



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

P. O. Box 13087
Austin, Texas 78711-3087

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

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 lbs/day	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency Sample Type
Flow (MGD)				
Temperature (°F) (*1)	(Report)	(Report)	N/A	1/day Estimate
Total Residual Chlorine (*1)	N/A	75.6	N/A	1/day In-situ
Dissolved Oxygen (*3)	N/A	N/A	N/A	1/week (*2) 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.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 102

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	Report Daily Average and Measurement Frequency	Daily Maximum Sample Type
Flow (MGD)	(Report)	(Report)	1/day (*2)	Estimate
Total Suspended Solids	30	100	1/quarter (*2)	Grab (*3)
Oil and Grease	15	20	1/year (*2)	Grab (*3)
Selenium, Total	0.012	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 lbs/day	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	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.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 004

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 Desulfurization (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 be 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.

8. 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:

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

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 desulfurization 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 the 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.:	<input type="checkbox"/> C <input type="checkbox"/> G	Effluent Concentration (mg/l)					
		Samp.	Samp.	Samp.	Samp.	Average	
Pollutants							
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							
<i>E. coli</i>							
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

Dates and Times Composites Collected

No. 1 FROM: _____ Date Time TO: _____ Date Time

No. 2 FROM: _____ Date Time TO: _____ Date Time

No. 3 FROM: _____ Date Time TO: _____ Date Time

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent (%)					
	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

Time of Reading	Percent effluent (%)					
	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

Dates and Times
Composites
Collected

No. 1 FROM: _____ Date Time TO: _____ Date Time

No. 2 FROM: _____ Date Time TO: _____ Date Time

No. 3 FROM: _____ Date Time TO: _____ Date Time

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

- 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

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: June 13, 2011

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

<u>Outfall</u>	<u>Frequency</u>	<u>Average of Daily Avg., million gallons per day (MGD)</u>	<u>Maximum of Daily Max (MGD)</u>
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)

<u>Outfall</u>	<u>Daily Avg.</u>	<u>Daily Max</u>
002	92°F	115°F

C. Effluent Characteristics

<u>Outfall</u>	<u>Parameter</u>	<u>Average of Daily Avg</u>	<u>Maximum of Daily Max</u>
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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

<u>Outfall</u>	<u>Parameter</u>	<u>Average of Daily Avg</u>	<u>Maximum of Daily Max</u>
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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

VII. PROPOSED EFFLUENT LIMITATIONS

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

<u>Outfall No</u>	<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

<u>Outfall No</u>	<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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),

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

(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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Technology-based effluent limitations for total residual chlorine at Outfall 002; total suspended solids and oil and grease at Outfall 102; 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:

<u>Outfall No.</u>	<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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	

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS1. 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 CRITERIAa. 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).

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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%
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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%
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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)*.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

The segment values are 41 mg/L CaCO₃ 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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

- 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 CRITERIAa. 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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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

$$\text{Daily Maximum} = [0.2 \text{ mg/L}] * [8.345] * [544.3 \text{ MGD} / 12] = 75.7 \text{ lbs/day}$$

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.

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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:

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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	

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

BAT (40 CFR §423.13)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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:

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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.

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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	

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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:

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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:

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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:

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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).

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

BPT (40 CFR §423.12)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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:

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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:

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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).

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

BPT (40 CFR §423.12)

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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 CaCO₃): 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:

<i>Lake Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient t (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>		<i>Water Effects Ratio (WER)</i>	
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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT
LIMITATIONS

Parameter	Acute		WLAa	WLAc	LTAa	LTAc	Daily Avg. (ug/L)	Daily Max. (ug/L)
	Standard (perennial) (ug/L)	Chronic Standard (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
Tributyltin (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	FW Fish Only	WLAh	LTAh	Daily Avg. (ug/L)	Daily Max. (ug/L)
	(ug/L)	(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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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
Methoxychlor	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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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
Pentachlorophenol	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
Tributyltin (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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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
Methoxychlor	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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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 Parifoy
 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 CaCO₃): 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:

<i>Lake Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient t (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>		<i>Water Effects Ratio (WER)</i>	
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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT
LIMITATIONS

<i>Parameter</i>	<i>Acute Standard</i>			<i>Daily Avg.</i>	<i>Daily Max.</i>
	<i>(perennial)</i>	<i>WLAa</i>	<i>LTAa</i>		
	<i>(ug/L)</i>			<i>(ug/L)</i>	<i>(ug/L)</i>
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
Tributyltin (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

<i>Parameter</i>	<i>Water and FW Fish</i>		<i>WLAh</i>	<i>LTAh</i>	<i>Daily Avg.</i>	<i>Daily Max.</i>
	<i>(ug/L)</i>	<i>FW Fish Only (ug/L)</i>				
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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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
Methoxychlor	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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

<i>Parameter</i>	<i>70%</i>	<i>85%</i>
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
Pentachlorophenol	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
Tributyltin (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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Barium	23924.250	29050.875
Benzene	59.811	72.627
Benidine	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
Methoxychlor	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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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 CaCO₃): 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:

<i>Stream/River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partitioning Coefficient (K_p)</i>	<i>Dissolved Fraction (C_d/C_t)</i>		<i>Water Effects Ratio (WER)</i>	
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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

<i>Parameter</i>	<i>Acute Standard</i>			<i>Daily</i>	
	<i>(ug/L)</i>	<i>WLAa</i>	<i>LTAa</i>	<i>Avg. (ug/L)</i>	<i>Daily Max. (ug/L)</i>
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
Tributyltin (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

<i>Parameter</i>	<i>Water and FW Fish</i>		<i>FW Fish Only</i>		<i>Daily</i>	
	<i>(ug/L)</i>	<i>(ug/L)</i>	<i>WLAh</i>	<i>LTAh</i>	<i>Avg. (ug/L)</i>	<i>Daily Max. (ug/L)</i>
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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

<i>Parameter</i>	<i>70%</i>	<i>85%</i>
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
Pentachlorophenol	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
Tributyltin (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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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 Equivalentents)	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
Methoxychlor	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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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 CaCO₃): 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:

<i>Stream/River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partitioning Coefficient (K_{po})</i>	<i>Dissolved Fraction (C_d/C_t)</i>		<i>Water Effects Ratio (WER)</i>	
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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	Acute	Chronic	WLAa	WLAc	LTAa	LTAc	Daily	Daily
	Standard	Standard					Avg.	Max.
	(ug/L)	(ug/L)					(ug/L)	(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
Demeton	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
Tributyltin (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	WLAh	LTAh	Daily	Daily
	FW Fish	Only			Avg.	Max.
	(ug/L)	(ug/L)			(ug/L)	(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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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
Methoxychlor	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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

<i>Parameter</i>	<i>70%</i>	<i>85%</i>
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
Pentachlorophenol	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
Tributyltin (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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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
Methoxychlor	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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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 CaCO₃): 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:

<i>Stream/River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partitioning Coefficient (K_{po})</i>	<i>Dissolved Fraction (Cd/Ct)</i>		<i>Water Effects Ratio (WER)</i>	
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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	Acute	Chronic	WLAa	WLAc	LTAA	LTAc	Daily	Daily
	Standard	Standard					Avg.	Max.
	(ug/L)	(ug/L)					(ug/L)	(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
Tributyltin (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	FW Fish	WLAh	LTAh	Daily	Daily
	and FW				Avg.	Max.
	Fish	Only				
	(ug/L)	(ug/L)			(ug/L)	(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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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
Methoxychlor	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

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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

<i>Parameter</i>	<i>70%</i>	<i>85%</i>
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
Pentachlorophenol	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
Tributyltin (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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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
Methoxyelol	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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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.

Pollutant	Existing TPDES Permit Limits		Water Quality-Based Effluent Limits		Technology-Based Effluent Limits		Proposed TPDES Permit Limits		Basis of Limit
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.	
<u>Outfall 002</u>									
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
<u>Outfall 102</u>									
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
<u>Outfall 202</u>									
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	1.0 mg/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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

	Existing TPDES Permit Limits		Water Quality-Based Effluent Limits		Technology-Based Effluent Limits		Proposed TPDES Permit Limits		
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
<u>Outfall 302</u>									
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
<u>Outfall 003</u>									
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
<u>Outfall 004</u>									
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
<u>Outfall 104</u>									
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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

	Existing TPDES Permit Limits		Water Quality-Based Effluent Limits		Technology-Based Effluent Limits		Proposed TPDES Permit Limits		
<u>Outfall 005</u>									
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
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
<u>Outfall 006</u>									
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

¹TRC = Total Residual Chlorine

²TSS = Total Suspended Solids

³BOD₅ = Biochemical oxygen demand, 5-day

⁴lb/d = Pounds per day.

⁵ WBL = Water Quality-Based Limit

⁶ TBL = Technology-Based Limit

Compliance History Report

Customer/Respondent/Owner-Operator: CN600126767 Southwestern Electric Power Company

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 #	33240
	(SWR)	
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 02, 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 02, 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)

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