)	6.818	8.279
Hexachlorocyclohexane (gamma) (Lindane)	2.392	2.905
Hexachloroethane	1007.211	1223.042
Hexachlorophene	0.635	0.771
Lead	507.258	615.956
Mercury	0.146	0.177
Methoxyclor	26.436	32.101
Methyl Ethyl Ketone	6.33E+05	7.68E+05
Nitrate-Nitrogen (as Total Nitrogen)	119621.25	145254.38
Nitrobenzene	446.187	541.799
N-Nitrosodiethylamine	0.457	0.555
N-Nitroso-di-n-Butylamine	22.010	26.727
PCB's (Polychlorinated Biphenyls)	0.016	0.019
Pentachlorobenzene	72.969	88.605
Pentachlorophenol	11.962	14.525
Pyridine	1054	1280
Selenium	598.106	726.272
1,2,4,5-Tetrachlorobenzene	2.883	3.501
Tetrachloroethylene	59.811	72.627
Toxaphene	0.060	0.073

2,4,5-TP (Silvex)	562.220	682.696
2,4,5-Trichlorophenol	11399.905	13842.742
Trichloroethylene	59.811	72.627
1,1,1-Trichloroethane	2392	2905
TTHM (Sum of Total Trihalomethanes)	1196.213	1452.544
Vinyl Chloride	23.924	29.051

TEXTOX MENU #2 - INTERMITTENT STREAM WITHIN 3 MILES OF A FRESHWATER PERENNIAL STREAM/RIVER

The water quality-based effluent limitations demonstrated below are calculated using:

Table 1, 2000 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 3, 2000 Texas Surface Water Quality Standards for Human Health
Procedures to Implement the Texas Surface Water Quality Standards, Texas Commission on Environmental Quality, January 2003

PERMITTEE INFORMATION

Permittee Name:	Southwestern Electric Power Company
TPDES Permit No.:	WQ0002496000
Outfall No.:	004
Prepared by:	Lindsay Purifoy
Date:	January 10, 2011

DISCHARGE INFORMATION

Intermittent Receiving Waterbody:	An unnamed tributary of Hatley Creek
Segment No.:	0505
TSS (mg/L):	16
pH (Standard Units):	6.7
Hardness (mg/L as $CaCO_3$):	41
Chloride (mg/L):	42
Effluent Flow for Aquatic Life (MGD):	1.67
Critical Low Flow [7Q2] (cfs) for intermittent:	0
Critical Low Flow [7Q2] (cfs) for perennial:	0.36
Percent Effluent for Mixing Zone:	88
Percent Effluent for Zone of Initial Dilution:	100
Effluent Flow for Human Health (MGD):	0.82
Harmonic Mean Flow (cfs) for perennial:	0.53
Percent Effluent for Human Health:	71
Public Water Supply Use?:	yes

CALCULATE TOTAL/DISSOLVED RATIO:

Stream/River Metal	*Intercept (b)*	*Slope (m)*	*Partitioning Coefficient (Kpo)*	*Dissolved Fraction (Cd/Ct)*		*Water Effects Ratio (WER)*	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	5.68	-0.73	63240.08	0.50		1	Assumed
Cadmium	6.6	-1.13	173517.95	0.26		1	Assumed
Chromium (Total)	6.52	-0.93	251286.07	0.20		1	Assumed
Chromium (+3)	6.52	-0.93	251286.07	0.20		1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	6.02	-0.74	134570.92	0.32		1	Assumed
Lead	6.45	-0.8	306693.11	0.17		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	5.69	-0.57	100844.36	0.38		1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	6.38	-1.03	137961.03	0.31		1	Assumed
Zinc	6.1	-0.7	180765.69	0.26		1	Assumed

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Acute Standard (ug/L)*	*WLAa*	*LTAa*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Aldrin	3	3.000	1.719	2.527	5.346
Aluminum	991	991.000	567.843	834.73	1765.99
Arsenic	360	724.263	415.003	610.05	1290.66
Cadmium	11.991	45.281	25.946	38.140	80.691
Carbaryl	2	2.000	1.146	1.685	3.564
Chlordane	2.4	2.400	1.375	2.022	4.277
Chlorpyrifos	0.083	0.083	0.048	0.070	0.148
Chromium (+3)	264.384	1327.36	760.577	1118.05	2365.40
Chromium (+6)	15.700	15.700	8.996	13.224	27.978
Copper	7.954	25.081	14.371	21.126	44.695
Cyanide	45.78	45.780	26.232	38.561	81.581
4,4'-DDT	1.1	1.100	0.630	0.927	1.960
Dementon	N/A	N/A	N/A	N/A	N/A
Dicofol	59.3	59.300	33.979	49.949	105.674
Dieldrin	2.5	2.500	1.433	2.106	4.455
Diuron	210	210.000	120.330	176.885	374.226
Endosulfan I (alpha)	0.22	0.220	0.126	0.185	0.392
Endosulfan II (beta)	0.22	0.220	0.126	0.185	0.392
Endosulfan sulfate	0.22	0.220	0.126	0.185	0.392
Endrin	0.18	0.180	0.103	0.152	0.321
Guthion	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.52	0.520	0.298	0.438	0.927
Hexachlorocyclohexane (Lindane)	2	2.000	1.146	1.685	3.564
Lead	23.330	137.810	78.965	116.078	245.581
Malathion	N/A	N/A	N/A	N/A	N/A
Mercury	2.400	2.400	1.375	2.022	4.277
Methoxychlor	N/A	N/A	N/A	N/A	N/A
Mirex	N/A	N/A	N/A	N/A	N/A
Nickel	665.727	1739.89	996.954	1465.5	3100.5
Parathion (ethyl)	0.065	0.065	0.037	0.055	0.116
Pentachlorophenol	6.709	6.709	3.844	5.651	11.956
Phenanthrene	30	30.000	17.190	25.269	53.461
Polychlorinated Biphenyls (PCBs)	2	2.000	1.146	1.685	3.564
Selenium	20	20.000	11.460	16.846	35.641
Silver, (free ion)	0.8	9.603	5.503	8.089	17.113
Toxaphene	0.78	0.780	0.447	0.657	1.390
Tributlytin (TBT)	0.13	0.130	0.074	0.110	0.232
2,4,5 Trichlorophenol	136	136.000	77.928	114.6	242.4
Zinc	53.767	209.276	119.915	176.3	372.9

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Water and FW Fish (ug/L)*	*FW Fish Only (ug/L)*	*WLAh*	*LTAh*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Acrylonitrile	1.28	10.9	1.815	1.688	2.481	5.249
Aldrin	0.00408	0.00426	0.006	0.005	0.008	0.017
Arsenic	50	N/A	142.614	132.631	195.0	412.5
Barium	2000	N/A	2835.487	2637.003	3876.4	8201.1
Benzene	5	106	7.089	6.593	9.691	20.503

Benzidine	0.00106	0.00347	0.002	0.001	0.002	0.004
Benzo(a)anthracene	0.099	0.81	0.140	0.131	0.192	0.406
Benzo(a)pyrene	0.099	0.81	0.140	0.131	0.192	0.406
Bis(chloromethyl)ether	0.00462	0.0193	0.007	0.006	0.009	0.019
Cadmium	5	N/A	26.769	24.895	36.596	77.424
Carbon Tetrachloride	3.76	8.4	5.331	4.958	7.288	15.418
Chlordane	0.021	0.0213	0.030	0.028	0.041	0.086
Chlorobenzene	776	1380	1100.169	1023.157	1504.04	3182.018
Chloroform	100	1292	141.774	131.850	193.820	410.054
Chromiumd	100	3320	711.789	661.964	973.087	2058.707
Chrysene	0.417	8.1	0.591	0.550	0.808	1.710
Cresols	3313	13116	4696.984	4368.195	6421.2	13585.1
Cyanide	200	N/A	283.549	263.700	387.6	820.1
4,4'-DDD	0.0103	0.01	0.015	0.014	0.020	0.042
4,4'-DDE	0.0073	0.007	0.010	0.010	0.014	0.030
4,4'-DDT	0.0073	0.007	0.010	0.010	0.014	0.030
2,4'-D	70	N/A	99.242	92.295	135.674	287.038
Danitol	0.709	0.721	1.005	0.935	1.374	2.907
Dibromochloromethane	9.2	71.6	13.043	12.130	17.831	37.725
1,2-Dibromoethane	0.014	0.335	0.020	0.018	0.027	0.057
1,3-Dichloropropene (1,3- Dichloropropylene)	22.8	161	32.325	30.062	44.191	93.492
Dieldrin	0.00171	0.002	0.002	0.002	0.003	0.007
p-Dichlorobenzene	75	N/A	106.331	98.888	145.365	307.540
1,2-Dichloroethane	5	73.9	7.089	6.593	9.691	20.503
1,1-Dichloroethylene	1.63	5.84	2.311	2.149	3.159	6.684
Dicofol	0.215	0.217	0.305	0.283	0.417	0.882
Dioxins/Furans (TCDD Equivalents)	1.34E-07	1.4E-07	0.000	1.77E-07	2.6E-07	5.5E-07
Endrin	1.27	1.34	1.801	1.674	2.462	5.208
Fluoride	4000	N/A	5670.974	5274.01	7752.79	16402.16
Heptachlor	0.0026	0.00265	0.004	0.003	0.005	0.011
Heptachlor Epoxide	0.159	1.1	0.225	0.210	0.308	0.652
Hexachlorobenzene	0.0194	0.0198	0.028	0.026	0.038	0.080
Hexachlorobutadiene	2.99	3.6	4.239	3.942	5.795	12.261
Hexachlorocyclohexane (alpha)	0.163	0.413	0.231	0.215	0.316	0.668
Hexachlorocyclohexane (beta)	0.57	1.45	0.808	0.752	1.105	2.337
Hexachlorocyclohexane (gamma) (Lindane)	0.2	2	0.284	0.264	0.388	0.820
Hexachloroethane	84.2	278	119.374	111.018	163.196	345.265
Hexachlorophene	0.0531	0.053	0.075	0.070	0.103	0.218
Lead	4.98	25.3	41.706	38.787	57.017	120.627
Mercury	0.0122	0.0122	0.017	0.016	0.024	0.050
Methoxyclor	2.21	2.22	3.133	2.914	4.283	9.062
Methyl Ethyl Ketone	52917	9940000	75022.728	7.0E+04	1E+05	2E+05
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	14177.434	13185.01	2E+04	4E+04
Nitrobenzene	37.3	233	52.882	49.180	72.295	152.950
N-Nitrosodiethylamine	0.0382	7.68	0.054	0.050	0.074	0.157
N-Nitroso-di-n-Butylamine	1.84	13.5	2.609	2.426	3.566	7.545
PCB's (Polychlorinated Biphenyls)	0.0013	0.0013	0.002	0.002	0.003	0.005
Pentachlorobenzene	6.1	6.68	8.648	8.043	11.823	25.013
Pentachlorophenol	1	135	1.418	1.319	1.938	4.101
Pyridine	88.1	13333	124.903	116.160	170.755	361.258
Selenium	50	N/A	70.887	65.925	96.910	205.027
1,2,4,5-Tetrachlorobenzene	0.241	0.243	0.342	0.318	0.467	0.988
Tetrachloroethylene	5	323	7.089	6.593	9.691	20.503
Toxaphene	0.005	0.014	0.007	0.007	0.010	0.021
2,4,5-TP (Silvex)	47	50.3	66.634	61.970	91.095	192.725
2,4,5-Trichlorophenol	953	1069	1351.109	1256.532	1847.1	3907.8

Trichloroethylene	5	612	7.089	6.593	9.691	20.503
1,1,1-Trichloroethane	200	12586	283.549	263.700	387.6	820.1
TTHM (Sum of Total Trihalomethanes)	100	N/A	141.774	131.850	193.8	410.1
Vinyl Chloride	2	415	2.835	2.637	3.876	8.201

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	*70%*	*85%*
Aquatic Life		
Aldrin	1.769	2.148
Aluminum	584.3	709.5
Arsenic	427.0	518.5
Cadmium	26.698	32.419
Carbaryl	1.179	1.432
Chlordane	1.415	1.718
Chlorpyrifos	0.049	0.059
Chromium (+3)	782.634	950.341
Chromium (+6)	9.257	11.241
Copper	14.788	17.957
Cyanide	26.993	32.777
4,4'-DDT	0.649	0.788
Dementon	N/A	N/A
Dicofol	34.964	42.457
Dieldrin	1.474	1.790
Diuron	123.820	150.352
Endosulfan (alpha)	0.130	0.158
Endosulfan (beta)	0.130	0.158
Endosulfan sulfate	0.130	0.158
Endrin	0.106	0.129
Guthion	N/A	N/A
Heptachlor	0.307	0.372
Hexachlorocyclohexane (Lindane)	1.179	1.432
Lead	81.255	98.667
Malathion	N/A	N/A
Mercury	1.415	1.718
Methoxychlor	N/A	N/A
Mirex	N/A	N/A
Nickel	1025.9	1245.7
Parathion (ethyl)	0.038	0.047
Pentachlrophenol	4E+00	5E+00
Phenanthrene	17.689	21.479
Polychlorinated Biphenyls (PCBs)	1.179	1.432
Selenium	11.792	14.319
Silver, (free ion)	5.662	6.876
Toxaphene	0.460	0.558
Tributlytin (TBT)	0.077	0.093
2,4,5 Trichlorophenol	80.188	97.371
Zinc	123.4	149.8
Human Health		
Acrylonitrile	1.737	2.109
Aldrin	0.006	0.007
Arsenic	136.48	165.722
Barium	2713.48	3294.93
Benzene	6.784	8.237
Benzidine	0.001	0.002

Benzo(a)anthracene	0.134	0.163
Benzo(a)pyrene	0.134	0.163
Bis(chloromethyl)ether	0.006	0.008
Cadmium	25.617	31.107
Carbon Tetrachloride	5.101	6.194
Chlordane	0.028	0.035
Chlorobenzene	1052.829	1278.44
Chloroform	135.674	164.747
Chromiumd	681.161	827.124
Chrysene	0.566	0.687
Cresols	4494.9	5458.1
Cyanide	271.348	329.493
4,4'-DDD	0.014	0.017
4,4'-DDE	0.010	0.012
4,4'-DDT	0.010	0.012
2,4'-D	94.972	115.323
Danitol	0.962	1.168
Dibromochloromethane	12.482	15.157
1,2-Dibromoethane	0.019	0.023
1,3-Dichloropropene (1,3- Dichloropropylene)	30.934	37.562
Dieldrin	0.002	0.003
p-Dichlorobenzene	101.8	123.6
1,2-Dichloroethane	6.784	8.237
1,1-Dichloroethylene	2.211	2.685
Dicofol	0.292	0.354
Dioxins/Furans (TCDD Equivalents)	1.8E-07	2.2E-07
Endrin	1.723	2.092
Fluoride	5426.95	6589.87
Heptachlor	0.004	0.004
Heptachlor Epoxide	0.216	0.262
Hexachlorobenzene	0.026	0.032
Hexachlorobutadiene	4.057	4.926
Hexachlorocyclohexane (alpha)	0.221	0.269
Hexachlorocyclohexane (beta)	0.773	0.939
Hexachlorocyclohexane (gamma) (Lindane)	0.271	0.329
Hexachloroethane	114.237	138.717
Hexachlorophene	0.072	0.087
Lead	39.912	48.464
Mercury	0.017	0.020
Methoxyclor	2.998	3.641
Methyl Ethyl Ketone	7.2E+04	8.7E+04
Nitrate-Nitrogen (as Total Nitrogen)	1.4E+04	1.6E+04
Nitrobenzene	50.606	61.451
N-Nitrosodiethylamine	0.052	0.063
N-Nitroso-di-n-Butylamine	2.496	3.031
PCB's (Polychlorinated Biphenyls)	1.8E-03	2.1E-03
Pentachlorobenzene	8.276	10.050
Pentachlorophenol	1.357	1.647
Pyridine	119.529	145.142
Selenium	67.837	82.373
1,2,4,5-Tetrachlorobenzene	0.327	0.397
Tetrachloroethylene	6.784	8.237
Toxaphene	0.007	0.008
2,4,5-TP (Silvex)	63.767	77.431
2,4,5-Trichlorophenol	1293.0	1570.0
Trichloroethylene	6.784	8.237

1,1,1-Trichloroethane	271.3	329.5
TTHM (Sum of Total Trihalomethanes)	135.7	164.7
Vinyl Chloride	2.713	3.295

TEXTOX MENU #2 - INTERMITTENT STREAM WITHIN 3 MILES OF A FRESHWATER PERENNIAL STREAM/RIVER

The water quality-based effluent limitations demonstrated below are calculated using:

Table 1, 2000 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 3, 2000 Texas Surface Water Quality Standards for Human Health
Procedures to Implement the Texas Surface Water Quality Standards, Texas Commission on Environmental Quality, January 2003

PERMITTEE INFORMATION

Permittee Name:	Southwestern Electric Power Company
TPDES Permit No.:	WQ0002496000
Outfall No.:	005
Prepared by:	Lindsay Purifoy
Date:	January 10, 2011

DISCHARGE INFORMATION

Intermittent Receiving Waterbody:	An unnamed tributary of Hatley Creek
Segment No.:	0505
TSS (mg/L):	16
pH (Standard Units):	6.7
Hardness (mg/L as $CaCO_3$):	41
Chloride (mg/L):	42
Effluent Flow for Aquatic Life (MGD):	0.85
Critical Low Flow [7Q2] (cfs) for intermittent:	0
Critical Low Flow [7Q2] (cfs) for perennial:	0.36
Percent Effluent for Mixing Zone:	79
Percent Effluent for Zone of Initial Dilution:	100
Effluent Flow for Human Health (MGD):	0.41
Harmonic Mean Flow (cfs) for perennial:	0.53
Percent Effluent for Human Health:	54
Public Water Supply Use?:	yes

CALCULATE TOTAL/DISSOLVED RATIO:

Stream/River Metal	*Intercept (b)*	*Slope (m)*	*Partitioning Coefficient (Kpo)*	*Dissolved Fraction (Cd/Ct)*		*Water Effects Ratio (WER)*	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	5.68	-0.73	63240.08	0.50		1	Assumed
Cadmium	6.6	-1.13	173517.95	0.26		1	Assumed
Chromium (Total)	6.52	-0.93	251286.07	0.20		1	Assumed
Chromium (+3)	6.52	-0.93	251286.07	0.20		1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	6.02	-0.74	134570.92	0.32		1	Assumed
Lead	6.45	-0.8	306693.11	0.17		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	5.69	-0.57	100844.36	0.38		1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	6.38	-1.03	137961.03	0.31		1	Assumed
Zinc	6.1	-0.7	180765.69	0.26		1	Assumed

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Acute Standard (ug/L)*	*Chronic Standard (ug/L)*	*WLAa*	*WLAc*	*LTAa*	*LTAc*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Aldrin	3	N/A	3.000	N/A	1.719	N/A	2.527	5.346
Aluminum	991	N/A	991.000	N/A	567.843	N/A	834.729	1765.99
Arsenic	360	190	724.263	486.885	415.003	374.902	551.105	1165.94
Cadmium	11.991	0.512	45.281	2.463	25.946	1.896	2.787	5.897
Carbaryl	2	N/A	2.000	N/A	1.146	N/A	1.685	3.564
Chlordane	2.4	0.004	2.400	0.005	1.375	0.004	0.006	0.012
Chlorpyrifos	0.083	0.041	0.083	0.052	0.048	0.040	0.059	0.125
Chromium (+3)	264.384	85.763	1327.360	548.447	760.577	422.305	620.788	1313.37
Chromium (+6)	15.700	10.6	15.700	13.502	8.996	10.396	13.224	27.978
Copper	7.954	5.838	25.081	23.448	14.371	18.055	21.126	44.695
Cyanide	45.78	10.7	45.780	13.629	26.232	10.494	15.427	32.637
4,4'-DDT	1.1	0.001	1.100	0.001	0.630	0.001	0.001	0.003
Dementon	N/A	0.1	N/A	0.127	N/A	0.098	0.144	0.305
Dicofol	59.3	19.8	59.300	25.220	33.979	19.419	28.546	60.394
Dieldrin	2.5	0.002	2.500	0.003	1.433	0.002	0.003	0.006
Diuron	210	70	210.000	89.161	120.330	68.654	100.922	213.515
Endosulfan I (alpha)	0.22	0.056	0.220	0.071	0.126	0.055	0.081	0.171
Endosulfan II (beta)	0.22	0.056	0.220	0.071	0.126	0.055	0.081	0.171
Endosulfan sulfate	0.22	0.056	0.220	0.071	0.126	0.055	0.081	0.171
Endrin	0.18	0.002	0.180	0.003	0.103	0.002	0.003	0.006
Guthion	N/A	0.01	N/A	0.013	N/A	0.010	0.014	0.031
Heptachlor	0.52	0.004	0.520	0.005	0.298	0.004	0.006	0.012
Hexachlorocyclohexane (Lindane)	2	0.08	2.000	0.102	1.146	0.078	0.115	0.244
Lead	23.330	0.810	137.810	6.094	78.965	4.692	6.898	14.593
Malathion	N/A	0.01	N/A	0.013	N/A	0.010	0.014	0.031
Mercury	2.400	1.3	2.400	1.656	1.375	1.275	1.874	3.965
Methoxychlor	N/A	0.03	N/A	0.038	N/A	0.029	0.043	0.092
Mirex	N/A	0.001	N/A	0.001	N/A	0.001	0.001	0.003
Nickel	665.727	73.934	1739.885	246.122	996.954	189.514	278.585	589.387
Parathion (ethyl)	0.065	0.013	0.065	0.017	0.037	0.013	0.019	0.040
Pentachlorophenol	6.709	4.235	6.709	5.395	3.844	4.154	5.651	11.956
Phenanthrene	30	30	30.000	38.212	17.190	29.423	25.269	53.461
Polychlorinated Biphenyls (PCBs)	2	0.014	2.000	0.018	1.146	0.014	0.020	0.043
Selenium	20	5	20.000	6.369	11.460	4.904	7.209	15.251
Silver, (free ion)	0.8	N/A	9.603	N/A	5.503	N/A	8.089	17.113
Toxaphene	0.78	0.0002	0.780	0.000	0.447	0.000	2.9E-04	6.1E-04
Tributlytin (TBT)	0.13	0.024	0.130	0.031	0.074	0.024	0.035	0.073
2,4,5 Trichlorophenol	136	64	136.000	81.519	77.928	62.770	92.271	195.214
Zinc	53.767	49.098	209.276	243.411	119.915	187.427	176.275	372.935

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Water and FW Fish (ug/L)*	*FW Fish Only (ug/L)*	*WLAh*	*LTAh*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Acrylonitrile	1.28	10.9	2.349	2.185	3.212	6.795
Aldrin	0.00408	0.00426	0.007	0.007	0.010	0.022
Arsenic	50	N/A	184.635	171.711	252.415	534.021
Barium	2000	N/A	3670.974	3414.006	5018.588	10617.56
Benzene	5	106	9.177	8.535	12.546	26.544
Benzidine	0.00106	0.00347	0.002	0.002	0.003	0.006

Benzo(a)anthracene	0.099	0.81	0.182	0.169	0.248	0.526
Benzo(a)pyrene	0.099	0.81	0.182	0.169	0.248	0.526
Bis(chloromethyl)ether	0.00462	0.0193	0.008	0.008	0.012	0.025
Cadmium	5	N/A	34.657	32.231	47.379	100.237
Carbon Tetrachloride	3.76	8.4	6.901	6.418	9.435	19.961
Chlordane	0.021	0.0213	0.039	0.036	0.053	0.111
Chlorobenzene	776	1380	1424.338	1324.634	1947.212	4119.612
Chloroform	100	1292	183.549	170.700	250.929	530.878
Chromiumd	100	3320	921.520	857.014	1259.810	2665.313
Chrysene	0.417	8.1	0.765	0.712	1.046	2.214
Cresols	3313	13116	6080.968	5655.300	8313.291	17587.98
Cyanide	200	N/A	367.097	341.401	501.859	1061.756
4,4'-DDD	0.0103	0.01	0.019	0.018	0.026	0.055
4,4'-DDE	0.0073	0.007	0.013	0.012	0.018	0.039
4,4'-DDT	0.0073	0.007	0.013	0.012	0.018	0.039
2,4'-D	70	N/A	128.484	119.490	175.651	371.614
Danitol	0.709	0.721	1.301	1.210	1.779	3.764
Dibromochloromethane	9.2	71.6	16.886	15.704	23.086	48.841
1,2-Dibromoethane	0.014	0.335	0.026	0.024	0.035	0.074
1,3-Dichloropropene (1,3- Dichloropropylene)	22.8	161	41.849	38.920	57.212	121.040
Dieldrin	0.00171	0.002	0.003	0.003	0.004	0.009
p-Dichlorobenzene	75	N/A	137.662	128.025	188.197	398.158
1,2-Dichloroethane	5	73.9	9.177	8.535	12.546	26.544
1,1-Dichloroethylene	1.63	5.84	2.992	2.782	4.090	8.653
Dicofol	0.215	0.217	0.395	0.367	0.539	1.141
Dioxins/Furans (TCDD Equivalents)	1.34E-07	1.4E-07	0.000	2.29E-07	3.36E-07	7.11E-07
Endrin	1.27	1.34	2.331	2.168	3.187	6.742
Fluoride	4000	N/A	7341.947	6828.011	1.0E-04	2.1E-04
Heptachlor	0.0026	0.00265	0.005	0.004	0.007	0.014
Heptachlor Epoxide	0.159	1.1	0.292	0.271	0.399	0.844
Hexachlorobenzene	0.0194	0.0198	0.036	0.033	0.049	0.103
Hexachlorobutadiene	2.99	3.6	5.488	5.104	7.503	15.873
Hexachlorocyclohexane (alpha)	0.163	0.413	0.299	0.278	0.409	0.865
Hexachlorocyclohexane (beta)	0.57	1.45	1.046	0.973	1.430	3.026
Hexachlorocyclohexane (gamma) (Lindane)	0.2	2	0.367	0.341	0.502	1.062
Hexachloroethane	84.2	278	154.548	143.730	211.283	446.999
Hexachlorophene	0.0531	0.053	0.097	0.091	0.133	0.282
Lead	4.98	25.3	53.995	50.215	73.817	156.170
Mercury	0.0122	0.0122	0.022	0.021	0.031	0.065
Methoxyclor	2.21	2.22	4.056	3.772	5.546	11.732
Methyl Ethyl Ketone	52917	9940000	97128.457	9.03E+04	1.33E+05	2.81E+05
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	18354.868	17070.03	25092.94	53087.79
Nitrobenzene	37.3	233	68.464	63.671	93.597	198.017
N-Nitrosodiethylamine	0.0382	7.68	0.070	0.065	0.096	0.203
N-Nitroso-di-n-Butylamine	1.84	13.5	3.377	3.141	4.617	9.768
PCB's (Polychlorinated Biphenyls)	0.0013	0.0013	0.002	0.002	0.003	0.007
Pentachlorobenzene	6.1	6.68	11.196	10.413	15.307	32.384
Pentachlorophenol	1	135	1.835	1.707	2.509	5.309
Pyridine	88.1	13333	161.706	150.387	221.069	467.703
Selenium	50	N/A	91.774	85.350	125.465	265.439
1,2,4,5-Tetrachlorobenzene	0.241	0.243	0.442	0.411	0.605	1.279
Tetrachloroethylene	5	323	9.177	8.535	12.546	26.544
Toxaphene	0.005	0.014	0.009	0.009	0.013	0.027
2,4,5-TP (Silvex)	47	50.3	86.268	80.229	117.937	249.513
2,4,5-Trichlorophenol	953	1069	1749.219	1626.774	2391.357	5059.266
Trichloroethylene	5	612	9.177	8.535	12.546	26.544

1,1,1-Trichloroethane	200	12586	367.097	341.401	501.859	1061.756
TTHM (Sum of Total Trihalomethanes)	100	N/A	183.549	170.700	250.929	530.878
Vinyl Chloride	2	415	3.671	3.414	5.019	10.618

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	*70%*	*85%*
Aquatic Life		
Aldrin	1.769	2.148
Aluminum	584.310	709.520
Arsenic	385.774	468.440
Cadmium	1.951	2.369
Carbaryl	1.179	1.432
Chlordane	0.004	0.005
Chlorpyrifos	0.041	0.050
Chromium (+3)	434.551	527.670
Chromium (+6)	9.257	11.241
Copper	14.788	17.957
Cyanide	10.799	13.113
4,4'-DDT	0.001	0.001
Dementon	0.101	0.123
Dicofol	19.983	24.265
Dieldrin	0.002	0.002
Diuron	70.645	85.784
Endosulfan (alpha)	0.057	0.069
Endosulfan (beta)	0.057	0.069
Endosulfan sulfate	0.057	0.069
Endrin	0.002	0.002
Guthion	0.010	0.012
Heptachlor	0.004	0.005
Hexachlorocyclohexane (Lindane)	0.081	0.098
Lead	4.828	5.863
Malathion	0.010	0.012
Mercury	1.312	1.593
Methoxychlor	0.030	0.037
Mirex	1.0E-03	1.2E-03
Nickel	195.009	236.797
Parathion (ethyl)	0.013	0.016
Pentachlrophenol	3.96E+00	4.80E+00
Phenanthrene	17.689	21.479
Polychlorinated Biphenyls (PCBs)	0.014	0.017
Selenium	11.792	14.319
Silver, (free ion)	5.662	6.876
Toxaphene	2.0E-04	2.5E-04
Tributlytin (TBT)	0.024	0.029
2,4,5 Trichlorophenol	64.590	78.431
Zinc	123.392	149.834
Human Health		
Acrylonitrile	2.248	2.730
Aldrin	0.007	0.009
Arsenic	176.69	214.553
Barium	3513.01	4265.80
Benzene	8.783	10.664
Benzidine	0.002	0.002
Benzo(a)anthracene	0.174	0.211

Benzo(a)pyrene	0.174	0.211
Bis(chloromethyl)ether	0.008	0.010
Cadmium	33.17	40.272
Carbon Tetrachloride	6.604	8.020
Chlordane	0.037	0.045
Chlorobenzene	1363.049	1655.130
Chloroform	175.651	213.290
Chromiumd	881.867	1070.839
Chrysene	0.732	0.889
Cresols	5819.304	7066.297
Cyanide	351.301	426.580
4,4'-DDD	0.018	0.022
4,4'-DDE	0.013	0.016
4,4'-DDT	0.013	0.016
2,4'-D	122.96	149.303
Danitol	1.245	1.512
Dibromochloromethane	16.160	19.623
1,2-Dibromoethane	0.025	0.030
1,3-Dichloropropene (1,3- Dichloropropylene)	40.048	48.630
Dieldrin	0.003	0.004
p-Dichlorobenzene	131.74	159.967
1,2-Dichloroethane	8.783	10.664
1,1-Dichloroethylene	2.863	3.477
Dicofol	0.378	0.459
Dioxins/Furans (TCDD Equivalents)	2.35E-07	2.86E-07
Endrin	2.231	2.709
Fluoride	7026.02	8531.60
Heptachlor	0.005	0.006
Heptachlor Epoxide	0.279	0.339
Hexachlorobenzene	0.034	0.041
Hexachlorobutadiene	5.252	6.377
Hexachlorocyclohexane (alpha)	0.286	0.348
Hexachlorocyclohexane (beta)	1.001	1.216
Hexachlorocyclohexane (gamma) (Lindane)	0.351	0.427
Hexachloroethane	147.898	179.590
Hexachlorophene	0.093	0.113
Lead	51.672	62.744
Mercury	0.021	0.026
Methoxyclor	3.882	4.714
Methyl Ethyl Ketone	9.29E+04	1.13E+05
Nitrate-Nitrogen (as Total Nitrogen)	1.76E+04	2.1E+04
Nitrobenzene	65.518	79.557
N-Nitrosodiethylamine	0.067	0.081
N-Nitroso-di-n-Butylamine	3.232	3.925
PCB's (Polychlorinated Biphenyls)	2.28E-03	2.77E-03
Pentachlorobenzene	10.715	13.011
Pentachlorophenol	1.757	2.133
Pyridine	154.748	187.908
Selenium	87.83	106.645
1,2,4,5-Tetrachlorobenzene	0.423	0.514
Tetrachloroethylene	8.783	10.664
Toxaphene	0.009	0.011
2,4,5-TP (Silvex)	82.556	100.246
2,4,5-Trichlorophenol	1673.950	2032.654
Trichloroethylene	8.783	10.664
1,1,1-Trichloroethane	351.301	426.580

TTHM (Sum of Total Trihalomethanes)	175.65	213.290
Vinyl Chloride	3.513	4.266

TEXTOX MENU #2 - INTERMITTENT STREAM WITHIN 3 MILES OF A FRESHWATER PERENNIAL STREAM/RIVER

The water quality-based effluent limitations demonstrated below are calculated using:

Table 1, 2000 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 3, 2000 Texas Surface Water Quality Standards for Human Health
Procedures to Implement the Texas Surface Water Quality Standards, Texas Commission on Environmental Quality, January 2003

PERMITTEE INFORMATION

Permittee Name:	Southwestern Electric Power Company
TPDES Permit No.:	WQ0002496000
Outfall No.:	006
Prepared by:	Lindsay Purifoy
Date:	January 10, 2011

DISCHARGE INFORMATION

Intermittent Receiving Waterbody:	An unnamed tributary of Hatley Creek
Segment No.:	505
TSS (mg/L):	16
pH (Standard Units):	6.7
Hardness (mg/L as $CaCO_3$):	41
Chloride (mg/L):	42
Effluent Flow for Aquatic Life (MGD):	2.27
Critical Low Flow [7Q2] (cfs) for intermittent:	0
Critical Low Flow [7Q2] (cfs) for perennial:	0.36
Percent Effluent for Mixing Zone:	91
Percent Effluent for Zone of Initial Dilution:	100
Effluent Flow for Human Health (MGD):	1.17
Harmonic Mean Flow (cfs) for perennial:	0.53
Percent Effluent for Human Health:	77
Public Water Supply Use?:	yes

CALCULATE TOTAL/DISSOLVED RATIO:

Stream/River Metal	*Intercept (b)*	*Slope (m)*	*Partitioning Coefficient (Kpo)*	*Dissolved Fraction (Cd/Ct)*		*Water Effects Ratio (WER)*	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Arsenic	5.68	-0.73	63240.08	0.50		1	Assumed
Cadmium	6.6	-1.13	173517.95	0.26		1	Assumed
Chromium (Total)	6.52	-0.93	251286.07	0.20		1	Assumed
Chromium (+3)	6.52	-0.93	251286.07	0.20		1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	6.02	-0.74	134570.92	0.32		1	Assumed
Lead	6.45	-0.8	306693.11	0.17		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	5.69	-0.57	100844.36	0.38		1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	6.38	-1.03	137961.03	0.31		1	Assumed
Zinc	6.1	-0.7	180765.69	0.26		1	Assumed

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Acute Standard (ug/L)*	*Chronic Standard (ug/L)*	*WLAa*	*WLAc*	*LTAa*	*LTAc*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Aldrin	3	N/A	3.000	N/A	1.719	N/A	2.527	5.346
Aluminum	991	N/A	991.000	N/A	567.843	N/A	834.729	1765.99
Arsenic	360	190	724.263	421.430	415.003	324.501	477.017	1009.20
Cadmium	11.991	0.512	45.281	2.131	25.946	1.641	2.413	5.104
Carbaryl	2	N/A	2.000	N/A	1.146	N/A	1.685	3.564
Chlordane	2.4	0.004	2.400	0.004	1.375	0.003	0.005	0.011
Chlorpyrifos	0.083	0.041	0.083	0.045	0.048	0.035	0.051	0.108
Chromium (+3)	264.384	85.763	1327.360	474.717	760.577	365.532	537.332	1136.80
Chromium (+6)	15.700	10.6	15.700	11.687	8.996	8.999	13.224	27.978
Copper	7.954	5.838	25.081	20.296	14.371	15.628	21.126	44.695
Cyanide	45.78	10.7	45.780	11.797	26.232	9.083	13.353	28.250
4,4'-DDT	1.1	0.001	1.100	0.001	0.630	0.001	0.001	0.003
Dementon	N/A	0.1	N/A	0.110	N/A	0.085	0.125	0.264
Dicofol	59.3	19.8	59.300	21.830	33.979	16.809	24.709	52.275
Dieldrin	2.5	0.002	2.500	0.002	1.433	0.002	0.002	0.005
Diuron	210	70	210.000	77.175	120.330	59.425	87.354	184.811
Endosulfan I (alpha)	0.22	0.056	0.220	0.062	0.126	0.048	0.070	0.148
Endosulfan II (beta)	0.22	0.056	0.220	0.062	0.126	0.048	0.070	0.148
Endosulfan sulfate	0.22	0.056	0.220	0.062	0.126	0.048	0.070	0.148
Endrin	0.18	0.002	0.180	0.002	0.103	0.002	0.002	0.005
Guthion	N/A	0.01	N/A	0.011	N/A	0.008	0.012	0.026
Heptachlor	0.52	0.004	0.520	0.004	0.298	0.003	0.005	0.011
Hexachlorocyclohexane (Lindane)	2	0.08	2.000	0.088	1.146	0.068	0.100	0.211
Lead	23.330	0.810	137.810	5.275	78.965	4.061	5.970	12.631
Malathion	N/A	0.01	N/A	0.011	N/A	0.008	0.012	0.026
Mercury	2.400	1.3	2.400	1.433	1.375	1.104	1.622	3.432
Methoxychlor	N/A	0.03	N/A	0.033	N/A	0.025	0.037	0.079
Mirex	N/A	0.001	N/A	0.001	N/A	0.001	0.001	0.003
Nickel	665.727	73.934	1739.885	213.034	996.954	164.036	241.133	510.153
Parathion (ethyl)	0.065	0.013	0.065	0.014	0.037	0.011	0.016	0.034
Pentachlorophenol	6.709	4.235	6.709	4.670	3.844	3.596	5.286	11.182
Phenanthrene	30	30	30.000	33.075	17.190	25.468	25.269	53.461
Polychlorinated Biphenyls (PCBs)	2	0.014	2.000	0.015	1.146	0.012	0.017	0.037
Selenium	20	5	20.000	5.513	11.460	4.245	6.240	13.201
Silver, (free ion)	0.8	N/A	9.603	N/A	5.503	N/A	8.089	17.113
Toxaphene	0.78	0.0002	0.780	0.000	0.447	0.000	0.000	0.001
Tributlytin (TBT)	0.13	0.024	0.130	0.026	0.074	0.020	0.030	0.063
2,4,5 Trichlorophenol	136	64	136.000	70.560	77.928	54.331	79.867	168.970
Zinc	53.767	49.098	209.276	210.688	119.915	162.230	176.275	372.935

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	*Water and FW Fish (ug/L)*	*FW Fish Only (ug/L)*	*WLAh*	*LTAh*	*Daily Avg. (ug/L)*	*Daily Max. (ug/L)*
Acrylonitrile	1.28	10.9	1.655	1.539	2.262	4.786
Aldrin	0.00408	0.00426	0.005	0.005	0.007	0.015
Arsenic	50	N/A	130.043	120.940	177.782	376.124
Barium	2000	N/A	2585.555	2404.566	3534.71	7478.200
Benzene	5	106	6.464	6.011	8.837	18.696

Benzidine	0.00106	0.00347	0.001	0.001	0.002	0.004
Benzo(a)anthracene	0.099	0.81	0.128	0.119	0.175	0.370
Benzo(a)pyrene	0.099	0.81	0.128	0.119	0.175	0.370
Bis(chloromethyl)ether	0.00462	0.0193	0.006	0.006	0.008	0.017
Cadmium	5	N/A	24.409	22.701	33.370	70.600
Carbon Tetrachloride	3.76	8.4	4.861	4.521	6.645	14.059
Chlordane	0.021	0.0213	0.027	0.025	0.037	0.079
Chlorobenzene	776	1380	1003.195	932.972	1371.47	2901.542
Chloroform	100	1292	129.278	120.228	176.736	373.910
Chromiumd	100	3320	649.049	603.615	887.315	1877.244
Chrysene	0.417	8.1	0.539	0.501	0.737	1.559
Cresols	3313	13116	4282.972	3983.164	5855.25	12387.64
Cyanide	200	N/A	258.555	240.457	353.471	747.820
4,4'-DDD	0.0103	0.01	0.013	0.012	0.018	0.039
4,4'-DDE	0.0073	0.007	0.009	0.009	0.013	0.027
4,4'-DDT	0.0073	0.007	0.009	0.009	0.013	0.027
2,4'-D	70	N/A	90.494	84.160	123.715	261.737
Danitol	0.709	0.721	0.917	0.852	1.253	2.651
Dibromochloromethane	9.2	71.6	11.894	11.061	16.260	34.400
1,2-Dibromoethane	0.014	0.335	0.018	0.017	0.025	0.052
1,3-Dichloropropene (1,3-Dichloropropylene)	22.8	161	29.475	27.412	40.296	85.251
Dieldrin	0.00171	0.002	0.002	0.002	0.003	0.006
p-Dichlorobenzene	75	N/A	96.958	90.171	132.552	280.433
1,2-Dichloroethane	5	73.9	6.464	6.011	8.837	18.696
1,1-Dichloroethylene	1.63	5.84	2.107	1.960	2.881	6.095
Dicofol	0.215	0.217	0.278	0.258	0.380	0.804
Dioxins/Furans (TCDD Equivalents)	1.34E-07	1.4E-07	0.000	1.61E-07	2.37E-07	5.01E-07
Endrin	1.27	1.34	1.642	1.527	2.245	4.749
Fluoride	4000	N/A	5171.110	4809.132	7069.42	14956.40
Heptachlor	0.0026	0.00265	0.003	0.003	0.005	0.010
Heptachlor Epoxide	0.159	1.1	0.206	0.191	0.281	0.595
Hexachlorobenzene	0.0194	0.0198	0.025	0.023	0.034	0.073
Hexachlorobutadiene	2.99	3.6	3.865	3.595	5.284	11.180
Hexachlorocyclohexane (alpha)	0.163	0.413	0.211	0.196	0.288	0.609
Hexachlorocyclohexane (beta)	0.57	1.45	0.737	0.685	1.007	2.131
Hexachlorocyclohexane (gamma) (Lindane)	0.2	2	0.259	0.240	0.353	0.748
Hexachloroethane	84.2	278	108.852	101.232	148.811	314.832
Hexachlorophene	0.0531	0.053	0.069	0.064	0.094	0.199
Lead	4.98	25.3	38.030	35.368	51.991	109.994
Mercury	0.0122	0.0122	0.016	0.015	0.022	0.046
Methoxyclor	2.21	2.22	2.857	2.657	3.906	8.263
Methyl Ethyl Ketone	52917	9940000	68409.904	6.4E+04	9.3E+04	1.98E+05
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	12927.774	12022.83	17673.6	37391.0
Nitrobenzene	37.3	233	48.221	44.845	65.922	139.468
N-Nitrosodiethylamine	0.0382	7.68	0.049	0.046	0.068	0.143
N-Nitroso-di-n-Butylamine	1.84	13.5	2.379	2.212	3.252	6.880
PCB's (Polychlorinated Biphenyls)	0.0013	0.0013	0.002	0.002	0.002	0.005
Pentachlorobenzene	6.1	6.68	7.886	7.334	10.781	22.809
Pentachlorophenol	1	135	1.293	1.202	1.767	3.739
Pyridine	88.1	13333	113.894	105.921	155.704	329.415
Selenium	50	N/A	64.639	60.114	88.368	186.955
1,2,4,5-Tetrachlorobenzene	0.241	0.243	0.312	0.290	0.426	0.901
Tetrachloroethylene	5	323	6.464	6.011	8.837	18.696
Toxaphene	0.005	0.014	0.006	0.006	0.009	0.019
2,4,5-TP (Silvex)	47	50.3	60.761	56.507	83.066	175.738
2,4,5-Trichlorophenol	953	1069	1232.017	1145.776	1684.29	3563.362

Trichloroethylene	5	612	6.464	6.011	8.837	18.696
1,1,1-Trichloroethane	200	12586	258.555	240.457	353.471	747.820
TTHM (Sum of Total Trihalomethanes)	100	N/A	129.278	120.228	176.736	373.910
Vinyl Chloride	2	415	2.586	2.405	3.535	7.478

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	*70%*	*85%*
Aquatic Life		
Aldrin	1.769	2.148
Aluminum	584.310	709.520
Arsenic	333.912	405.465
Cadmium	1.689	2.051
Carbaryl	1.179	1.432
Chlordane	0.003	0.004
Chlorpyrifos	0.036	0.043
Chromium (+3)	376.132	456.732
Chromium (+6)	9.257	11.241
Copper	14.788	17.957
Cyanide	9.347	11.350
4,4'-DDT	0.001	0.001
Dementon	0.087	0.106
Dicofol	17.296	21.002
Dieldrin	0.002	0.002
Diuron	61.148	74.251
Endosulfan (alpha)	0.049	0.059
Endosulfan (beta)	0.049	0.059
Endosulfan sulfate	0.049	0.059
Endrin	0.002	0.002
Guthion	0.009	0.011
Heptachlor	0.003	0.004
Hexachlorocyclohexane (Lindane)	0.070	0.085
Lead	4.179	5.075
Malathion	0.009	0.011
Mercury	1.136	1.379
Methoxychlor	0.026	0.032
Mirex	0.001	0.001
Nickel	168.793	204.963
Parathion (ethyl)	0.011	0.014
Pentachlrophenol	3.70E+00	4.49E+0
Phenanthrene	17.689	21.479
Polychlorinated Biphenyls (PCBs)	0.012	0.015
Selenium	4.368	5.304
Silver, (free ion)	5.662	6.876
Toxaphene	1.7E-04	2.1E-04
Tributlytin (TBT)	0.021	0.025
2,4,5 Trichlorophenol	55.907	67.887
Zinc	123.392	149.834
Human Health		
Acrylonitrile	1.584	1.923
Aldrin	0.005	0.006
Arsenic	124.45	151.115
Barium	2474.25	3004.51
Benzene	6.186	7.511

Benzidine	0.001	0.002
Benzo(a)anthracene	0.122	0.149
Benzo(a)pyrene	0.122	0.149
Bis(chloromethyl)ether	0.006	0.007
Cadmium	23.36	28.365
Carbon Tetrachloride	4.652	5.648
Chlordane	0.026	0.032
Chlorobenzene	960.028	1165.75
Chloroform	123.715	150.225
Chromiumd	621.120	754.218
Chrysene	0.516	0.626
Cresols	4098.675	4976.96
Cyanide	247.430	300.451
4,4'-DDD	0.013	0.015
4,4'-DDE	0.009	0.011
4,4'-DDT	0.009	0.011
2,4'-D	86.60	105.158
Danitol	0.877	1.065
Dibromochloromethane	11.382	13.821
1,2-Dibromoethane	0.017	0.021
1,3-Dichloropropene (1,3- Dichloropropylene)	28.207	34.251
Dieldrin	0.002	0.003
p-Dichlorobenzene	92.79	112.669
1,2-Dichloroethane	6.186	7.511
1,1-Dichloroethylene	2.017	2.449
Dicofol	0.266	0.323
Dioxins/Furans (TCDD Equivalents)	1.66E-07	2.0E-07
Endrin	1.571	1.908
Fluoride	4948.60	6009.01
Heptachlor	0.003	0.004
Heptachlor Epoxide	0.197	0.239
Hexachlorobenzene	0.024	0.029
Hexachlorobutadiene	3.699	4.492
Hexachlorocyclohexane (alpha)	0.202	0.245
Hexachlorocyclohexane (beta)	0.705	0.856
Hexachlorocyclohexane (gamma) (Lindane)	0.247	0.300
Hexachloroethane	104.168	126.490
Hexachlorophene	0.066	0.080
Lead	36.394	44.192
Mercury	0.015	0.018
Methoxyclor	2.734	3.320
Methyl Ethyl Ketone	6.55E+04	7.9E+04
Nitrate-Nitrogen (as Total Nitrogen)	1.24E+04	1.5E+04
Nitrobenzene	46.146	56.034
N-Nitrosodiethylamine	0.047	0.057
N-Nitroso-di-n-Butylamine	2.276	2.764
PCB's (Polychlorinated Biphenyls)	1.61E-03	1.9E-03
Pentachlorobenzene	7.547	9.164
Pentachlorophenol	1.237	1.502
Pyridine	108.993	132.348
Selenium	61.86	75.113
1,2,4,5-Tetrachlorobenzene	0.298	0.362
Tetrachloroethylene	6.186	7.511
Toxaphene	0.006	0.008
2,4,5-TP (Silvex)	58.146	70.606
2,4,5-Trichlorophenol	1179.003	1431.65

Trichloroethylene	6.186	7.511
1,1,1-Trichloroethane	247.430	300.451
TTHM (Sum of Total Trihalomethanes)	123.71	150.225
Vinyl Chloride	2.474	3.005

Appendix C
Comparison of Technology-Based Effluent Limits and Water Quality-Based Effluent Limits

The following table is a summary of technology based effluent limitations calculated/assessed in the draft permit (Technology Based), effluent limitations from the existing permit (Existing Permit), and calculated/assessed water quality based effluent limitations (Water Quality). Effluent limitations appearing in bold are the most stringent of the three, and are included in the draft permit.

	Existing TPDES Permit Limits		Water Quality-Based Effluent Limits		Technology-Based Effluent Limits		Proposed TPDES Permit Limits		
Pollutant	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.	Basis of Limit
Outfall 002									
Temperature (°F)	(Report)	(122)	N/A	N/A	N/A	N/A	**(Report)**	**(122)**	WQL[5]
TRC[1]	N/A	75.6 lb/day 0.2 mg/L	N/A	N/A	N//A	75.7 lb/d 0.2 mg/L	**N/A**	**75.6 lb/d 0.2 mg/L**	TBL[6]
Outfall 102									
TSS[2]	30 mg/L	100 mg/L	N/A	N/A	30 mg/L	100 mg/L	**30 mg/L**	**100 mg/L**	TBL
Oil and Grease	15 mg/L	20 mg/L	N/A	N/A	15 mg/L	20 mg/L	**15 mg/L**	**20 mg/L**	TBL
Selenium, Total	0.012 mg/L	0.025 mg/L	N/A	N/A	0.012 mg/L	0.025 mg/L	**0.012 mg/L**	**0.025 mg/L**	TBL
pH, s.u.	6.0, min.	9.0, max.	N/A	N/A	6.0, min.	9.0, max.	**6.0, min.**	**9.0, max.**	TBL
Outfall 202									
TSS	30 mg/L	100 mg/L	N/A	N/A	30 mg/L	50 mg/L	**30 mg/L**	**50 mg/L**	TBL
Oil and Grease	15 mg/L	20 mg/L	N/A	N/A	15 mg/L	20 mg/L	**15 mg/L**	**20 mg/L**	TBL
Selenium, Total	0.016 mg/L	0.033 mg/L	N/A	N/A	0.016 mg/L	0.033 mg/L	**0.016 mg/L**	**0.033 mg/L**	TBL
Iron, Total	1.0 mg/L	1.0 mg/L	N/A	N/A	1.0 mg/L	1.0mg/L	**1.0 mg/L**	**1.0 mg/L**	TBL
Copper, Total	0.5 mg/L	1.0 mg/L	N/A	N/A	0.5 mg/L	1.0 mg/L	**0.5 mg/L**	**1.0 mg/L**	TBL
pH, s.u.	6.0, min.	9.0, max.	N/A	N/A	6.0, min.	9.0, max.	**6.0, min.**	**9.0, max.**	TBL

	Existing TPDES Permit Limits		Water Quality-Based Effluent Limits		Technology-Based Effluent Limits		Proposed TPDES Permit Limits		
Outfall 302									
BOD_5[3]	2.5 lb/d[4] 20 mg/L	65 mg/L	N/A	N/A	2.5 lb/d[4] 20 mg/L	65 mg/L	**2.5 lb/d 20 mg/L**	**65 mg/L**	TBL
TSS	2.5 lb/d 20 mg/L	65 mg/L	N/A	N/A	2.5 lb/d 20 mg/L	65 mg/L	**2.5 lb/d 20 mg/L**	**65 mg/L**	TBL
TRC	1.0 mg/L (min)	Report (max)	N/A	N/A	1.0 mg/L (min)	Report (max)	**1.0 mg/L (min)**	**Report (max)**	TBL
pH, s.u.	6.0, min.	9.0, max.	N/A	N/A	6.0, min.	9.0, max.	**6.0, min.**	**9.0, max.**	TBL
Outfall 003									
TSS	N/A	50 mg/L	N/A	N/A	N/A	50 mg/L	**N/A**	**50 mg/L**	TBL
Oil and Grease	N/A	20 mg/L	N/A	N/A	N/A	20 mg/L	**N/A**	**20 mg/L**	TBL
Selenium, Total	N/A	0.033 mg/L	N/A	0.033 mg/L	N/A	N/A	**N/A**	**0.033 mg/L**	WQL
pH, s.u.	6.0, min.	9.0, max.	N/A	N/A	6.0, min.	9.0, max.	**6.0, min.**	**9.0, max.**	TBL
Outfall 004									
TSS	N/A	100 mg/L	N/A	N/A	N/A	50 mg/L	N/A	**50 mg/L**	TBL
Oil and Grease	N/A	20 mg/L	N/A	N/A	N/A	20 mg/L	N/A	**20 mg/L**	TBL
Selenium, Total	N/A	0.036 mg/L	N/A	0.036 mg/L	N/A	N/A	N/A	**0.036 mg/L**	WQL
pH, s.u.	6.0, min.	9.0, max.	N/A	N/A	6.0, min.	9.0, max.	**6.0, min.**	**9.0, max.**	TBL
Outfall 104									
TSS	N/A	N/A	N/A	N/A	30 mg/L	100 mg/L	**30 mg/L**	**100 mg/L**	TBL
Oil and Grease	N/A	N/A	N/A	N/A	15 mg/L	20 mg/L	**15 mg/L**	**20 mg/L**	TBL
Outfall 005									
TSS	N/A	50 mg/L	N/A	N/A	N/A	50 mg/L	N/A	**50 mg/L**	TBL

	Existing TPDES Permit Limits		Water Quality-Based Effluent Limits		Technology-Based Effluent Limits		Proposed TPDES Permit Limits		
Oil and Grease	N/A	20 mg/L	N/A	N/A	N/A	20 mg/L	N/A	**20 mg/L**	TBL
pH, s.u.	6.0, min.	9.0, max.	N/A	N/A	6.0, min.	9.0, max.	**6.0, min.**	**9.0, max.**	TBL
Outfall 006									
TSS	30 mg/L	100 mg/L	N/A	N/A	30 mg/L	100 mg/L	**30 mg/L**	**100 mg/L**	TBL
Oil and Grease	15 mg/L	20 mg/L	N/A	N/A	15 mg/L	20 mg/L	**15 mg/L**	**20 mg/L**	TBL
Selenium, Total	0.006 mg/L	0.013 mg/L	0.006 mg/L	0.013 mg/L	N/A	N/A	**0.006 mg/L**	**0.013 mg/L**	WQL
pH, s.u.	6.0, min.	9.0, max.	N/A	N/A	6.0, min.	9.0, max.	**6.0, min.**	**9.0, max.**	TBL

[1]TRC = Total Residual Chlorine
[2]TSS = Total Suspended Solids
[3]BOD_5 = Biochemical oxygen demand, 5-day
[4]lb/d = Pounds per day.
[5] WBL = Water Quality-Based Limit
[6] TBL = Technology-Based Limit

TPDES PERMIT NO. WQ0002496000
[For TCEQ office use only -
EPA I.D. No. TX0087726]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
P. O. Box 13087
Austin, Texas 78711-3087

This permit supersedes and replaces TPDES Permit No. WQ0002496000, issued May 14, 2007.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

Southwestern Electric Power Company

whose mailing address is

2400 Farm-to-Market Road 3251
Hallsville, Texas, 75650-7634

is authorized to treat and discharge wastes from Henry W. Pirkey Power Plant (SIC 4911)

located adjacent to Red Oak Road at a point approximately six miles southeast of the City of Hallsville, Harrison County, Texas

via Outfalls 002 and 003 to Brandy Branch Reservoir; thence to Brandy Branch Creek; via Outfalls 004, 005, and 006 to unnamed tributaries of Hatley Creek; thence to Hatley Creek; thence all to Sabine River Above Toledo Bend Reservoir in Segment No. 0505 of the Sabine River Basin.

only according to effluent limitations, monitoring requirements and other conditions set forth in this permit, as well as the rules of the Texas Commission on Environmental Quality (TCEQ), the laws of the State of Texas, and other orders of the TCEQ. The issuance of this permit does not grant to the permittee the right to use private or public property for conveyance of wastewater along the discharge route described in this permit. This includes, but is not limited to, property belonging to any individual, partnership, corporation, or other entity. Neither does this permit authorize any invasion of personal rights nor any violation of federal, state, or local laws or regulations. It is the responsibility of the permittee to acquire property rights as may be necessary to use the discharge route.

This permit shall expire at midnight on April 1, 2016.

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 002

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge once-through cooling water (*1) and previously monitored effluents (low volume wastewater via Outfall 102; treated effluent from Plant "X" via Outfall 202; and domestic wastewater via Outfall 302) subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 600 million gallons per day (MGD). The daily maximum flow shall not exceed 600 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/L	lbs/day	mg/L	mg/L	Measurement Frequency	Sample Type
Flow (MGD)	(Report)		(Report)		N/A	1/day	Estimate
Temperature (°F) (*1)	(Report)		(122)		N/A	1/day	In-situ
Total Residual Chlorine (*1)	N/A	N/A	75.6	0.2	N/A	1/week (*2)	Grab
Dissolved Oxygen (*3)	N/A	Report	N/A	Report	N/A	1/week	Grab

(*1) See Other Requirement No. 3.
(*2) Samples shall be representative of periods of chlorination. Sampling is required only when there is chlorination during a calendar week.
(*3) Beginning upon the date of permit issuance and lasting through February 26, 2016.

2. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

3. Effluent monitoring samples shall be taken at the following location: At Outfall 002, where condenser cooling water and previously monitored effluents are discharged from the discharge canal to Brandy Branch Reservoir.

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge low volume wastewater (*1), subject to the following effluent limitations:

Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*2)	Estimate
Total Suspended Solids	30	100	100	1/quarter (*2)	Grab (*3)
Oil and Grease	15	20	20	1/year (*2)	Grab (*3)
Selenium, Total	0.012	0.025	0.025	1/quarter (*2)	Grab (*3)

(*1) See Other Requirements No. 3.
(*2) When discharging.
(*3) For total suspended solids, oil and grease, and total selenium: since more than one source is associated with this particular waste category, grab samples from each source shall be either physically or arithmetically composited into a single flow-weighted sample for analysis or reporting. For pH, samples from each source shall be analyzed separately and the highest and lowest results shall be reported.

2. The pH shall neither be less than 6.0 standard units nor be greater than 9.0 standard units and shall be monitored 1/week (*2)(*3), by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 102, where low volume wastewaters are discharged from the collector pit, the low pressure service water system, or both, prior to mixing with other waters.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 202

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge treated effluent from Plant "X" (*1), subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.8 MGD. The daily maximum flow shall not exceed 0.8 MGD.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*2)	Estimate
Total Suspended Solids	30	50	50	1/week (*2)	Grab
Oil and Grease	15	20	20	1/week (*2)	Grab
Selenium, Total	0.016	0.033	0.033	1/week (*2)	Grab
Iron, Total (*3)	1.0	1.0	1.0	1/week (*2)	Grab
Copper, Total (*3)	0.5	1.0	1.0	1/week (*2)	Grab

(*1) See Other Requirements No. 6.
(*2) When discharging.
(*3) Effluent limits apply to the discharge of metal cleaning waste only, and shall be monitored only when discharging metal cleaning waste or chemical metal cleaning waste.

2. The pH shall neither be less than 6.0 standard units nor be greater than 9.0 standard units and shall be monitored 1/week (*2), by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 202, after the final Plant "X" treatment and prior to mixing with other waters.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 302

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge domestic wastewater effluent subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.015MGD. The daily maximum flow shall not exceed 0.030 MGD.

Effluent Characteristics	Discharge Limitations				Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/L	mg/L	mg/L	Measurement Frequency	Sample Type
Flow (MGD)	(Report)		(Report)	N/A	1/day	Estimate
Biochemical Oxygen Demand (5-day)	2.5	20	65	65	1/quarter	Grab (*1)
Total Suspended Solids	2.5	20	65	65	1/quarter	Grab (*1)
Total Residual Chlorine	N/A	1.0, minimum	Report, maximum	N/A	1/week	Grab (*1)

(*1) For biochemical oxygen demand (5-day) and total suspended solids: since more than one source is associated with this particular waste category, grab samples from each source shall be either physically or arithmetically composited into a single flow-weighted sample for analysis or reporting. For total residual chlorine and pH: samples from each source shall be analyzed separately and the highest and lowest results shall be reported.

2. The pH shall neither be less than 6.0 standard units nor be greater than 9.0 standard units and shall be monitored 1/week, by grab sample (*1).

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 302, after the final treatment unit and prior to mixing with other waters.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 003

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge storm water from the Lignite Runoff Pond (*1) (*2), subject to the following effluent limitations:

Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/week (*3)	Estimate
Total Suspended Solids	N/A	50	50	1/month (*3)	Grab
Oil and Grease	N/A	20	20	1/year (*3)	Grab
Selenium, Total	N/A	0.033	0.033	1/week (*3)	Grab

(*1) See Other Requirements No. 5.
(*2) These wastes may be routed to the Plant "X" treatment plant and discharged via Outfall 202.
(*3) When discharging.

2. The pH shall neither be less than 6.0 standard units nor be greater than 9.0 standard units and shall be monitored 1/week (*3), by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 003, where wastewater discharges from the Lignite Runoff Pond to Brandy Branch Reservoir.

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge storm water from the Flue Gas Desulphurization (FGD) & Fly Ash Landfill Retention Pond (*1) (*2), wastewater from the Lignite Runoff Pond (*1) (*2) and previously monitored effluents (wastewater from the Ash Pond via Outfall 104) (*1), subject to the following effluent limitations:

   Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/week (*3)	Estimate
Total Suspended Solids	N/A	50	50	1/quarter (*3)	Grab
Oil and Grease	N/A	20	20	1/year (*3)	Grab
Selenium, Total	N/A	0.036	0.036	1/week (*3)	Grab

(*1) See Other Requirements No. 5.
(*2) These wastewaters may be routed to the Plant "X" treatment plant and discharged via Outfall 202.
(*3) When discharging.

2. The pH shall neither be less than 6.0 standard units nor be greater than 9.0 standard units and shall be monitored 1/week (*3), by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 004, where wastewater discharges from the FGD & Fly Ash Landfill Retention Pond to an unnamed tributary of Hatley Creek.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 104

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge wastewater from the Ash Pond (*1), subject to the following effluent limitations:

Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*2)	Estimate
Total Suspended Solids	30	100	100	1/month (*2)	Grab
Oil and Grease	15	20	20	1/quarter (*2)	Grab

(*1) See Other Requirements No. 5.
(*2) When discharging.

2. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

3. Effluent monitoring samples shall be taken at the following location: At Outfall 104, after the waters are discharged from the Ash Pond and prior to their commingling with waters in the FGD & Fly Ash Landfill Retention Pond.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 005

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge storm water from the Limestone Runoff Pond (*1), subject to the following effluent limitations:

Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/week (*2)	Estimate
Total Suspended Solids	N/A	50	50	1/quarter (*2)	Grab
Oil and Grease	N/A	20	20	1/year (*2)	Grab

(*1) See Other Requirements No. 5.
(*2) When discharging.

2. The pH shall neither be less than 6.0 standard units nor be greater than 9.0 standard units and shall be monitored 1/week (*2), by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 005, where wastewater discharges from the Limestone Runoff Pond to an unnamed tributary of Hatley Creek.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 006

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge wastewater from the Ash Pond (*1) (*2), subject to the following effluent limitations:

Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/l	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*3)	Estimate
Total Suspended Solids	30	100	100	1/month (*3)	Grab
Oil and Grease	15	20	20	1/quarter (*3)	Grab
Selenium, Total	0.006	0.013	0.013	1/week (*3)	Grab

(*1) See Other Requirements No. 5.
(*2) These wastewaters may be routed to Plant "X" treatment plant and discharged via Outfall 202, or diverted to FGD & Fly Ash Landfill Retention Pond. See Other Requirement No. 5.f.
(*3) When discharging.

2. The pH shall neither be less than 6.0 standard units nor be greater than 9.0 standard units and shall be monitored 1/week (*3), by grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

4. Effluent monitoring samples shall be taken at the following location: At Outfall 006, where commingled wastewaters are discharged from the Ash Pond to an unnamed tributary of Hatley Creek.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC §§305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in Texas Water Code §26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

   a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder, and limited to major domestic wastewater discharge facilities with a one million gallons per day or greater permitted flow.

   b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.

   c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.

   d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.

   e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.

   f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

2. Concentration Measurements

   a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.

      i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

      ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.

   b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.

   c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.

   d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day.

      The "daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

   e. Bacteria concentration (Fecal coliform, E. coli, or Enterococci) – the number of colonies of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month.

The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements of made in a calendar month. For any measurement of bacteria equaling zero, a substitute value of one shall made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.

f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).

g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.

3. Sample Type

a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC §319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC §319.9 (b).

b. Grab sample - an individual sample collected in less than 15 minutes.

4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.

5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes .

6. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge that is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on an approved self-report form that is signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act; TCW Chapters 26, 27, and 28; and THSC Chapter 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.

b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC Chapter 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR §264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.

c. Records of monitoring activities shall include the following:

i. date, time, and place of sample or measurement;
ii. identity of individual who collected the sample or made the measurement.
iii. date and time of analysis;
iv. identity of the individual and laboratory who performed the analysis;
v. the technique or method of analysis; and
vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Enforcement Division (MC 224).

7. Noncompliance Notification

a. In accordance with 30 TAC §305.125(9) any noncompliance that may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

i. Unauthorized discharges as defined in Permit Condition 2(g).
ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.

c. In addition to the above, any effluent violation that deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.

d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.

1. In accordance with the procedures described in 30 TAC §§35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) that is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

   i. One hundred micrograms per liter (100 μg/L);
   ii. Two hundred micrograms per liter (200 μg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
   iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
   iv. The level established by the TCEQ.

b. That any activity has occurred or will occur that would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

   i. Five hundred micrograms per liter (500 μg/L);
   ii. One milligram per liter (1 mg/L) for antimony;
   iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
   iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC §305.128 (relating to Signatories to Reports).

11. All Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Executive Director of the following:

a. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to CWA §301 or §306 if it were directly discharging those pollutants;

b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and

c. For the purpose of this paragraph, adequate notice shall include information on:

   i. The quality and quantity of effluent introduced into the POTW; and
   ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

PERMIT CONDITIONS

1. General

a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.

b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:

   i. Violation of any terms or conditions of this permit;
   ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
   iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending, or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.

b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.

e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§305.62 and 305.66 and TWC §7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.

h. In accordance with 30 TAC §305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility that does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.

i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§402 (a)(3) or 402 (b)(8).

3. Inspections and Entry

a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC Chapter 361.

b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit, or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC §7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment and/or Renewal

   a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:

      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC §305.534 (relating to New Sources and New Dischargers); or

      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9;

      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

   b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.

   c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.

   d. Prior to accepting or generating wastes that are not described in the permit application or that would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.

   e. In accordance with the TWC §26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.

   f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA §307(a) for a toxic pollutant that is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA §307(a)for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

   a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.

   b. A permit may be transferred only according to the provisions of 30 TAC §305.64 (relating to Transfer of Permits) and 30 TAC §50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

   This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

   Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to Texas Water Code Chapter 11.

8. Property Rights

   A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy.

a. Each permittee shall notify the executive director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:

i. the permittee;
ii. an entity (as that term is defined in 11 USC, §101(15)) controlling the permittee or listing the permit or permittee as property of the estate; or
iii. an affiliate (as that term is defined in 11 USC, §101(2)) of the permittee.

b. This notification must indicate:
i. the name of the permittee;
ii. the permit number(s);
iii. the bankruptcy court in which the petition for bankruptcy was filed; and
iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.

2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge use and disposal and 30 TAC §§319.21 - 319.29 concerning the discharge of certain hazardous metals.

3. Domestic wastewater treatment facilities shall comply with the following provisions:

a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.

b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.

4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.

5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC §7.302(b)(6).

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available.

Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.

   a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility that reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

   If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 149) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

   b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission, and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

   c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.

9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.

10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.

11. Facilities that generate industrial solid waste as defined in 30 TAC §335.1 shall comply with these provisions:

   a. Any solid waste, as defined in 30 TAC §335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.

   b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.

   c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC §335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.

d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Remediation Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC §335.5.

e. The term "industrial solid waste management unit" means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.

f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC Chapter 335 and must include the following, as it pertains to wastewater treatment and discharge:

i. Volume of waste and date(s) generated from treatment process;
ii. Volume of waste disposed of on-site or shipped off-site;
iii. Date(s) of disposal;
iv. Identity of hauler or transporter;
v. Location of disposal site; and
vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

12. For industrial facilities to which the requirements of 30 TAC Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC Code Chapter 361.

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OTHER REQUIREMENTS

1. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 5, within 24 hours from the time the permittee becomes aware of the violation followed by a written report within five working days to TCEQ Region 5 and the Enforcement Division (MC 224):

POLLUTANT	MAL (mg/L)
Copper (Total)	0.010
Selenium (Total)	0.010

Test methods utilized shall be sensitive enough to demonstrate compliance with the permit effluent limitations. Permit compliance/noncompliance determinations will be based on the effluent limitations contained in this permit with consideration given to the minimum analytical level (MAL) for the parameters specified above.

When an analysis of an effluent sample for any of the parameters listed above indicates no detectable levels above the MAL and the test method detection level is as sensitive as the specified MAL, a value of zero (0) shall be used for that measurement when determining calculations and reporting requirements for the self-reporting form. This applies to determinations of daily maximum concentration, calculations of loading and daily averages, and other reportable results.

When a reported value is zero (0) based on this MAL provision, the permittee shall submit the following statement with the self-reporting form either as a separate attachment to the form or as a statement in the comments section of the form.

> "The reported value(s) of zero (0) for _____[list parameter(s)]_____ on the self-reporting form for [monitoring period date range]____ is based on the following conditions: 1) the analytical method used had a method detection level as sensitive as the MAL specified in the permit, and 2) the analytical results contained no detectable levels above the specified MAL."

When an analysis of an effluent sample for a parameter indicates no detectable levels and the test method detection level is not as sensitive as the MAL specified in the permit, or an MAL is not specified in the permit for that parameter, the level of detection achieved shall be used for that measurement when determining calculations and reporting requirements for the self-reporting form. A zero (0) may not be used.

2. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

3. DEFINITIONS

   a. The term "10-year, 24-hour rainfall event" shall mean a rainfall event with the probable recurrence interval of once in ten years as defined by the National Weather Service in Technical Paper No. 40, "Rainfall Frequency Atlas of the United States," May 1961, and subsequent amendments, or equivalent regional or state rainfall event and facility design, construction, and operation resides with the permittee.

   b. The term "total residual chlorine" (or total residual oxidants for intake water with bromides) means the value obtained using the amperometric method for total residual chlorine described in 40 CFR Part 136. The permittee may use the DPD spectrophotometric method (EPA Method 330.5) upon written notification of the Executive Director, provided that EPA has modified the existing effluent limitation guidelines (40 CFR Part 423) or has provided the permittee with documentation that this new test method is appropriate for use by steam electric power generating facilities.

Total residual chlorine may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control.

Simultaneous multi-unit chlorination is permitted.

c. The term "metal cleaning waste" means any wastewater resulting from cleaning (with or without chemical compounds) any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

The term "chemical metal cleaning waste" means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.

d. The term "low volume waste" includes "utility waste waters" and "water treatment wastes". "Utility waste waters" include, but are not limited to: wet scrubber air pollution control systems, evaporator blowdown, boiler blowdown, laboratory and sampling streams, floor drainage, cooling tower basin cleaning wastes, and blowdown from recirculating house service water systems. "Water treatment wastes" include, but are not limited to: ion exchange water treatment system wastes, demineralizer backwash, cold lime water treatment wastes, reverse osmosis waste, and water treatment system filter backwash. Sanitary and air conditioning wastes are not included.

e. The term "once-through cooling water" means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.

f. The term "ash transport water" shall mean water used in the transport of either fly ash or bottom ash.

g. The term "coal pile runoff" means the rainfall runoff from or through any coal, ash, or other material storage pile.

Any untreated overflow from facilities designed, constructed, and operated to treat the volume of "coal pile runoff" which is associated with a 10-year, 24-hour rainfall event shall not be subject to the limitations specified on page 2d of this permit. The burden of proof regarding the rainfall event and facility design, construction, and operation resides with the permittee.

h. Daily average temperature is defined as the flow weighted average temperature (FWAT) shall be computed and recorded on a daily basis. FWAT shall be computed at equal time intervals not greater than two hours. The method of calculating FWAT is as follows:

$$\text{FWAT} = \frac{\sum(\text{INSTANTANEOUS FLOW X INSTANTANEOUS TEMPERATURE})}{\sum(\text{INSTANTANEOUS FLOW})}$$

The "daily average temperature" shall be the arithmetic average of all FWAT's calculated during the calendar month.

The "daily maximum temperature" shall be the highest FWAT calculated during the calendar month.

4. This provision supersedes and replaces Provision 1, Paragraph 1 of Monitoring and Reporting Requirements found on Page 4 of this permit.

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12.

Unless otherwise specified, a monthly effluent report shall be submitted each month, to the location(s) specified on the reporting form or the instruction sheet, by the 25th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on the approved TPDES self-report form, Discharge Monitoring Report (DMR) Form EPA No. 3320-1, signed and certified as required by Monitoring and Reporting Requirements No. 10.

5. PONDS

a. The following table describes the ponds recognized through this permit:

Pond No.	Wastewater Type	Associated Outfall (s)	Surface Area (Acres)	Capacity (Acre/ft)	Liner Type
Lignite Runoff Pond	Storm water from the lignite storage area (coal pile runoff)	003	5.18	28.59	Clay
FGD & Fly Ash Landfill Retention Pond	Storm water from the FGD & Fly ash landfill, wastes from the Lignite Runoff Pond, and wastes from the Ash Pond	004	12.88	25.0	Clay
Limestone Runoff Pond	Storm water from the limestone storage area	005	3.22	8.74	Clay
Ash Pond	Ash transport water, low volume wastes (boiler blowdown and demineralizer regenerant)	006	71.76	187.97	Clay
Metal Cleaning Waste Pond	Metal cleaning wastes and chemical metal cleaning wastes	N/A	2.42	11.96	Clay

b. The Metal Cleaning Waste Pond may contain metal cleaning waste and may be used for temporary storage of storm water from the lignite storage area (coal pile runoff), wastewater from the Ash Pond, and storm water from the FGD & Fly ash landfill. Wastewater held in this pond may be routed to Plant "X" for treatment. Other wastes may be routed to this pond with prior approval from the Executive Director.

c. Wastewater from any of the following ponds: Lignite Runoff Pond, FGD & Fly Ash Landfill Retention Pond, Limestone Runoff Pond, Ash Pond, Metal Cleaning Waste Pond, and surge pond may be recycled to the flue gas desulphurization system for use as a process wastewater.

d. All newly-constructed process wastewater ponds shall be lined in compliance with one of the following requirements:

(1) Soil Liner: The soil liner shall contain clay-rich soil material (at least 30% of the liner material passing through a #200 mesh sieve, liquid limit greater than or equal to 30, and plasticity index greater than or equal to 15) along the sides and bottom of the pond. The liner material shall be compacted in lifts of no more than 8 inches to 95% standard proctor density at the optimum moisture content in accordance with ASTM D 698 to achieve a permeability equal to or less than 1×10^{-7} cm/sec.

The liner shall be a minimum thickness of 2.0 feet for water depths less than or equal to 8.0 feet and a minimum thickness of 3.0 feet for water depths greater than 8.0 feet.

(2) Synthetic/Plastic/Rubber Liner: The liner shall be either a plastic or rubber membrane liner at least 40 mils in thickness which completely covers the sides and the bottom of the pond and which is not subject to degradation due to reaction with wastewater with which it will come into contact. If this lining material is vulnerable to ozone or ultraviolet deterioration it shall be covered with a protective layer of soil of at least six inches. A wastewater pond with a membrane liner must include an underdrain with a leachate detection and collection system.

(3) Alternate Liner: The permittee shall submit plans for any other pond lining method. Pond liner plans must be approved in writing by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) prior to pond construction.

(4) The permittee shall provide certification, signed and sealed by a Texas licensed professional engineer, that the completed pond lining and any required underdrain with leachate detection/collection system for the pond meet the above requirements prior to utilization of the facilities. The certification shall be provided to the TCEQ Water Quality Assessment Team (MC-150), the Compliance Monitoring Section (MC-224), and to the TCEQ Regional Office (Region 05). A copy of the liner certification shall be kept on-site for future reference. Also, liner and any underdrain construction details (i.e., as-built drawings) for the storage pond shall be provided to the TCEQ Water Quality Assessment Team (MC-150), the Enforcement Division (MC-224), and to the TCEQ Regional Office (Region 05) upon construction completion.

(5) The permittee shall notify the TCEQ Regional Office upon completion of construction of any pond and at least a week prior to its use.

(6) At least once per month, the permittee shall inspect any pond leak detection systems that are in service. Leaking ponds shall be removed from service either until repairs are made or replacement ponds are constructed.

(7) The liner shall be recertified by a Texas-licensed professional engineer ensuring that the liner for the storage pond meets the above requirements each time the liner undergoes repair, expansion, or each time sediments are cleaned from the pond. Within 45 days of completion of repair or cleaning, liner certifications should be provided to the TCEQ Water Quality Assessment Team (MC-150), the Enforcement Division (MC-224), and to the TCEQ Regional Office (Region 05). A copy of the liner certification shall be kept on-site for future reference.

e. The permittee shall maintain a minimum two-foot freeboard for all wastewater ponds. Any pond level increases associated with storm water events shall be promptly managed to re-establish the minimum required freeboard of two feet, as soon as practicable.

f. Wastewaters from the facility's Ash Pond may be diverted into the FGD & Fly Ash Landfill Retention Pond on an infrequent basis. This transfer is authorized: (i) during periods of heavy precipitation events, (ii) while the facility is offline due to extended emergency maintenance or outages, or when conditions (i) and (ii) occur simultaneously.

6. PLANT "X"

The permittee is authorized to discharge treated wastewater from Plant "X" via Outfall 202, subject to effluent limitations, monitoring requirements, and other conditions listed on page 2b of this permit. Plant "X" may receive the following wastes for treatment and disposal via Outfall 202: metal cleaning wastes, chemical metal cleaning wastes, wastewater from the Lignite Runoff Pond (coal pile runoff), wastewater from the Ash Pond (ash transport water, low volume wastes consisting of boiler blowdown and demineralizer regenerant), storm water from the FGD & Fly ash landfill. Other wastes may be treated at Plant "X" with prior approval from the Executive Director.

7. MIXING ZONE DEFINITIONS

Outfalls 002 and 003: Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone is defined as a volume of water within a radius of 100 feet from the point of discharge. The human health mixing zone is defined as a volume within a radius of 200 feet from the point of discharge.

Outfall 004, 005, and 006: There is no mixing zone established for this discharges to an intermittent stream. Acute toxic criteria apply at the point of discharge.

8. Monitoring results shall be provided at the intervals specified in the permit. For pollutants which are monitored annually, effluent reports shall be submitted in September of each year. For pollutants which are monitored four times per year, the first effluent report shall be submitted three months after the date of permit issuance and subsequent reports every three months thereafter.

9. SELENIUM MONITORING PROGRAM

The permittee shall comply with all necessary sampling requirements in the Selenium Monitoring Program as approved by the Executive Director. Revisions to the Selenium Monitoring Program must be approved by the Water Quality Assessment Team (MC-150), Water Quality Division, TCEQ prior to initiating any modifications.

10. This requirement is applicable to the treatment and disposal of domestic wastewater at Outfall 302.

On-site disposal of sewage sludge is not authorized. The permittee shall ensure that all sewage sludge which is not a hazardous waste (as defined in 30 TAC Chapter 335) is handled, transported, and disposed of in compliance with the applicable provisions of 30 TAC Chapter 312. The permittee shall ensure that all sewage sludge which is a hazardous waste (as defined in 30 TAC Chapter 335) is handled, transported, and disposed of in compliance with the applicable provisions of 30 TAC Chapter 335. The permittee shall keep records of all sludges removed from the wastewater treatment plant site. Such records will include the following information:

a. Volume (dry weight basis) of sludge disposed
b. Date of disposal
c. Identity and registration number of hauler
d. Location and registration or permit number of disposal site
e. Method of final disposal

The above records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the TCEQ for at least five years.

11. Dust Suppression

The permittee is authorized to use effluent from the Ash Pond associated with Outfall 006 for on-site dust suppression at the Henry W. Pirkey Power Plant. With respect to the use of effluent for dust suppression, the permittee shall comply with the following requirements:

a. dust suppression practices shall be designed and managed so as to prevent runoff, ponding of effluent, or contamination of ground and surface waters and to prevent the occurrence of nuisance conditions in the area;

b. except for roads at the facility, the application of effluent for dust suppression shall be accomplished only when the area specified is not in use;

c. spray fixtures for dust suppression systems shall be of such design that they cannot be operated by unauthorized personnel;

d. the permittee shall keep records of volumes, times, and areas where effluent is used for dust suppression; records shall be updated daily and maintained onsite for review by Commission personnel for a minimum of three years; and

e. adequate signs consisting of a red slash superimposed over the international symbol for drinking water accompanied by the message "Do not drink the water" in both English and Spanish shall be erected, to state that the dust suppression water are from a non-potable water supply.

12. The permittee shall continue to operate and maintain the cooling water intake structure (CWIS) configuration consistent with the document, titled *Pirkey Power Plant - Impingement Monitoring Data Report* dated March 2007, submitted as part of the major amendment application received on August 31, 2010.

The permittee shall adhere to the following conditions related to the operation, maintenance, and monitoring of the CWIS:

a. bar grates shall be cleaned as needed but no less frequently than every three years;

b. screen condition shall be visually checked daily;

c. the screens must initiate a cleaning cycle whenever the water level differential (before and after the screens) exceeds eight inches;

d. screens shall be in proper operating condition whenever the circulating water pumps are withdrawing water; if a screen must be taken out of service for maintenance, the differential across the screens must maintain compliance with item c above;

e. screens shall be rotated through a cleaning cycle a minimum of once per week;

f. water and impinged material resulting from the cleaning process shall enter a concrete trench from which water returns to the reservoir, and any material removed shall be properly disposed in accordance with TCEQ regulations;

g. routine preventive maintenance shall be conducted to ensure proper operating condition of the screen(s) on an as needed basis, but at a minimum of once each three months;

h. the bottom of the intake structure shall be inspected periodically, but no less frequently than once every five years, and shall be cleaned as necessary; and

i. records documenting the operation and maintenance described above shall be kept on site for a minimum of three years, and made available to TCEQ personnel upon request.

The permittee has submitted a document titled *Pirkey Power Plant – Impingement Monitoring Data Report* dated March 2007 for review to the Water Quality Standards Team (MC 150) of the Water Quality Assessment Section of the Water Quality Division. The review of this document has indicated that the facility meets Best Technology Available (BTA) for minimizing Adverse Environmental Impact (AEI). If it is later determined that the current CWIS configuration is not representative of BTA for minimizing AEI, the permit may be reopened to incorporate additional requirements.

13. Discharges via Outfall 006 shall be sampled and analyzed for the parameters listed in Attachment 1 for a minimum of one sampling event. The completed table with the results of these analyses shall be submitted to the Industrial Permits Team, Wastewater Permitting Section (MC 148), Water Quality Division, TCEQ, within 90 days following permit issuance or the first discharge event.

14. Discharges via Outfalls 003 and 004 shall not occur for a period of more than six consecutive days. The permittee shall submit an annual report summarizing the number of days and volume of each discharge. Based on the review of the additional information received, the permit may be reopened to include additional effluent limitations, permit conditions, or both.

ATTACHMENT 1
TABLE 1

Outfall No.: ☐C ☐G	**Effluent Concentration (mg/l)**					
Pollutants	**Samp.**	**Samp.**	**Samp.**	**Samp.**	**Average**	
BOD (5-day)						
CBOD (5-day)						
Chemical Oxygen Demand						
Total Organic Carbon						
Dissolved Oxygen						
Ammonia Nitrogen						
Total Suspended Solids						
Nitrate Nitrogen						
Total Organic Nitrogen						
Total Phosphorus						
Oil and Grease						
Total Residual Chlorine						
Total Dissolved Solids						
Sulfate						
Chloride						
Fluoride						
E.coli						
Temperature (°F)						
pH (standard units; min/max)						
	Effluent Concentration (µg/l)					**MAL (µg/l)**
Total Aluminum						30
Total Antimony						30
Total Arsenic						10
Total Barium						10
Total Beryllium						5
Total Cadmium						1
Total Chromium						10
Trivalent Chromium						N/A
Hexavalent Chromium						10
Total Copper						10
Cyanide						20
Total Lead						5
Total Mercury						0.2
Total Nickel						10
Total Selenium						10
Total Silver						2.0
Total Thallium						10
Total Zinc						5

CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this Section apply to Outfall 002 for whole effluent toxicity testing (biomonitoring).

1. Scope, Frequency and Methodology

a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.

b. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures and quality assurance requirements specified in this Part of the permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013), or the most recent update:

1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0 or the most recent update). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever comes first. This test shall be conducted once per quarter.

2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0 or the most recent update). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit. All test results, valid or invalid, must be submitted as described below.

c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These additional effluent concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.

d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, Chemical-Specific (CS) effluent limits, a Best Management Practice (BMP), additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.

e. Testing Frequency Reduction

1) If none of the first four consecutive quarterly tests demonstrates significant lethal or sub-lethal effects, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

2) If one or more of the first four consecutive quarterly tests demonstrates significant sub-lethal effects, the permittee shall continue quarterly testing for that species until four consecutive quarterly tests demonstrate no significant sub-lethal effects. At that time, the permittee may apply for the appropriate testing frequency reduction for that species.

3) If one or more of the first four consecutive quarterly tests demonstrates significant lethal effects, the permittee shall continue quarterly testing for that species until the permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant lethal effects, the permittee will resume a quarterly testing frequency for that species until the permit is reissued.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:

1) a control mean survival of 80% or greater;

2) a control mean number of water flea neonates per surviving adult of 15 or greater;

3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;

4) a control Coefficient of Variation percent (CV%) of 40 or less between replicates for the young of surviving females in the water flea reproduction and survival test; and the growth and survival endpoints in the fathead minnow growth and survival test.

5) a critical dilution CV% of 40 or less for young of surviving females in the water flea reproduction and survival test; and the growth and survival endpoints for the fathead minnow growth and survival test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test.

6) a Percent Minimum Significant Difference of 47 or less for water flea reproduction;

7) a Percent Minimum Significant Difference of 30 or less for fathead minnow growth.

b. Statistical Interpretation

1) For the water flea survival test, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be Fisher's Exact Test as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update thereof.

2) For the water flea reproduction test and the fathead minnow larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the methods described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update thereof.

3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The EPA manual, "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004), provides guidance on determining the validity of test results.

4) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.

5) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is herein defined as a statistically significant difference at the 95% confidence level between the survival, reproduction, or growth of the test organism(s) in a specified effluent dilution compared to the survival, reproduction, or growth of the test organism(s) in the control (0% effluent).

6) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3 above.

7) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The above-referenced guidance manual will be used when making a determination of test acceptability.

8) Staff will review test results for consistency with rules, procedures, and permit requirements.

c. Dilution Water

1) Dilution water used in the toxicity tests shall be the receiving water collected as close to the point of discharge as possible but unaffected by the discharge.

2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of item 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of item 2.a;

b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);

c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3 of this Section.

The synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or a natural water in the drainage basin that is unaffected by the discharge, provided the magnitude of these parameters will not cause toxicity in a synthetic dilution water control that has been formulated to match the pH, hardness, and alkalinity naturally found in the receiving water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

1) The permittee shall collect a minimum of three composite samples from Outfall 002. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.

2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 002 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum numbers of effluent portions, and the sample holding time, are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update, for every valid and invalid toxicity test initiated whether carried to completion or not.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit. All Table 1 reports must include the information specified in the Table 1 form attached to this permit.

1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12 month period.

2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6 month period.

3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th, for biomonitoring conducted during the previous calendar quarter.

4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For the water flea, Parameter TOP3B, report the NOEC for survival.

3) For the water flea, Parameter TXP3B, report the LOEC for survival.

4) For the water flea, Parameter TWP3B, enter a "1" if the NOEC for reproduction is less than the critical dilution; otherwise, enter a "0."

5) For the water flea, Parameter TPP3B, report the NOEC for reproduction.

6) For the water flea, Parameter TYP3B, report the LOEC for reproduction.

7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.

9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.

10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."

11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.

12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. A significant effect is defined as a statistically significant difference, at the 95% confidence level, between a specified endpoint (survival, growth, or reproduction) of the test organism in a specified effluent dilution when compared to the specified endpoint of the test organism in the control. Significant lethality is defined as a statistically significant difference in survival at the critical dilution when compared to the survival of the test organism in the control. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction of the test organism in the control.

a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.

b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of item 4.a. are suspended upon completion of the two retests and submittal of the TRE Action Plan and Schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in item 4.a.

d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency until such time that the permittee can invoke the reduced testing frequency provision specified in Part 1.e.

e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a General Outline for initiating a Toxicity Reduction Evaluation (TRE). The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE.

A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:

1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;

3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.

d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b. The permittee may only apply the "cessation of lethality" provision once.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and/or an appropriate control measure.

g. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall provide information pertaining to the specific control mechanism(s) selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify CS limits.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

		Date Time		Date Time
Dates and Times Composites Collected	No. 1	FROM: _____	TO:	_____
	No. 2	FROM: _____	TO:	_____
	No. 3	FROM: _____	TO:	_____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

	Percent effluent (%)					
REP	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						
PMSD						

*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults) Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean number of young produced per adult significantly less (p=0.05) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

   CRITICAL DILUTION (100%): _____ YES _____ NO

PERCENT SURVIVAL

	Percent effluent (%)					
Time of Reading	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

   Is the mean survival at test end significantly less (p=0.05) than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC/LOEC below:

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC reproduction = _____% effluent

   d.) LOEC reproduction = _____% effluent

TABLE 1 (SHEET 3 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

		Date Time		Date Time
Dates and Times Composites Collected	No. 1	FROM: _____	TO:	_____
	No. 2	FROM: _____	TO:	_____
	No. 3	FROM: _____	TO:	_____

Test initiated: _____am/pm_____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration (%)	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean dry weight (growth) at 7 days significantly less (p=0.05) than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): _____ YES _____ NO

TABLE 1 (SHEET 4 OF 4)

BIOMONITORING REPORTING

FATHEAD MINNOW GROWTH AND SURVIVAL TEST

FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration (%)	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7-day	
0%									
32%									
42%									
56%									
75%									
100%									

* Coefficient of Variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean survival at 7 days significantly less (p=0.05) than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC/LOEC below:

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC growth = _____% effluent

   d.) LOEC growth = _____% effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 002 for whole effluent toxicity testing (biomonitoring)

1. Scope, Frequency and Methodology

a. The permittee shall test the effluent for lethality in accordance with the provisions in this Section. Such testing will determine compliance with the Surface Water Quality Standard, 307.6(e)(2)(B), of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.

b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests utilizing the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition" (EPA-821-R-02-012), or the most recent update thereof:

1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.

2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit. All test results, valid or invalid, must be submitted as described below.

c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and/or dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.

e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this Section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in item a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency defined in item b.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.

b. Dilution Water - In accordance with item 1.c., the control and/or dilution water shall normally consist of standard, synthetic, moderately hard, reconstituted water. If the permittee utilizes the results of a chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a as the control and dilution water.

c. Samples and Composites

1) The permittee shall collect one composite sample from Outfall 002.

2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 002 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report required in Part 3 of this Section.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition" (EPA-821-R-02-012), or the most recent update thereof, for every valid and invalid toxicity test initiated.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit. All Table 2 reports must include the information specified in the Table 2 form attached to this permit.

1) Semiannual biomonitoring test results are due on or before January 20th and July 20th for biomonitoring conducted during the previous 6 month period.

2) Quarterly biomonitoring test results are due on or before January 20th, April 20th, July 20th, and October 20th, for biomonitoring conducted during the previous calendar quarter.

c. Enter the following codes for the appropriate parameters for valid tests only:

1) For the water flea, Parameter TIE3D, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

2) For the fathead minnow, Parameter TIE6C, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

4. Persistent Mortality

The requirements of this Part apply when a toxicity test demonstrates significant lethality, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 24-hours.

a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These additional effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.

b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5 of this Section.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a General Outline for initiating a Toxicity Reduction Evaluation (TRE). The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE Action Plan and Schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:

1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or alternative approaches.

When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled, "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003), or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled, "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE Action Plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/ identification/ confirmation procedures, and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;

3) Quality Assurance Plan - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE Action Plan should describe the project staff, manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.

d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly TRE Activities Reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and

6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings. Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species; testing for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality (herein as defined below) the permittee may end the TRE. A "cessation of lethality" is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b. The permittee may only apply the "cessation of lethality" provision once.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. "Corrective actions" are herein defined as proactive efforts which eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and/or an appropriate control measure.

g. The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity as specified in item 5.g. The report will also specify a corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 307.6.(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE.

The requirement to comply with 307.6.(e)(2)(B) may be exempted upon proof that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g. metals) form a salt compound. Following the exemption, the permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify a CS limit.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN*						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

TABLE 2 (SHEET 2 OF 2)

FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

CMP THRESHOLD REVIEW SHEET

INDUSTRIAL WASTEWATER DISCHARGE PERMITS

PERMITTEE: Southwestern Electric Power Company

TPDES PERMIT NO.: WQ0002496000

CLASSIFIED SEGMENT:

NAME: Sabine River Above Toledo Bend Reservoir

NUMBER: 0505

COUNTY: Harrison

SECTION A

No 1. This is a new permit application which would authorize the discharge of a wastewater subject to EPA Categorical Effluent Standards (40 CFR Parts 400-471) into a priority segment (see Appendix B).

No 2. This is an amendment permit application which would authorize an increase in the mass loading of pollutants from the discharge of a wastewater subject to EPA Categorical Effluent Standards (40 CFR Parts 400-471) into a priority segment (see Appendix B).

No 3. This is an amendment permit application which would change the point of discharge of a wastewater subject to EPA Categorical Effluent Standards (40 CFR Parts 400-471) into a priority segment (see Appendix B).

IF "YES" TO ANY OF THE ABOVE THEN THE PERMIT ACTION IS CONSIDERED ABOVE THRESHOLD, COMPLETE SECTION B.

IF NO TO ALL OF THE ABOVE, THEN THE PERMIT ACTION IS CONSIDERED BELOW THRESHOLD, STOP HERE.

Satya Dwivedula, P.E.
PERMIT WRITER

February 13, 2012
DATE

SECTION B

____ 1. The IOM from standards states that "no significant degradation of high quality receiving waters is anticipated" (if receiving water has a designated high quality aquatic life use).

____ 2. The IOM from standards states that "no loss of designated uses is anticipated."

____ 3. The draft permit complies with all applicable provisions of 30 TAC 307, 309, and 319.

PERMIT WRITER

DATE

30 TAC §281
APPENDIX B

TIDAL SEGMENTS DESIGNATED AS TCEQ PRIORITY WATERBODIES COASTAL MANAGEMENT PROGRAM

Segment Number	Name
2412	Sabine Lake
2411	Sabine Pass
2423	East Bay
2439	Lower Galveston Bay
0801	Trinity River Tidal
1113	Armand Bayou Tidal
2431	Moses Lake
2424	West Bay
2432	Chocolate Bay
2433	Bastrop Bay/Oyster Lake
2434	Christmas Bay
2435	Drum Bay
2442	Cedar Lakes
2441	East Matagorda Bay
2451	Matagorda Bay/Powderhorn Lake
2452	Tres Palacios Bay/Turtle Bay
2456	Carancahua Bay
2455	Keller Bay
2461	Espiritu Santo Bay
2462	San Antonio Bay/Hynes Bay/Guadalupe Bay
1801	Guadalupe River Tidal
2463	Mesquite Bay/Carlos Bay/Ayres Bay
2473	St. Charles Bay
2471	Aransas Bay
2472	Copano Bay/Port Bay/Mission Bay
2483	Redfish Bay
2482	Nueces Bay
2492	Baffin Bay/Alazan Bay/Cayo Del Grullo/Laguna Salada
2491	Laguna Madre
2493	South Bay

INDUSTRIAL EPA REVIEW CHECKLIST

Permittee Name: Southwestern Electric Power Company

Permittee Number: WQ0002496000

PLEASE CHECK ALL THE APPLICABLE BELOW:

Draft permit authorizes:

Yes	No	
☐	☒	discharge to territorial seas (within 3 miles of the coastline) of the United States?
☐	☒	discharge or sewage sludge management may affect another state or the Republic of Mexico? For sewage sludge management, "may affect" means, accepts sewage sludge from another state or Mexico. For discharge, it means a discharge within 3 miles of a boundary with a another state or Mexico.
☐	☒	discharge of uncontaminated cooling tower blowdown with a permitted daily average flow >500 MGD?
☒	☐	discharge from a designated major facility?
☒	☐	discharge from a categorical industry as listed in 40 CFR Part 122, Appendix A? (see Attachment A)
☐	☒	discharge from source other than categorical industry with a permitted daily average flow >0.5 MGD, except for facilities that discharge non-process wastewater? Non-process wastewater is water that (during manufacturing or processing) does not come into direct contact with, or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
☐	☒	minor facility discharge to critical concern species watersheds (see WQ Standards review)
☐	☒	(Prior to a final TMDL) discharge from a new or expanding facility to a 303(d) listed segment which has the potential to discharge any pollutant which is causing or contributing to the impairment of the segment?
☐	☒	(After a final TMDL) discharge from a new or expanding discharge to a 303(d) listed segment where the TMDL does not allocate the loadings described in the draft permit?
☐	☒	(After a final TMDL) a permit with effluent limits which allow loadings in excess of those prescribed by the TMDL for the segment?
☐	☒	(After a final TMDL) permit allows a 3 year compliance schedule for limits based on the TMDL allocations?

If any column is marked "YES", EPA <u>must</u> receive a of the full permit package.
If no column is marked "YES", EPA does <u>not</u> need to review the draft permit.

Satya Dwivedula, P.E.
Permit Writer's Name

February 13, 2012
Date

ATTACHMENT A

PRIMARY INDUSTRIAL CATEGORIES

Adhesives and sealants	N/A
Aluminum forming	**Part 467**
Auto and other laundries	N/A
Battery and manufacturing	**Part 461**
Coal mining	**Part 434**
Coil coating	**Part 465**
Copper forming	**Part 468**
Electrical and electronic components	**Part 469**
Electroplating	**Part 413**
Explosives manufacturing	**Part 457**
Foundries	N/A
Gum and wood chemicals	**Part 454**
Inorganic chemicals manufacturing	**Part 415**
Iron and steel manufacturing	**Part 420**
Leather tanning and finishing	**Part 425**
Mechanical products manufacturing	N/A
Nonferrous metals manufacturing	**Part 421**
Ore mining	**Part 440**
Organic chemicals manufacturing	**Part 414**
Paint and ink formulation	**Part 446**
Pesticides	**Part 455**
Petroleum refining	**Part 419**
Pharmaceutical preparation	**Part 439**
Photographic equipment and supplies	**Part 459**
Plastics processing	**Part 463**
Plastic and synthetic material manufacturing	**Part 414**
Porcelain enameling	**Part 466**
Printing and publishing	N/A
Pulp and paper mills	**Part 430**
Rubber processing	**Part 428**
Soap and detergent manufacturing	**Part 417**
Steam electric power plants	**Part 423**
Textile mills	**Part 410**
Timber products processing	**Part 429**

TPDES PERMIT MAJOR/MINOR RATING WORK SHEET

TPDES No.: WQ0002496000 **NPDES No.:** TX0087726

Facility Name: Southwestern Electric Power Company

City/County: Dallas, Texas, 75270 / Harrison

Receiving Water (Name/Segment No.):

Sabine River Above Toledo Bend Reservoir 0505

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (no cooling pond/lake).
2. A nuclear power plant.
3. Cooling water discharge greater than 25% of the receiving waters 7Q2 flow rate.

☐ **YES** (score is 700, stop here).
☐ **NO** (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

☐ **YES** (score is 600, stop here).
☐ **NO** (continue)

FACTOR 1: Toxic Pollutant Potential

Primary SIC Code: 04911

Other SIC Codes: _____ _____ _____ _____

Industrial Subcategory Code _____

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one.

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
☐ No process wastestreams	0	0	☐ 3.	3	15	☐ 7.	7	35
☐ 1.	1	5	☐ 4.	4	20	☐ 8.	8	40
☐ 2.	2	10	☐ 5.	5	25	☐ 9.	9	45
			☐ 6.	6	30	☐ 10.	10	50

CODE NUMBER CHECKED _____
TOTAL POINTS FACTOR 1: _____

FACTOR 2: Flow/Stream Flow Volume (*Complete either Section A or B; check only one*)

SECTION A - Wastewater Flow Only Considered

Wastewater Type		Code	Points
Type I:	Flow < 5 MGD	☐ 11	0
	Flow 5 to 10 MGD	☐ 12	10
	Flow 10 to 50 MGD	☐ 13	20
	Flow > 50	☐ 14	30
Type II:	Flow <1 MGD	☐ 21	10
	Flow 1 to 5 MGD	☐ 22	20
	Flow 5 to 10 MGD	☐ 23	30
	Flow > 10 MGD	☐ 24	50
Type III	Flow < 1 MGD	☐ 31	0
	Flow 1 to 5 MGD	☐ 32	10
	Flow 5 to 10 MGD	☐ 33	20
	Flow > 10 MGD	☐ 34	30

SECTION B - Wastewater & Stream Flow Considered

Wastewater Type	Percent Effluent @ Mixing Zone	Code	Points
Type I/III:	< 10%	☐ 41	0
	10% to 50%	☐ 42	10
	> 50%	☐ 43	20
Type II:	< 10%	☐ 51	0
	10% to 50%	☐ 52	20
	> 50%	☐ 53	30

CODE NUMBER CHECKED FROM SECTION A or B _____
TOTAL POINTS FACTOR 2: _____

TPDES PERMIT MAJOR/MINOR RATING WORK SHEET

TPDES No.: WQ0002496000

FACTOR 3: Conventional Pollutants (*Only when limited by the permit)*

A. Oxygen Demanding Pollutant: (check one) ☐ BOD/CBOD ☐ COD ☐ Other:

Permit Limits: (check one)		Code	Points
☐	< 100 lbs/day	1	0
☐	100 to 1000 lbs/day	2	5
☐	1000 to 3000 lbs/day	3	15
☐	> 3000 lbs/day	4	20

B. Total Suspended Solids (TSS)

Permit Limits: (check one)		Code	Points
☐	< 100 lbs/day	1	0
☐	100 to 1000 lbs/day	2	5
☐	1000 to 5000 lbs/day	3	15
☐	> 5000 lbs/day	4	20

C. Nitrogen Pollutant: (check one) ☐ Ammonia ☐ Other:

Permit Limits: (check one)		Nitrogen Equivalent	Code	Points
☐		< 300 lbs/day	1	0
☐		300 to 1000 lbs/day	2	5
☐		1000 to 3000 lbs/day	3	15
☐		> 3000 lbs/day	4	20

CODE NUMBER CHECKED A B C

POINTS FACTOR 3: A ____ + B ____ + C ____ = ____ Total

FACTOR 4: Public Health Impacts

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply

☐ YES (If yes, check toxicity potential number below)
☐ NO (If no, go to Factor 5)

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column - check one below.)

Toxicity Group Code		Points	Toxicity Group Code		Points	Toxicity Group Code		Points
☐ No process wastestreams	0	0	☐ 3.	3	0	☐ 7.	7	15
☐ 1.	1	0	☐ 4.	4	0	☐ 8.	8	20
☐ 2.	2	0	☐ 5.	5	5	☐ 9.	9	25
			☐ 6.	6	10	☐ 10.	10	30

CODE NUMBER CHECKED _____

TOTAL POINTS FACTOR 4: _____

TPDES PERMIT RATING WORK SHEET

TPDES No.: WQ0002496000

FACTOR 5: Water Quality Factors

A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge?

	Code	Points
☐ YES	1	10
☐ NO	2	0

B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

	Code	Points
☐ YES	1	0
☐ NO	2	5

C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

	Code	Points
☐ YES	1	10
☐ NO	2	0

CODE NUMBER CHECKED A ____ B ____ C ____

POINT FACTOR 5: A ____ + B ____ + C ____ = ____ Total

FACTOR 6: Proximity to Near Coastal Waters

A. Base Score: Enter flow code here (from Factor 2): _____

Enter the multiplication factor that corresponds to the flow code: _____

Check appropriate facility HPRI Code (from PCS):

	HPRI#	CODE	HPRI Score	Flow Code	Multiplication Factor
☐	1	1	20	11, 31, or 41	0.00
☐	2	2	0	12, 32, or 42	0.05
☐	3	3	30	13, 33, or 43	0.10
☐	4	4	0	14 or 34	0.15
☐	5	5	0	21 or 51	0.10
				22 or 52	0.30
				23 or 53	0.60
				24	1.00

HPRI code checked: |__|

Base Score: (HPRI Score) _____ X (Multiplication Factor) _____ = _____ (Total Points)

B. Additional Points -- NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions)?

	Code	Points
☐ YES	1	10
☐ NO	2	0

C. Additional Points -- Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern?

	Code	Points
☐ YES	1	10
☐ NO	2	0

CODE NUMBER CHECKED A ____ B ____ C ____

POINT FACTOR 6: A ____ + B ____ + C ____ = ____ Total

TPDES PERMIT RATING WORK SHEET

TPDES No.: WQ0002496000

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	
2	Flow/Streamflow Volume	
3	Conventional Pollutants	
4	Public Health Impacts	
5	Water Quality Factors	
6	Proximity to Near Coastal Waters	
	TOTAL (Factors 1 through 6)	

S1. Is the total score equal to or greater than 80?

☒ YES - Facility is a major, stop here.
☐ NO - Facility is NOT a major, proceed to S2.

S2. Do you want the facility to be designated a discretionary major?

☐ YES - Add 500 points to the score above and provide justification below.
☐ NO - Stop here

Justification:

Check appropriate classification:

☒ Major

☐ Minor

☐ Discretionary Major

Satya Dwivedula, P.E.
Permit Reviewer

512-239-3548
Phone Number

February 13, 2012
Date Reviewed

NEW SOURCE DETERMINATION WORKSHEET

PERMITTEE:	Southwestern Electric Power Company
TPDES PERMIT NUMBER:	WQ0002496000
NPDES PERMIT NUMBER:	TX0087726
TYPE OF INDUSTRIAL ACTIVITY:	Electric power generation
SIC CODE:	4911
CATEGORICAL GUIDELINES:	40 CFR Part 423

A. NEW SOURCE DETERMINATION - SCREENING

ANSWER EITHER "YES" OR "NO" TO THE FOLLOWING QUESTIONS AND PROCEED AS DIRECTED:

1. Is there an applicable new source performance standard for this facility?

   Yes X No _____ If YES, proceed to Item No. 2. If NO proceed to Section B, the facility is not a new source.

2. Was the current production facility in existence prior to the promulgation of the applicable new source performance standard?

   Yes X No _____ If NO, proceed to Item No. 3. If YES proceed to Section B, the facility is not a new source.

3. This facility MAY be classified as a new source. Additional information will be required to conduct an evaluation and make a final determination. Please refer to 40 CFR 122.29.

B. NEW SOURCE DETERMINATION - DETERMINATION

PLEASE CHECK THE APPROPRIATE DETERMINATION:

X	Facility IS NOT a new source. Determination made via screening in Section A above.
	Facility IS NOT a new source. Determination made via evaluation. Please see attached evaluation.
	Facility IS a new source. Determination made via evaluation. Please see attached evaluation.

Satya Dwivedula, P.E.
REVIEWER

February 13, 2012
DATE

ATTACHMENT 1

EPA - REGION 6
NPDES PERMIT CERTIFICATION CHECKLIST

In accordance with the MOA established between the State of Texas and the United States Environmental Protection Agency, Region 6, the Texas Commission on Environmental Quality submits the following draft Texas Pollutant Discharge Elimination System (TPDES) permit for Agency review.

Major X **Minor** **POTW** **Private Domestic** **Non-POTW**

Facility Name	Southwestern Electric Power Company		
SIC Code	4911		
Type of operation	Electric power generation		
NPDES Permit No.	TX0087726	**TPDES Permit No.**	WQ0002496000
Segment No.	0505	**Basin**	Sabine River Basin
Receiving Water	Sabine River Above Toledo Bend Reservoir		

Permit Action:	**New**	
	Renewal WITH changes	
	Renewal w/out changes (permit and WQS)	
	Major Amendment with renewal	**X**
	Amendment/Modification WITHOUT renewal, proceed directly to question 22, below	

Answer the following.

	Yes	No	N/A
1. Are there known or potential interstate water issues associated with this permit?		X	
2. Is there known or potential third-party interest/environmental concern regarding this permit action?		X	
3. Does this facility discharge to a 303(d) listed waterbody segment?	X		
If **YES**, does the facility discharge any of the pollutant(s) of concern identified in the 303(d) listing?	X		
4. Is this permit consistent with the approved WQMP?	X		
5. Does the facility discharge to a waterbody segment which has a finalized TMDL?		X	
If **YES**, does the permit implement the TMDL consistent with the WLAs?			X
6. Does the fact sheet document the rationale for the inclusion/omission of permit conditions for each 303(d) listed pollutant of concern or TMDL pollutant?	X		
7. Has a priority watershed of critical concern been identified by the U. S. Fish and Wildlife Service for this segment?		X	
8. Does this permit authorize ammonia discharges > 4.0 mg/l at the edge of the mixing zone?		X	
9. Does this permit require testing for Whole Effluent Toxicity in accordance with the state's standard practices and implementation plan?	X		

	Yes	No	N/A
10. If this facility has completed and implemented a Toxicity Reduction Evaluation (TRE), has any subsequent toxicity been identified?			X
11. Does this permit propose to grant a variance request *(WQS, FDF, etc.)* or does it incorporate a proposed or final approval of a variance request?		X	
12. If a POTW is ≥ 5 MGD, does it have an approved Pretreatment Program?			X
13. Since the last permit issuance, has the POTW had a new Pretreatment Program approved or a Pretreatment Program modification approved?			X
14. Does this permit contain authorization for wet weather related peak-flow discharges?		X	
15. Does this permit include a bypasses of any treatment unit or authorize overflows in the system?		X	
16. Does this permit include provisions for effluent trading?		X	
17. Does this permit contain specific issues on which EPA and the state are not in agreement regarding the permitting approach?		X	
18. Is this facility subject to a national effluent limitations guideline? Please specify: 40 CFR Part 423	X		
19. Does this permit contain "first-time" implementation of a new federal guideline, policy, regulation, etc.? Please specify:		X	
20. Is this a new facility or an expansion of an existing facility? For an **EXISTING** facility, if any limits have been removed or are less stringent than those in the previous permit, is it in accordance with the anti-backsliding regulations?			X
21. Does this permit incorporate any exceptions to the standards or regulations?		X	
22. Is this is a permit modification/amendment?	X		

Please specify: A major amendment to authorize: (a) an increase in the capacity of the existing Flue Gas Desulphurization (FGD) & Fly Ash Landfill Retention Pond, (b) the diversion of wastewater from the Ash Pond into the FGD & Fly Ash Landfill Retention Pond on an infrequent basis, (c) a reduction in the monitoring frequency for total suspended solids at Outfalls 004 and 005 from once per month to once per quarter, (c) a reduction in the monitoring frequency for oil and grease at Outfall 006 from once per month to once per quarter, (d) a reduction in the monitoring frequency for oil and grease at Outfall 102 from once per quarter to once per year, (e) a reduction in monitoring frequency for biochemical oxygen demand (5-day) at Outfall 302 from once per two months to once per quarter, and (f) a temporary reduction in two-foot freeboard requirement for ponds during storm events.

Name: Satya Dwivedula, P.E.

Date February 13, 2012

TOXIC RATING WORKSHEET

TPDES Permit No.:	WQ0002496000			
NPDES Permit No.:	TX0087726			
Permittee:	Southwestern Electric Power Company			
Facility:	Pirkey Power Plant			
SIC Codes:	1. 4911	2.	3.	4.
40 CFR Section:	423			
Toxic Rating for Facility:	II			
Permit Writer:	Satya Dwivedula, P.E.			Date: February 13, 2012

CALCULATE TOXIC RATING FOR THE FACILITY

For each outfall listed below, list the percent contribution to the total wastewater flow from the facility and the toxic rating for the outfall.

OUTFALL No.	% Contribution	Toxic Rating	Rating x Percent
002, 003, 004	100	2	200
005, and 006			

Toxic Rating for Facility = Total/100 = II (round to nearest whole #)

OUTFALL NO.: 002

List waste streams in order of percent contribution to outfall and toxic rating for each waste stream:

Description of Waste Stream	%	Toxic Rating	Rating x Percent
Once-through cooling water	100	II	200
	Total 100		Total: 200
	Total/100 = 2		

OUTFALL NO.: 003

List waste streams in order of percent contribution to outfall and toxic rating for each waste stream:

Description of Waste Stream	%	Toxic Rating	Rating x Percent
Storm water from Lignite storage area	100	2	200
	Total 100		Total: 200

Toxic Rating for Outfall = Total/100 = 2 (round to nearest whole #)

OUTFALL NO. 004

List waste streams in order of percent contribution to outfall and toxic rating for each waste stream:

Description of Waste Stream	%	Toxic Rating	Rating x Percent
Storm water from ash landfill and Flue gas	99	2	198
Storm water from desulphurization areas	1	2	2
	Total 100		Total: 200

Toxic Rating for Outfall = Total/100 = 2 (round to nearest whole #)

OUTFALL NO. 005

List waste streams in order of percent contribution to outfall and toxic rating for each waste stream:

Description of Waste Stream	%	Toxic Rating	Rating x Percent
Storm water runoff from Limestone storage area	100	2	200
	Total 100		Total:

Toxic Rating for Outfall = Total/100 = _____ (round to nearest whole #)

OUTFALL NO. 006

List waste streams in order of percent contribution to outfall and toxic rating for each waste stream:

Description of Waste Stream	%	Toxic Rating	Rating x Percent
Wastewater from the ash pond	100	2	200
	Total 100		Total: 200

Toxic Rating for Outfall = Total/100 = 2 (round to nearest whole #)

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

TO: Yvonna Miramontes, Team Leader
Industrial Permits, Wastewater Permits Section

DATE: February 13, 2012

From: Satya Dwivedula, P.E., Permit Writer
Industrial Permits, Wastewater Permits Section

Subject:

Applicant:	Southwestern Electric Power Company				
Plant Name:	Henry W. Pirkey Power Plant				
☒ **TPDES**	☐ **TCEQ**	WQ0002496000		**EPA ID. No.**	TX0087726
Industrial:	☐ **Minor**	☒ **Major**			
Toxic Rating:	II	**Stream Segment:**		0505	
Received:	August 31, 2010	**Administratively Complete:**		October 25, 2010	
Assigned:	December 22, 2010	**To Team Leader:**		May 6, 2011	
Tech Complete:	May 6, 2011				

ATTACHMENTS:	**State-Only**	**TPDES**
New	☐	☐
Renewal	☐	☒
Major Amendment	☐	☒
Minor Amendment	☐	☐
Staff Initiated Amendment	☐	☐
Fact Sheet	☐	☒
SOB/Technical Summary	☐	☐

RATIONAL Used to Draft Permit:		
☒	**Federal Guidelines:**	40 CFR Part 423
☐	**Waste Load Evaluation:**	
☒	**TCEQ Rules:**	30 TAC Chapters 217, 307, 309, and 319
☒	**Existing Permit:**	WQ0002496000 issued on May 14, 2007
☒	**Other:**	Implementation Procedures and BPJ.

Company's Rep: Mr. Franklin L. Mills

Phone #: (214) 777-1507 Fax #: (214) 777-1138

Known Opposition: None If yes, briefly explain: _____

Comments: None

FILE LOCATION: I:\WQ\IND\ERC AND REGION PERMITS\WQ0002496000.docx

ATTACHMENT D

TPDES Permit No. WQ0002496000

Application by Southwestern Electric Power Company for TPDES Permit No. WQ0002496000	§ § § § § § §	**BEFORE THE** **TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

2011 OCT 5 PM 2:24
CHIEF CLERKS OFFICE
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENT

The Executive Director (ED) of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comments (Response) on the application by Southwestern Electric Power Company (permittee or SWEPCO) for an amendment and renewal of Texas Pollutant Discharge Elimination System (TPDES) permit No.WQ0002496000, and on the ED's preliminary decision. As required by Title 30 of the Texas Administrative Code (TAC) § 55.156, before a permit is issued, the ED prepares a response to all timely, relevant and material, or significant comments. The Office of the Chief Clerk at the TCEQ received a timely comment letter from Eric Allmon with the law firm of Lowerre, Frederick, Perales, Allmon & Rockwell, representing "Public Citizen." This Response addresses all timely comments received, whether or not withdrawn.

If you need more information about this permit application or the wastewater permitting process, please call the TCEQ Public Education Program, Toll Free, at 1-800-687-4040. General information about the TCEQ can be found at our website at www.tecq.texas.gov.

I. Background

A. Description of Facility

SWEPCO operates the Henry W. Pirkey Power Plant, an electric power generation facility located adjacent to Red Oak Road at a point approximately six miles southeast of the City of Hallsville, Harrison County, Texas 75650.

SWEPCO has applied to the TCEQ for the renewal of the existing TPDES Permit No. WQ0002496000 with a major amendment that would authorize: (a) an increase in the capacity of the Flue Gas Desulfurization (FGD) & Fly Ash Landfill Retention Pond (Landfill Pond), (b) the diversion of wastewater from the Ash Pond into the Landfill Pond on an infrequent basis, (c) a reduction in the monitoring frequency for total suspended solids (TSS) at Outfalls 004 and 005 from once per month to once per quarter, (d) a reduction in the monitoring frequency for oil and grease (O&G) at Outfall

006 from once per month to once per quarter, (e) a reduction in the monitoring frequency for O&G at Outfall 102 from once per quarter to once per year, (f) a reduction in the monitoring frequency for biochemical oxygen demand, 5-day (BOD_5) at Outfall 302 from once per two months to once per quarter, and (g) a temporary reduction in the two-foot freeboard requirement for ponds during storm events.

The existing permit authorizes the discharge of once-through cooling water and previously monitored effluent (low volume wastewater on an intermittent and flow variable basis via Outfall 102; treated effluent from Plant "X" at a daily average flow not to exceed 800,000 gallons per day via Outfall 202; and domestic wastewater at a daily average flow not to exceed 15,000 gallons per day via Outfall 302) at a daily average flow not to exceed 600,000,000 gallons per day via Outfall 002; storm water from the Lignite Runoff Pond on an intermittent and flow variable basis via Outfall 003; storm water from the Landfill Pond on an intermittent and flow variable basis via Outfall 004; storm water from the Limestone Runoff Pond on an intermittent and flow variable basis via Outfall 005; and wastewater from the Ash Pond on an intermittent and flow variable basis via Outfall 006.

Once-through condenser cooling water and once-through miscellaneous cooling water (collectively referred to as "once-through cooling water" in the permit) receive no treatment prior to discharge at Outfall 002. Low volume wastes (demineralizer regenerant, floor drains, and yard drains) are routed to the Ecology Pit for settling, precipitation, and flocculation prior to discharge via Outfall 102.

Additionally, demineralizer regenerant is routed to a chemical sump and neutralization tank prior to being routed to the Ecology Pit. The permittee may route metal cleaning wastes, chemical metal cleaning wastes, wastewater from the Ash Pond, and wastewater from the Lignite Runoff Pond to Plant "X."

Plant "X" provides pH neutralization, filtration, settling, oil-water separation, and chemical wastewater treatment prior to discharge via Outfall 202. Additionally, metal cleaning wastes and chemical metal cleaning wastes are routed to the Metal Cleaning Waste Pond prior to being routed to Plant "X."

Domestic sewage is subject to pH neutralization, filtration, settling and clarifier solids separation, chlorination, and chemical wastewater treatment prior to discharge via Outfall 302.

Storm water from the lignite storage area is routed to the Lignite Runoff Pond where it is subject to settling, precipitation, and flocculation prior to discharge via Outfall 003. Storm water runoff from the flue gas desulfurization & fly ash sludge landfill (the landfill) is routed to the Landfill Pond where it is subject to settling, precipitation, and flocculation prior to discharge via Outfall 004. The permittee may transfer wastewater from the Lignite Runoff Pond to the Landfill Pond for treatment and discharge via Outfall 004. The permittee may divert wastewater from the Ash Pond

into the Landfill Pond on an infrequent basis, on compliance with the technology-based effluent limitations at internal Outfall 104.

Storm water from the limestone storage area is routed to the Limestone Runoff Pond where it is subject to settling, precipitation, and flocculation prior to discharge via Outfall 005. Low volume wastes (boiler blowdown and demineralizer regenerant) and ash transport water are routed to the Ash Pond where they are subject to oil-water separation, pH adjustment, settling, precipitation, and flocculation prior to discharge via Outfall 006.

B. Effluent Limitations

Effluent limitations for discharges via Outfall 002 include: 600 million gallons per day (MGD) daily average and daily maximum flow, 122 degrees Fahrenheit (°F) daily maximum temperature, 0.2 milligrams per liter (mg/L) and 75.6 pounds per day (lbs/day) daily maximum total residual chlorine (TRC), and a report requirement for the daily average and the daily maximum dissolved oxygen (DO) concentrations.

Effluent limitations for discharges via Outfall 102 include: 30 mg/L for the daily average and 100 mg/L daily maximum for TSS, 15 mg/L daily average and 20 mg/L daily maximum for O&G, 0.012 mg/L daily average and 0.025 mg/L daily maximum for total selenium, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 202 include: 0.8 MGD daily average and daily maximum flow, 30 mg/L daily average and 50 mg/L daily maximum for TSS, 15 mg/L daily average and 20 mg/L daily maximum for O&G, 0.016 mg/L daily average and 0.033 mg/L daily maximum for total selenium, 1.0 mg/L daily average and daily maximum for total iron, 0.5 mg/L daily average and 1.0 mg/L daily maximum for total copper, and a range of 6.0 to 9.0 standard units for pH.

Effluent limitations for discharges via Outfall 302 include: 0.015 MGD daily average and 0.030 MGD daily maximum flow, 20 mg/L and 2.5 lbs/day daily average and 65 mg/L daily maximum for BOD_5, 20 mg/L and 2.5 lbs/day daily average and 65 mg/L daily maximum for TSS, a minimum of 1.0 mg/L for TRC, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily maximum concentration of the TRC.

Effluent limitations for discharges via Outfall 003 include: 50 mg/L daily maximum for TSS, 20 mg/L daily maximum for O&G, 0.033 mg/L daily maximum for total selenium, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 004 include: 50 mg/L daily maximum for TSS, 20 mg/L daily maximum for O&G, 0.036 mg/L daily maximum for

total selenium, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 104 include: 30 mg/L daily average and 100 mg/L daily maximum for TSS, 15 mg/L daily average and 20 mg/L daily maximum for O&G, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 005 include: 50 mg/L daily maximum for TSS, 20 mg/L daily maximum for O&G, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

Effluent limitations for discharges via Outfall 006 include: 30 mg/L daily average and 100 mg/L daily maximum for TSS, 15 mg/L daily average and 20 mg/L daily maximum for O&G, 0.006 mg/L daily average and 0.013 mg/L daily maximum for total selenium, a range of 6.0 to 9.0 standard units for pH, and a report requirement for the daily average and the daily maximum flow volumes.

C. Discharge Route

The effluent is discharged via Outfalls 002 and 003 to the Brandy Branch Reservoir; thence to Brandy Branch Creek; via Outfalls 004, 005, and 006 to unnamed tributaries of Hatley Creek; thence to Hatley Creek; thence all to Sabine River above Toledo Bend Reservoir in Segment No. 0505 of the Sabine River Basin.

The unclassified receiving waters have high aquatic life use for the Brandy Branch Reservoir and the Hatley Creek and no significant aquatic life use for the Brandy Branch Creek and the unnamed tributaries of Hatley Creek. The designated uses for Segment No. 0505 are high aquatic life use, contact recreation, and public water supply.

Segment No. 0505 is currently listed on the State's inventory of impaired and threatened waters (the 2008 Clean Water Act Section 303(d) list. The listing is specifically for elevated levels of bacteria in a 22-mile reach near SH 149. Although domestic wastewater is authorized for discharge via Outfall 002, it is not expected to cause or contribute to the elevated bacteria levels in the receiving waters because: (a) domestic wastewater discharges are controlled at internal Outfall 302 with effluent limitations for BOD_5 and TRC, and (b) the permittee met the effluent limitations for BOD_5 and TRC concentration limits in the past five-year period.

D. Antidegradation Review

In accordance with 30 TAC §307.5 and the TCEQ implementation procedures (January 2003) for the Texas Surface Water Quality Standards (TSWQS), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation

review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Brandy Branch Reservoir and Hatley Creek, which have been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

E. Procedural Background

The TCEQ received the application on August 31, 2010, the application was declared administratively complete on October 25, 2010 and technically complete on May 11, 2011. The Applicant published the *Notice of Receipt of Application and Intent to Obtain Water Quality Permit Amendment* (NORI) in English in *The Marshall News Messenger* on October 29, 2010 and in Spanish in *La Opinion* on November 3, 2010. On July 13, 2011, the Applicant published the *Notice of Application and Preliminary Decision for Water Quality TPDES Permit Amendment and Renewal* (NAPD) in English in *The Marshall News Messenger* and in Spanish in *La Opinion*. The public comment period ended on August 12, 2011. This application is subject to the procedural requirements adopted pursuant to House Bill 801, 76th Legislature, 1999.

F. Access to Rules, Laws, and Records

The following websites may be useful:

Secretary of State website for all administrative rules: www.sos.state.tx.us

TCEQ rules in Title 30 of the Texas Administrative Code: www.sos.state.tx.us/tac/ (select "TAC Viewer" on the right, then "Title 30 Environmental Quality")

Texas statutes: http://www.statutes.legis.state.tx.us/

TCEQ website: www.tceq.state.tx.us (for downloadable rules in Adobe PDF formats, select "Rules," then "Current Rules and Regulations," then "Download TCEQ Rules")

Federal rules in Title 40 of the Code of Federal Regulations: http://www.epa.gov/lawsregs/search/40cfr.html

Federal environmental laws: http://www.epa.gov/lawsregs/laws/index.html

Commission records for this facility are available for viewing and copying at the TCEQ's main office in Austin, 12100 Park 35 Circle, Building F, 1st Floor (Office of the Chief Clerk, for the current application until final action is taken). The application for

this facility is available for viewing and copying at the Marshall Public Library located at 300 South Alamo Street, Marshall, Texas, since publication of the NORI. The final application, draft permit, and the *Fact Sheet and Executive Director's Preliminary Decision* (Fact Sheet) are available for viewing and copying at the same location since the publication of the NAPD.

II. Comments and Responses

Comment No. 1:

Public Citizen comments that the draft permit does not ensure adequate protection of surface water quality and does not include adequate protections for the attainable and designated uses of the receiving waters.

Response No. 1:

In the permit application, the permittee provided information on the uses and characteristics of the receiving water. This information was used to supplement the ED's final determination of the uses of the receiving waters, in accordance with the TSWQS and the Procedures to Implement the Texas Surface Water Quality Standards (IPs). The TSWQS, 30 TAC Chapter 307, designate the criteria for the protection of aquatic life and human health in water in the state. Section 307.4(d) of the TSWQS states that "surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life."

The proposed discharge routes in the draft permit include the following unclassified water bodies: Brandy Branch Reservoir, Brandy Branch Creek, an unnamed tributary of Hatley Creek, and Hatley Creek. Brandy Branch Reservoir and Hatley Creek were determined to be perennial (flowing at all times). The unnamed tributary of Hatley Creek, and Brandy Branch Creek were determined to be intermittent (dry for at least one week during most years) until the confluence with Hatley Creek or the classified segment. Intermittent water bodies are assigned "no significant aquatic life uses" and perennial water bodies are presumed "high aquatic life uses" in accordance with 30 TAC § 307.4(h)(3) and (h)(4). The dissolved oxygen criterion for Brandy Branch Reservoir and Hatley Creek is 5.0 mg/L, and for the unnamed tributary and Brandy Branch Creek it is 2.0 mg/L. The classified perennial water body, Sabine River Above Toledo Bend, is assigned contact recreation, public water supply, and high aquatic life uses as designated within Appendix A of the TSWQS. The dissolved oxygen criterion for the Sabine River Above Toledo Bend is 5.0 mg/L.

Water bodies are designated for contact recreation use unless elevated concentrations of indicator bacteria (*E. coli*) frequently occur due to sources of pollution that cannot be reasonably controlled by existing regulations or if recreational activities are considered unsafe for other reasons, such as ship or barge traffic.

Dischargers are required to sample and submit analytical data for a set of potential pollutants. The submitted results are screened against the concentrations necessary to protect water quality.

If the effluent data shows pollutants that have the potential to exceed the calculated water quality-based limitations necessary to protect aquatic life, TCEQ staff will include additional monitoring requirements, effluent limitations, process control requirements, or a combination of these measures to the permit.

The TCEQ's practice for determining if discharges have a significant potential to exceed calculated water quality-based effluent limitations (significant potential) is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitations. Permit limitations are required when analytical data reported in the application exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

Effluent analysis data provided in the permit application for discharges via Outfall 002 did not exhibit significant potential. Therefore, discharges via Outfall 002 were determined to be protective of the receiving waters. Segment No. 0505 is currently listed on the State's inventory of impaired and threatened waters (the 2008 Clean Water Act Section 303(d) list. The listing is specifically for elevated levels of bacteria in a 22-mile reach near SH 149. Although domestic wastewater is authorized for discharge via Outfall 002, it is not expected to cause or contribute to the elevated bacteria levels in the receiving waters because: (a) domestic wastewater discharges are controlled at internal Outfall 302 with effluent limitations for BOD_5 and TRC, and (b) the permittee met the effluent limitations for BOD_5 and TRC concentration limits in the past five-year period.

The effluent analysis data for discharges via Outfall 003 did not exhibit significant potential for all parameters except total selenium. At Outfall 003, the reported total selenium concentration of 0.128 mg/L exceeded the 70% value of 0.011 mg/L of the calculated daily average water quality-based effluent limitation of 0.016 mg/L, but is below the 85% value of 0.013 mg/L. Therefore, in accordance with the IPs, a monitoring requirement is warranted for total selenium at Outfall 003, but not an effluent limitation. However, since the existing permit included an effluent limitation for total selenium at Outfall 003, in compliance with the anti-backsliding rules provided at Title 40 Code of Federal Regulations (CFR) § 122.44(l), a daily maximum water-quality based effluent limitation of 0.033 mg/L, which is more protective than the monitoring requirement, was continued from the existing permit. Therefore, discharges via Outfall 003 were determined to be protective of the receiving water quality.

The effluent analysis data for discharges via Outfall 004 did not exhibit significant potential for all parameters except total selenium. At Outfall 004, the reported total selenium concentration of 0.028 mg/L exceeded the 85% value of 0.014 mg/L of the calculated daily average water quality-based effluent limitation of 0.017

mg/L. To address this exceedance, the daily maximum water quality-based effluent limitation of 0.036 mg/L was continued from the existing permit. Therefore, discharges via Outfall 004 were determined to be protective of the receiving water quality.

Effluent analysis data provided in the permit application for discharges via Outfall 005 did not exhibit significant potential. Therefore, discharges via Outfall 005 were determined to be protective of the receiving water quality.

No analytical data was available for screening against water quality-based effluent limitations for discharges via Outfall 006 because no discharges have occurred from this outfall since May 2008. Therefore, effluent limitations at Outfall 006 were continued from the existing permit. A new Other Requirement No. 13 was included in the draft permit to require the permittee to analyze the effluent at Outfall 006 after the first qualifying discharge event. Based on the review of this data, TCEQ staff has the ability to include additional monitoring requirements, effluent limitations, process control requirements, or a combination of these measures to the permit to protect the quality of the receiving waters. Therefore, discharges via Outfall 006 were determined to be protective of the receiving waters.

Further, via its Interoffice Memorandum dated December 15, 2010, the Water Quality Assessment Team in the Water Quality Division of the TCEQ has determined that the discharges from this facility are not anticipated to significantly deplete dissolved oxygen levels in the receiving waters.

Based on the information provided above and the effluent limitations established in the draft permit, the ED has determined that the draft permit includes adequate measures to protect the designated and attainable uses of the receiving waters. Attainable uses are uses which can be reasonably achieved by a water body in accordance with its physical, biological, and chemical characteristics whether it is currently meeting that use or not. The Standards Implementation Procedures have guidelines for the determination and review of attainable uses. The designated use, existing use, or presumed use of a water body may not necessarily be the attainable use.

Comment No. 2:

Public Citizen comments that increasing the capacity of the retention pond constitutes a "new source" and should be subject to the new source performance standard.

Response No. 2:

Increasing the capacity of the retention pond does not constitute "new source" under 40 CFR § 122.2. New source is defined as "any building, structure, facility, or installation from which there is or may be a 'discharge of pollutants,' the construction of which commenced ... [a]fter promulgation of standards of performance under section 306 of CWA which are applicable to such source. ..." Construction of a new source as defined under §122.2 commences if the owner or operator has started placing,

assembling, or installing any facilities or equipment; or if "significant site preparation work including clearing, excavation or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment ..." has begun "as part of a continuous on-site construction program."[1]

The standard of performance for the steam electric power generating point source category was adopted in 1982[2] and the facility commenced construction in 1979. According to the Draft Environmental Impact Statement (EIS) for the facility, the foundation areas for the wastewater ponds were built in 1979.[3] The retention pond is an existing facility. The construction of the facility and the retention ponds predates promulgation of the rules for steam electric power generating point source category, therefore any expansion of the pond would not constitute a "new source."

Additionally, under the criteria for new source determination, a source is a new source only if it meets the definition of new source under § 122.2, and:

(i) It is constructed at a site at which no other source is located; or

(ii) It totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or

(iii) Its processes are substantially independent of an existing source at the same site.[4]

First, any construction related to expanding the capacity of the retention pond does not meet the definition of "new source" under § 122.2; second, the retention pond is located at a site where other sources are located; and third, the expansion does not totally replace a process or production equipment.

Finally, the rules are amply clear that construction at a site where an "existing source is located results in a modification subject to §122.62 rather than a new source ... if the construction does not create a new building, structure, facility, or installation meeting the criteria of paragraph (b)(1) (ii) or (iii) of this section but otherwise alters, replaces, or adds to existing process or production equipment."[5] Therefore the ED considers the expansion of the retention pond as a modification requiring an amendment to the existing permit under 30 TAC § 305.62.

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[1] 40 CFR § 122.29(b)(4).
[2] 40 CFR Part 423.
[3] See Draft Environmental Impact Statement, Henry W. Pirkey Power Plant, Unit-1/South Hallsville Surface Mine Project, Harrison County, Texas, EPA 906/9-82-004 (March 1982).
[4] 40 CFR § 122.29(b)(1).
[5] 40 CFR § 122.29(b)(3).

Comment No. 3:

Public Citizen expressed concern that the draft permit does not contain adequate effluent limitations to control barium and selenium.

Response No. 3:

The permittee provided analytical data for a set of potential pollutants in its permit application which included total selenium and total barium. As explained in the response to Comment No. 1, the ED screened the analytical data for total barium and total selenium along with the other parameters to determine if they exhibited significant potential to exceed the calculated water quality-based effluent limitations. This screening process was explained in Section X.D.2 of the Fact Sheet, which was prepared to explain conditions and effluent limitations in the draft permit. Variables used and the numerical values derived during the screening process were provided as Appendix B to the Fact Sheet.

Except for total selenium at Outfalls 003 and 004, none of the other potential pollutants, including total barium, demonstrated significant potential to exceed the calculated water quality-based effluent limitations. See Response No. 1 for a detailed explanation of the selenium effluent limitation.

Comment No. 4:

Public Citizen comments that the draft permit fails to include technology-based effluent limitations consistent with the current guidance for FGD wastewater issued by the United States Environmental Protection Agency (EPA). Public Citizen further comments that biological treatment systems constitute best available technology for FGD wastewater and that effluent limits should be established based on biological treatment systems.

Response No. 4:

Based on the following information gathered from the permittee, the permit application, and the EPA, the ED has determined that the EPA's interim guidance[6] on discharges from FGD impoundments is not applicable for discharges from this facility.

> FGD wastes generated at the facility are re-used in the process and are not discharged. Once or twice a year during maintenance, sludges from the FGD system are transported to the landfill.
>
> These sludges constitute a very small volume of the landfill because more than 99% of the landfill material is Fly Ash. Storm water from this landfill

[6] June 7, 2010 Memorandum from James Hanlon, Office of Wastewater Management to Water Division Directors, Regions 1-10 – Subject: National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residuals (CCR) Impoundments at Steam Electric Power Plants.

drains to the Landfill Pond. Wastewaters from this Landfill Pond are anticipated to be discharged only intermittently, during large storm events.

The draft permit authorizes the discharge of storm water runoff from the Landfill Pond on an intermittent and flow variable basis via internal Outfall 202 (which discharges to Outfall 002) and Outfall 004. These intermittent discharges are expected to consist predominantly of storm water. In March 2010, the facility completed process changes to increase the recycling of waters in the Landfill Pond. Due to these changes, no discharges were made from the Landfill Pond since April 2010. Presently, storm water-dominant discharges are expected from the Landfill Pond only as a result of very large storm events.

Finally, The ED assumes that the guidance document referenced in this comment is the EPA's interim guidance - "Technology-based Effluent Limits, Flue Gas Desulfurization (FGD) Wastewater at Steam Electric Facilities (Attachment A)." The guidance document is not intended to replace EPA or TCEQ's wastewater permitting rules and policies. EPA stated in Section VI of the interim guidance that:

> This guidance document does not change or substitute for any legal requirements, though it does provide clarification of some regulatory requirements. While EPA has made every effort to ensure the accuracy of the discussion in this document, the obligations of the regulated community are determined by the relevant statutes, regulations, or other legally binding requirements. This guidance document is not legally enforceable and does not confer legal rights or impose legal obligations upon any member of the public, EPA, states, or any other agency. In the event of a conflict between the discussion in this document and any statute or regulation, this document would not be controlling. ... This guidance may not apply in a particular situation based upon the circumstances, and EPA, states and Tribes retain the discretion to adopt approaches on a case-by-case basis that differ from the recommendations of this guidance document where appropriate.

Comment No. 5:

Public Citizen comments that the existing cooling water intake structure (CWIS) located at Lake O' the Pines does not reflect the best technology available (BTA) to minimize adverse environmental impacts – through screen velocity of 2.28 feet per second (fps) does not constitute BTA for new or existing cooling water intake structures.

Response No. 5:

Although the through screen velocity at the cooling water intake structure at the Pirkey Power Plant is greater than 0.5 fps, however, based on the results provided in the *Impingement Monitoring Data Report* dated March 2007 and information on the

operation and maintenance procedures for the CWIS provided in the *316(b) Proposal for Information Collection* dated September 2005, the ED determined that the operation of the CWIS has minimal adverse impact on the aquatic community. Even though there is a pump station located at Lake O' the Pines to provide make-up water for Brandy Branch Reservoir, it is not considered part of the CWIS for the electric generating facility.

Comment No. 6:

Public Citizen comments that a sufficient antidegradation analysis has not been performed to justify issuance of the permit.

Response No. 6:

In accordance with 30 TAC § 307.5 and the IPs, an antidegradation review of the receiving waters was performed. TCEQ's antidegradation policy applies to any increase in pollution authorized by a TPDES wastewater discharge permit. Increases in pollution are determined by information on effluent characteristics that are provided in the permit application, the draft permit, and other available sources.

The Standards Implementation Team conducts reviews of Tier 1, Tier 2, or both in accordance with the antidegradation policy stated in 30 TAC § 307.5. Antidegradation reviews under Tier 1 ensure that existing water quality uses are not impaired by increases in pollution loading. TPDES permit amendments or new permits that allow increased pollution loading are subject to review under Tier 1 of the antidegradation policy, and all pollutants that could cause an impairment of existing uses are included in the evaluation. Antidegradation reviews under Tier 2 ensure that where water quality exceeds the normal range of fishable/swimmable criteria, such water quality will be maintained unless lowering it is necessary for important economic or social development. The second tier of the antidegradation policy generally applies to water bodies that have existing, designated, or presumed uses of contact recreation and intermediate, high, or exceptional aquatic life waters. TPDES permit amendments and new permits that allow an increase in loading are subject to review under Tier 2 of the antidegradation policy.

A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained.

A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Brandy Branch Reservoir and Hatley Creek, which have been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

The applicant has applied for an amendment to the existing permit to request: (a) an increase in the capacity of the existing Landfill Pond, (b) the diversion of wastewater from the Ash Pond into the Landfill Pond on an infrequent basis, (c) a reduction in the monitoring frequency for TSS at Outfalls 004 and 005 from once per month to once per quarter, (c) a reduction in the monitoring frequency for O&G at Outfall 006 from once per month to once per quarter, (d) a reduction in the monitoring frequency for O&G at Outfall 102 from once per quarter to once per year, (e) a reduction in monitoring frequency for BOD_5 at Outfall 302 from once per two months to once per quarter, and (f) a temporary reduction in two-foot freeboard requirement for ponds during storm events .The draft permit does not authorize an increase in loading or the discharge of any new waste streams, therefore the ED has determined that if the permittee operates and maintains the facility according to all applicable TCEQ rules and the provisions in the draft permit, degradation of water quality is not anticipated.

Comment No. 7:

Public Citizen comments that no demonstration has been made that Lone Star POTW has adequate capacity to treat the wastes received from AEP Pirkey Power Plant.

Response No. 7:

Evaluation of the waste handling capacity of the Lone Star POTW is outside of the scope of the evaluation of this wastewater discharge permit application. The TPDES permitting process is limited to controlling the discharge of pollutants into or adjacent to water in the state and protecting the water quality of the state's rivers, lakes, and coastal waters. Currently, a permittee is not required to demonstrate that the off-site waste handlers have adequate treatment capacity as part of their application for a wastewater discharge permit.

Comment No. 8:

Public Citizen comments that the draft permit does not include proper protections for groundwater in the area of the plant and the Landfill Pond and other storage areas pose danger to groundwater.

Response No. 8:

The Landfill Pond along with the Lignite Runoff Pond, Ash Pond, and Limestone Runoff Pond are authorized to discharge to their associated outfalls by the draft permit. These outfalls discharge to surface water in the state.

The Water Quality Division has determined that the draft permit was prepared in accordance with the TSWQS, which ensure that the effluent discharge is protective of aquatic life, human health, and the environment. The review process for surface water quality is conducted by the Standards Implementation Team and the Water Quality Assessment Team surface water modelers. The Water Quality Division has determined

that if the surface water quality is protected, then the groundwater quality in the vicinity will not be impacted by the discharge.

Other Requirement 5.d. was updated to include the more stringent requirements of 30 TAC Chapter 217 for pond liners based on best professional judgment. These requirements have been determined by the Commission to be protective of groundwater quality.

Comment No. 9:

Public Citizen comments that the draft permit does not have adequate limitations and monitoring requirements to ensure the protection of aquatic life in the receiving waters.

Response No. 9:

The TSWQS found at 30 TAC Chapter 307 state that "surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life." The methodology outlined in the IPs is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater that: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health.

Information on calculation of effluent limitation for the protection of aquatic life was provided in Section X.D.2 of the draft Fact Sheet. Information on the screening procedures used for establishing effluent limitations and monitoring requirements is provided in Response No. 1. The draft permit contains effluent limitations, monitoring and reporting requirements, sampling and analysis requirements, and other safeguards which are designed to be protective of aquatic life in the receiving waters. The effluent limitations applicable to each Outfall are discussed in Section I.B above.

CHANGES MADE TO THE DRAFT PERMIT IN RESPONSE TO COMMENT

No changes to the draft permit have been made in response to public comment.

Respectfully submitted,

Texas Commission on Environmental Quality

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Environmental Law Division

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CERTIFICATE OF SERVICE

I certify that on October 5, 2011, the "Executive Director's Response to Public Comment" for Permit No. WQ0002496000 was filed with the Office of the Chief Clerk, Texas Commission on Environmental Quality.

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