



TPDES PERMIT NO. WQ0002430000  
[For TCEQ office use only -  
EPA I.D. No. TX0082651]

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

This is a renewal of TDES Permit  
No. WQ0002430000, issued on  
October 22, 2004.

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

NRG Texas Power LLC

whose mailing address is

1301 McKinney Street, Suite 2300  
Houston, Texas 77010

is authorized to treat and discharge wastes from Limestone Steam Electric Generating Station (SIC 4911)

located adjacent to and west of Farm-to-Market Road 39, approximately 2.5 miles southeast of the City of Farrar, Limestone County, Texas

via Outfalls 001, 003, and 006 to original channel of Lynn Creek; via Outfalls 002, 007, and 008 to relocated channel of Lynn Creek; via Outfall 004 and Outfall 005 to unnamed tributaries of Lambs Creek; and from all outfalls thence to Lambs Creek; thence to Lake Limestone in Segment No. 1252 of the Brazos 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 December 1, 2013.

ISSUED DATE:

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For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge low volume wastewater; cooling tower blowdown, lignite pile runoff and bottom ash transport water subject to the following effluent limitations:

The daily maximum flow of effluent shall not exceed 2.304 million gallons per day (MGD).

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements		
	Daily Average lbs/day (mg/L)	Daily Maximum lbs/day (mg/L)	Single Grab mg/L	Report Daily Average and Measurement Frequency	Daily Maximum	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*3)		Estimate
Total Suspended Solids	N/A	N/A	100	1/week (*3)		Grab
Oil and Grease	N/A	N/A	20	1/week (*3)		Grab
Free Available Chlorine (*1)	0.2	N/A	0.5	1/week (*3)		Grab
Temperature (°F) (*1) (*2)	N/A	N/A	(93)	1/day (*3)		In-Situ
Selenium, Total (*4)	0.30	0.64	0.0332	2/month (*3)		Grab
Selenium, Total (*5)	0.086	0.182	0.00949	2/month (*3)		Grab
Copper, Total	N/A	N/A	(Report)	1/week (*3)		Grab

- (\*1) Parameter applies only to cooling tower blowdown. Monitoring and analytical requirements apply only when discharging cooling tower blowdown.
- (\*2) See Other Requirements, Item 9.
- (\*3) When discharge occurs.
- (\*4) Beginning upon permit issuance and lasting three years from permit issuance date. See Other Requirements, Item 16.
- (\*5) Beginning three years from permit issuance date and lasting through permit expiration.

2. The pH shall not be less than 6.0 standard units nor 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(s): At Outfall 001, where ponded wastewaters discharge to Lynn Creek prior to mixing with other waters.

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 material handling area runoff, washdown and bottom ash transport water, and low volume wastewater subject to the following effluent limitations:

Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations		Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/occurrence (*1) Estimate
Total Suspended Solids	N/A	N/A	50	1/occurrence (*1) Grab
Oil and Grease	N/A	N/A	20	1/occurrence (*1) Grab
Dissolved Oxygen	N/A	N/A	5.0 (min)	1/occurrence (*1) Grab
Selenium, Total	0.87	1.83	0.0356	1/occurrence (*1) Grab

- (\*1) Samples shall be taken within one hour after discharge begins, during normal working hours when discharge occurs.
- The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/occurrence (\*1) by grab sample.
- There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
- Effluent monitoring samples shall be taken at the following location(s): At Outfall 002, where ponded wastewaters discharge to Lynn Creek prior to mixing with any 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 bottom ash transport water, low volume wastewater, and storm water runoff subject to the following effluent limitations:

The daily maximum flow shall not exceed 0.51 millions gallons per day (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 (*1)    Estimate
Total Suspended Solids	30	100	100	1/week (*1)    Grab
Oil and Grease	15	20	20	1/week (*1)    Grab

(\*1) When discharge occurs.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week (\*1) 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(s): At Outfall 003, where effluent discharges from the floor drainage treatment system prior to mixing with any other waters.

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 bottom ash transport water, low volume wastewater, and storm water runoff subject to the following effluent limitations:

The daily maximum flow of effluent shall not exceed 0.432 million gallons per day (MGD).

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Measurement Frequency	Daily Maximum Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*1)	Estimate
Total Suspended Solids	N/A	N/A	100	1/week (*1)	Grab
Oil and Grease	N/A	N/A	20	1/week (*1)	Grab
Total Dissolved Solids	N/A	N/A	3000	1/year (*1)	Grab
Selenium, Total (*2)	0.06	0.12	0.0332	2/month (*1)	Grab
Selenium, Total (*3)	0.016	0.034	0.00949	2/month (*1)	Grab

(\*1) When discharge occurs.

(\*2) Beginning upon permit issuance and lasting three years from permit issuance date. See Other Requirements, Item 16.

(\*3) Beginning three years from permit issuance date and lasting through permit expiration.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day (\*1) 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(s): At Outfall 004, where treated effluent is discharged from the treatment system prior to mixing with any other waters.

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 low volume wastewater, metal cleaning waste, bottom ash transport water, and utility wastewater subject to the following effluent limitations:

The daily maximum flow of effluent shall not exceed 0.216 million gallons per day (MGD).

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements		
	Daily Average lbs/day (mg/L)	Daily Maximum lbs/day (mg/L)	Single Grab mg/L	Report Daily Average and Measurement Frequency	Daily Maximum	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*2)	Estimate	
Total Suspended Solids	N/A	N/A	100	1/week (*2)	Grab	
Oil and Grease	N/A	N/A	20	1/week (*2)	Grab	
Iron, Total (*1)	N/A	N/A	1.0	1/week (*2)	Grab	
Copper, Total (*1)(*3)	N/A	N/A	0.0576	1/week (*2)	Grab	
Copper, Total (*1)(*4)	N/A	N/A	0.0547	1/week (*2)	Grab	
Selenium, Total (*3)	0.30	0.06	0.0332	2/month (*2)	Grab	
Selenium, Total (*4)	0.0081	0.017	0.00949	2/month (*2)	Grab	

(\*1) When discharging metal cleaning wastes.

(\*2) When discharge occurs.

(\*3) Beginning upon permit issuance and lasting three years from permit issuance date. See Other Requirements, Item 16.

(\*4) Beginning three years from permit issuance date and lasting through permit expiration.

2. The pH shall not be less than 6.0 standard units nor 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(s): At Outfall 005, where treated effluent is discharged from the treatment system prior to mixing with any other waters.

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 treated domestic wastewater subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 0.06 million gallons per day (MGD). The daily maximum flow shall not exceed 0.09 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)	(Report)	(Report)	N/A	1/day (*1) Estimate
Total Suspended Solids	7.5	60	60	1/week (*1) Grab
Biochemical Oxygen Demand (5-day)	5	35	35	1/week (*1) Grab
Dissolved Oxygen	N/A	4.0 (min)	4.0 (min)	1/week (*1) Grab

(\*1) When discharge occurs.

2. The effluent shall contain chlorine residual of at least 1.0 mg/L and a maximum chlorine residual of 4.0 mg/L after a detention of at least 20 minutes (based on peak flow), and shall be monitored 1/day (\*1), by grab sample. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week (\*1) by grab sample.

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

5. Effluent monitoring samples shall be taken at the following location(s): At Outfall 006, where treated effluent is discharged from the treatment system prior to mixing with any other waters.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 007

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

The daily average flow of effluent shall not exceed 0.003 million gallons per day (MGD). The daily maximum flow shall not exceed 0.006 MGD.

Effluent Characteristics	Discharge Limitations		Minimum Self-Monitoring Requirements	
	Daily Average lbs/day (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 (*1) Estimate
Total Suspended Solids	0.38	60	60	1/week (*1) Grab
Biochemical Oxygen Demand (5-day)	10	35	35	1/week (*1) Grab
Dissolved Oxygen	N/A	4.0 (min)	4.0 (min)	1/week (*1) Grab

(\*1) When discharge occurs.

2. The effluent shall contain chlorine residual of at least 1.0 mg/L and a maximum chlorine residual of 4.0 mg/L after a detention of at least 20 minutes (based on peak flow), and shall be monitored 1/day (\*1), by grab sample. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week (\*1) 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(s): At Outfall 007, where treated effluent is discharged from the treatment system prior to mixing with any other waters.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 008

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

The daily maximum flow shall not exceed 0.072 million gallons per day (MGD).

Effluent Characteristics	Discharge Limitations		Minimum Self-Monitoring Requirements		
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow (MGD)	(Report)	(Report)	N/A	1/day (*1)	Estimate
Total Suspended Solids	N/A	N/A	100	1/week (*1)	Grab
Oil and Grease	N/A	N/A	20	1/week (*1)	Grab
Selenium, Total	0.01	0.02	0.0356	2/month (*1)	Grab

(\*1) When discharge occurs.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week (\*1) 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(s): At Outfall 008, where commingled wastewater is discharged from the floor drainage treatment system prior to mixing with any other waters.

**DEFINITIONS AND STANDARD PERMIT CONDITIONS**

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

**1. Flow Measurements**

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder, and limited to major domestic wastewater discharge facilities with a one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

**2. Concentration Measurements**

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
  - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.
  - ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day.

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

- e. Bacteria concentration (Fecal coliform, E. coli, or Enterococci) - the number of colonies of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or

computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements of made in a calendar month. For any measurement of bacteria equaling zero, a substitute value of one shall made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.

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).

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 Land Application 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 9, 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 9 and the Enforcement Division (MC 224):

<u>POLLUTANT</u>	<u>MAL (mg/L)</u>
Chromium (Total)	0.010
Copper (Total)	0.010
Selenium (Total)	0.010
Zinc (Total)	0.005

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 water from the flue gas desulphurization system.
3. There shall be no discharge of polychlorinated biphenyl transformer fluid.
4. DEFINITIONS

- a. The term "free available chlorine" shall mean the value obtained using the amperometric titration method for free available chlorine described in "Standard Methods for the Examination of Water and Wastewater".

Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may be discharge free available or total residual chlorine at any one time unless the permittee can demonstrate to the TCEQ that the units in a particular location cannot operate at or below the limitations specified in this permit.

- b. The term "metal cleaning waste" means any wastewater resulting from cleaning (with or without chemical compound) any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.
- c. The term "area runoff" means the discharges resulting from material storage runoff. The term "material storage runoff" means the rainfall runoff or through any coal, ash, or other material storage pile.
- d. Any untreated overflow from facilities designed, constructed operated to treat the volume of "material storage runoff" which is associated with a 10-year, 24-hour rainfall event shall not be subject to the limitations specified (for area runoff) in this permit.

The term "10-year, 24-hour rainfall event" shall mean a rainfall event with the probable reoccurrence 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 probability information developed therefrom.

- e. The term "low volume waste sources" means wastewaters from, but not limited to: wet scrubber air pollution control systems, ion exchange water treatment system, water treatment evaporator blowdown, boiler blowdown, laboratory and sampling streams, floor drainage, cooling tower basin cleaning wastes, and recirculating house service water systems. Sanitary and air conditioning wastes are not included.
  - f. The term "ash transport water" shall mean water used in the transport of either fly ash or bottom ash.
  - g. The term "blowdown" means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practices.
5. This provision supersedes and replaces Provision 1, Paragraph 1 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 25<sup>th</sup> 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 from, Discharges Monitoring Report (DMR) Form EPA No. 3320-1, signed and certified as required by Monitoring and Reporting Requirements No. 10.

- 6. There is no mixing zone established for discharges via Outfalls 001, 002, 003, 004, 005, and 008 to an intermittent stream. Acute toxic criteria apply at the point of discharge.
- 7. The domestic sewage plant (Outfalls 006 and 007) shall be operated and maintained by a wastewater treatment plant operator holding a valid certificate of competency. The certificate of competency for the operator shall be a Class C certificate or higher for Outfall 006 and Class D or higher for Outfall 007 in accordance with 30 TAC §30.350.
- 8. Rainfall runoff from the Class III Landfill shall not exceed a concentration of 4.0 mg/L for total barium based on a grab sample.

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

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

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

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

10. The following Best Management Practices shall be implemented by the permittee:
- a. The use of sodium bromide or any other bromide based chemical compound in the cooling tower circulation system is prohibited.
  - b. The following information for any new chemical to be used in the cooling tower circulation system shall be submitted to the Water Quality Assessment Team (MC-150) of the Water Quality Division at least 30 days prior to use in the cooling tower circulation system:
    - (1) the technical name, trade name, active ingredient(s), and the CAS number(s);
    - (2) the intended dosage rate and anticipated effluent concentration;
    - (3) the manufacturer's toxicological data, if available, and other toxicity studies, if available; and
    - (4) persistence and bioaccumulative characteristics, if available.
11. The 126 priority pollutants (Appendix A of 40 CFR Part 423) contained in chemicals added for cooling tower maintenance, except chromium and zinc, shall be limited in the discharge to "no detectable amount". If used, total chromium shall be limited to 0.2 mg/l maximum at any time and total zinc shall be limited to 0.40 mg/l at any time. The use of other chemical additives, including phosphorous, is not authorized unless approval is obtained and limitations are established on a case-by-case basis in accordance with Part 122.62(a) and Other Requirement Provision No. 13 of this permit.
12. Upon commencement of wastewater discharge via Outfalls 001, 002, 003, 004, 005, 006, 007, and/or 008, the wastewater shall be sampled and analyzed for those parameters listed on Tables 1 and 2 of Attachment A of this permit for a minimum of four (4) separate sampling events which are a minimum of one (1) week apart for Table 1 and a minimum of one (1) sampling event for Table 2. Tables 1 and 2 shall be completed with the analytical results for each outfall and sent to TCEQ, Wastewater Permitting Section (MC-148), Industrial Team within 180 days of the final sampling event for each outfall. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations and/or monitoring requirements.
13. 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 twice per year, the first effluent report shall be submitted six months after the date of permit issuance and subsequent reports every six months thereafter. 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.

14. This requirement is applicable to the treatment and disposal of domestic wastewater (sewage) at Outfalls 006 and 007 only.

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 sludge from the treatment process shall be digested, dewatered and disposed of in accordance with all the applicable rules of the TCEQ. The permittee shall ensure that the disposal of sludge does not cause any contamination of the ground or surface waters in the state. The permittee shall keep records of all sludges removed from the wastewater treatment plant site. Such records 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.

15. The permittee is hereby placed on notice that this permit may be reviewed by the TCEQ after the completion of any new intensive water quality survey on Segment No 1252 of the Bazos River Basin and any subsequent updating of the water quality model for Segment No. 1252, in order to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC Sections 305.62, as a result of such review.

16. The permittee shall comply with the following schedule of activities for the attainment of water quality-based final effluent limitations for total selenium at Outfalls 001, 004, and 005 and total copper at Outfall 005:

- (a) Determine exceedence cause(s);
- (b) Develop control options;
- (c) Evaluate and select control mechanisms;
- (d) Implement corrective action; and
- (e) Attain final effluent limitations no later than three years from the date of permit issuance.

The permittee shall submit quarterly progress reports in accordance with the following schedule. The requirement to submit quarterly progress reports shall expire three years from the date of permit issuance.

PROGRESS REPORT DATE

January 1  
April 1  
July 1  
October 1

The quarterly progress reports shall include a discussion of the interim requirements that have been completed at the time of the report and shall address the progress towards attaining the water quality-based final effluent limitations for total selenium at Outfalls 001, 004 and 005, and total copper at Outfall 005, no later than three years from the date of permit issuance.

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date. Any reports of noncompliance shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

All reports shall be submitted to the Region 9 Office and to the Enforcement Division (MC 224) of the TCEQ.

ATTACHMENT A

TABLE 1

Outfall No.:	<input type="checkbox"/> C <input type="checkbox"/> G	Effluent Concentration (mg/l)				
		Samp. 1	Samp. 2	Samp. 3	Samp. 4	Average
Pollutants						
BOD (5-day)						
CBOD (5-day)						
Chemical Oxygen Demand						
Total Organic Carbon						
Ammonia Nitrogen						
Total Suspended Solids						
Nitrate Nitrogen						
Total Organic Nitrogen						
Total Phosphorus						
Oil and Grease						
Total Residual Chlorine						
Total Dissolved Solids						
Sulfate						
Chloride						
Fluoride						
Fecal Coliform						
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

TABLE 2

Outfall No.:	□C □G	Effluent Concentration (µg/l) (*1)					MAL (µg/l)
		Samp. 1	Samp. 2	Samp. 3	Samp. 4	Average	
Pollutants							
Benzene							10
Benzidine							50
Benzo(a)anthracene							10
Benzo(a)pyrene							10
Carbon Tetrachloride							10
Chlorobenzene							10
Chloroform							10
Chrysene							10
Cresols							(*2)
Dibromochloromethane							10
1,2-Dibromoethane							2
1,4-Dichlorobenzene							10
1,2-Dichloroethane							10
1,1-Dichloroethvlene							10
Fluoride							500
Hexachlorobenzene							10
Hexachlorobutadiene							10
Hexachloroethane							20
Methyl Ethyl Ketone							50
Nitrobenzene							10
n-Nitrosodiethylamine							20
n-Nitroso-di-n-Butylamine							20
PCB's. Total (*3)							1
Pentachlorobenzene							20
Pentachlorophenol							50
Phenanthrene							10
Pvridine							20
1,2,4,5-Tetrachlorobenzene							20
Tetrachloroethvlene							10
Trichloroethvlene							10

1,1,1-Trichloroethane						10
2,4,5-Trichlorophenol						50
TTHM (Total Trihalomethanes)						10
Vinyl Chloride						10

- (\*1) Indicate units if different from µg/l.
- (\*2) MAL's for Cresols: p-Chloro-m-Cresol 10 µg/l; 4,6-Dinitro-o-Cresol 50 µg/l; p-Cresol 10 µg/l
- (\*3) Total of PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, PCB-1016.

CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this Section apply to Outfall 001 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 from the Water Quality Standards Team, 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 and a full report will be submitted to the Water Quality Standards Team
- 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) The Water Quality Standards Team will review test results (i.e., Table 1 and Table 2 forms) for consistency with established TCEQ 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 flow-weighted 24-hour composite samples from Outfall 001. The second and third 24-hour composite samples will be used for the renewal of the dilution concentrations for each toxicity test. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportionally to flow, or a sample continuously collected proportionally to flow over a 24-hour operating day.
- 2) The permittee shall collect the 24-hour 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 24-hour composite sample. The holding time for any subsequent 24-hour 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 001 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 Water Quality Standards Team (MC 150) of the Water Quality Division. All DMRs, including DMRs with biomonitoring data, should be sent to the Enforcement Division (MC 224).

- 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. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TCEQ personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. 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 on the DMR 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 on the DMR 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. The retests shall also be reported on the DMRs as specified in Part 3.d.
- 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 both retests pass, 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/60-0/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 No. 1 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time  
 Composites  
 Collected No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_  
 No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving Water \_\_\_\_\_ Synthetic Dilution Water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent (%)					
	0%	37%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Surviv.						
Total						
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

- Dunnnett'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 001 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 flow-weighted 24-hour composite sample from 001. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow, or a sample continuously collected proportional to flow over a 24-hour operating day.
  - 2) The permittee shall collect the 24-hour 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 24-hour composite sample. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
  - 4) If Outfall 001 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 Water Quality Standards Team (MC 150) of the Water Quality Division. All DMRs, including DMRs with biomonitoring data, should be sent to the Enforcement Division (MC 224).

- 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. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TCEQ personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. 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 on the DMR 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 on the DMR 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. The retests shall also be reported on the DMRs as specified in Part 3.d.
- 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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For proposed Texas Pollutant Discharge Elimination System TPDES Permit No. WQ0002430000, EPA ID No. TX0082651 to discharge to water in the state.

Issuing Office: Texas Commission on Environmental Quality  
P.O. Box 13087  
Austin, Texas 78711-3087

Applicant: NRG Texas Power LLC  
1301 McKinney Street, Suite 2300  
Houston, Texas 77010

Prepared By: Monica Vallin-Baez  
Wastewater Permitting Section  
Water Quality Division  
(512) 239-5784

Date: October 13, 2008 (Revised March 3, 2009 and July 10, 2009)

Permit Action: Renewal; TPDES Permit No. WQ0002430000

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 December 1, 2013 following the requirements of 30 TAC §305.71.

II. APPLICANT ACTIVITY

The applicant currently operates the Limestone Steam Electric Generating Station. The Limestone Steam Electric Generating Station consists of two lignite/coal fired steam electric generating units

III. DISCHARGE LOCATION

As described in the application, the plant site is located adjacent to and west of Farm-to-Market Road 39, approximately 2.5 miles southeast of the City of Farrar, Limestone County, Texas. Discharge is via Outfalls 001, 003, and 006 to original channel of Lynn Creek; via Outfalls 002, 007, and 008 to relocated channel of Lynn Creek; via Outfall 004 and Outfall 005 to unnamed tributaries of Lambs Creek; and from all outfalls thence to Lambs Creek; thence to Lake Limestone in Segment No. 1252 of the Brazos River Basin.

IV. RECEIVING STREAM USES

The unclassified receiving waters have no significant aquatic life use for Lambs Creek, Lynn Creek, and unnamed tributaries of Lambs Creek. The designated uses for Segment No. 1252 are high aquatic life use, contact recreation, and public water supply.

V. STREAM STANDARDS

The general criteria and numerical criteria that make up the stream standards are provided in 30 TAC §§307.1 - 307.10, effective April 30, 1997.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

VI. DISCHARGE DESCRIPTION

The following is a quantitative description of the discharge described in the Monthly Effluent Report data for the period November 2003 through March 2008. 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. (MGD)</u>	<u>Maximum of Daily Max (MGD)</u>
001*	Intermittent	1.171	2.303
002	Intermittent	No Monthly Effluent Report Data	
003	Intermittent	No Monthly Effluent Report Data	
004	Intermittent	No Monthly Effluent Report Data	
005	Intermittent	No Monthly Effluent Report Data	
006	Intermittent	No Monthly Effluent Report Data	
007	Intermittent	No Monthly Effluent Report Data	
008	Intermittent	No Monthly Effluent Report Data	

B. Temperature (degrees F)

<u>Outfall</u>	<u>Daily Avg.</u>	<u>Daily Max</u>
001	N/A	84

C. Effluent Characteristics

<u>Outfall</u>	<u>Parameter</u>	<u>Average of Daily Avg</u>	<u>Maximum of Daily Max</u>
001	Total Suspended Solids	15 mg/L	30 mg/L
	Oil and Grease	5.3 mg/L	10 mg/L
	Free Available Chlorine	0.07 mg/L	0.14 mg/L
	Selenium, Total	19.6 ug/L	34.7 ug/L
		0.31 lbs/day	0.6 lbs/day
	Copper, Total	127 ug/L	187 ug/L
	pH	6.8 S.U. (min)	8.8 S.U. (max)

\*The values for Outfall 001 are from discharges reported on February 2006, March 2006, and April 2006. Based on the information contained in the renewal application received May 21, 2008, the permittee has not discharged from the past two years from these outfalls.

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>
001	Flow (MGD)	(Report)	(2.304)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Free Available Chlorine	0.2 mg/L	0.5 mg/L

## FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

<u>Outfall No</u>	<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
001	Temperature (°F)	N/A	(93)
	Selenium, Total (*1)	0.0157 mg/L	0.0332 mg/L
		0.30 lbs/day	0.64 lbs/day
	Selenium, Total (*2)	0.00448 mg/L	0.00949 mg/L
		0.086 lbs/day	0.182 lbs/day
	Copper, Total	Report, mg/L	Report, mg/L
pH	Between 6.0 and 9.0 standard units.		
002	Flow (MGD)	(Report)	(Report)
	Total Suspended Solids	30 mg/L	50 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Dissolved Oxygen	N/A	5.0 mg/L (min)
	Selenium, Total	0.0168 mg/l	0.0356 mg/L
		0.87 lbs/day	1.83 lbs/day
	pH	Between 6.0 and 9.0 standard units.	
003	Flow (MGD)	(Report)	(Report)
	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.	
004	Flow (MGD)	(Report)	(Report)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Total Dissolved Solids	N/A	3000 mg/L
	Selenium, Total (*1)	0.0157 mg/L	0.0332 mg/L
		0.06 lbs/day	0.12 lbs/day
	Selenium, Total (*2)	0.00448 mg/L	0.00949 mg/L
		0.016 lbs/day	0.034 lbs/day
pH	Between 6.0 and 9.0 standard units.		
005	Flow (MGD)	(Report)	(0.216)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Iron, Total	1.0 mg/L	1.0 mg/L
	Copper, Total (*1)	0.0272 mg/L	0.0576 mg/L
	Copper, Total (*2)	0.0259 mg/L	0.0547 mg/L
	Selenium, Total (*1)	0.0157 mg/L	0.0332 mg/L
		0.03 lbs/day	0.06 lbs/day
	Selenium, Total (*2)	0.00448 mg/L	0.00949 mg/L
		0.0081 lbs/day	0.017 lbs/day
	pH	Between 6.0 and 9.0 standard units.	

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

<u>Outfall No</u>	<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>	
006	Flow (MGD)	(0.06)	(0.09)	
	Total Suspended Solids	15 mg/L 7.5 lbs/day	60 mg/L N/A	
	Biochemical Oxygen Demand (5-day)	10 mg/L 5 lbs/day	35 mg/L N/A	
	Dissolved Oxygen	N/A	4 mg/L (min)	
	Total Chlorine Residual	1.0 mg/L (min)	4.0 mg/L (max)	
	pH	Between 6.0 and 9.0 standard units.		
	007	Flow (MGD)	(0.003)	(0.006)
		Total Suspended Solids	15 mg/L 0.38 lbs/day	60 mg/L N/A
Biochemical Oxygen Demand (5-day)		10 mg/L 0.25 lbs/day	35 mg/L N/A	
Dissolved Oxygen		N/A	4.0 (min)	
pH		Between 6.0 and 9.0 standard units.		
008		Flow (MGD)	(Report)	(0.072)
		Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L	
	Selenium, Total	0.0168 mg/L	0.0356 mg/L	
	pH	Between 6.0 and 9.0 standard units.		

- (\*1) Beginning upon permit issuance and lasting three years from the permit issuance date.
- (\*2) Beginning three years from the permit issuance date and lasting through the date of permit expiration.

VIII. SUMMARY OF CHANGES FROM APPLICATION

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

1. The calculated water quality-based effluent limitations for Outfall 001, 003, 004, and 005 are more stringent for total selenium and total copper. Therefore, the more stringent effluent limitations have been established in the draft permit for the protection of aquatic life. An interim three-year compliance period has been included in the draft permit for total selenium at Outfalls 001, 004, and 005 and total copper at Outfall 005 in accordance with 30 TAC § 307.2(f) and 40 CFR § 122.47.
2. The chronic critical dilution for Outfalls 001, 003, 004, and 005 has been changed from 15% to 100% based on new sources and recommendations from the Water Quality Assessment Section.

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

## FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

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

1. Based on a Transfer of Ownership submitted to TCEQ on August 9, 2007 and in accordance with 30 Texas Administrative Code Section 305.64, the name and address was changed from NRG Texas LP to NRG Texas Power LLC, 1301 McKinney Street, Suite 2300, Houston, Texas 77010-3035.
2. The Standard Permit Conditions (pages 3-11), Other Requirements and Biomonitoring sections of the draft permit have been updated based on current TCEQ practices and policies.
3. Added definitions in the Other Requirements that are applicable to the discharges of this draft permit. Other Requirements have been re-numbered.

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.

A. REASON FOR PERMIT ISSUANCE

The applicant has applied to the TCEQ for a renewal of Permit No. WQ0002430000, that authorizes the discharge of low volume wastewater, cooling tower blowdown, lignite pile runoff and bottom ash transport at a daily maximum flow not to exceed 2,304,000 gallons per day via Outfall 001; handling area runoff, washdown and bottom ash transport water, and low volume wastewater on an intermittent and flow variable basis via Outfall 002; bottom ash transport water, low volume wastewater, and storm water runoff at a daily maximum flow not to exceed 510,000 gallons per day via Outfall 003; bottom ash transport water, low volume wastewater, and storm water runoff at a daily maximum flow not to exceed 432,000 gallons per day via Outfall 004; low volume wastewater, metal cleaning waste, bottom ash transport water, and utility wastewater at a daily maximum flow not to exceed 216,000 gallons per day via Outfall 005; treated domestic wastewater at a daily average flow not to exceed 60,000 gallons per day via Outfall 006; treated domestic wastewater at a daily average flow not to exceed 3,000 gallons per day via Outfall 007; and bottom ash transport water and low volume wastewater not to exceed a daily maximum flow of 72,000 gallons per day via Outfall 008.

B. WATER QUALITY SUMMARY

The discharge route is via Outfalls 001, 003, and 006 to original channel of Lynn Creek; via Outfalls 002, 007, and 008 to relocated channel of Lynn Creek; via Outfall 004 and Outfall 005 to unnamed tributaries of Lambs Creek; and from all outfalls thence to Lambs Creek; thence to Lake Limestone in Segment No. 1252 of the Brazos River Basin. The unclassified receiving waters have no significant aquatic life use for Lambs Creek, Lynn Creek, and unnamed tributaries of Lambs Creek. The designated uses for Segment No. 1252 are high aquatic life use, contact recreation, and public water supply. Effluent limitations and/or 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.

## 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 threaten species.

Segment No. 1252 is not currently listed on the State's inventory of impaired and threatened waters, Texas 2006 Clean Water Act Section 303(d) list.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS1. 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, and/or on best professional judgment (BPJ) in the absence of guidelines.

The proposed draft permit authorizes the discharge of low volume wastewater, cooling tower blowdown, lignite pile runoff, and bottom ash transport water at a daily maximum flow not to exceed 2.304 million gallons per day via Outfall 001; material handling area runoff, washdown and bottom ash transport water, and low volume wastewater on an intermittent and flow variable basis via Outfall 002; bottom ash transport water, low volume wastewater, and storm water runoff at a daily maximum flow not to exceed 510,000 gallons per day via Outfall 003; bottom ash transport water, low volume wastewater, and storm water runoff at a daily maximum flow not to exceed 432,000 gallons per day via Outfall 004; low volume wastewater, metal cleaning waste, bottom ash transport water, and utility wastewater at a daily maximum flow not to exceed 216,000 gallons per day via Outfall 005; treated domestic wastewater at a daily average flow not to exceed 60,000 gallons per day via Outfall 006; treated domestic wastewater at a daily average flow not to exceed 3,000 gallons per day via Outfall 007; and bottom ash transport water and low volume wastewater not to exceed a daily maximum flow of 72,000 gallons per day via Outfall 008.

The discharge of low volume wastewater, cooling tower blowdown, lignite pile runoff, and bottom ash transport water via Outfall 001; washdown and bottom ash transport water, and low volume wastewater via Outfall 002; bottom ash transport water and low volume wastewater via Outfall 003; bottom ash transport water and low volume wastewater via Outfall 004; low volume wastewater, metal cleaning waste, bottom ash transport water via Outfall 005; bottom ash transport water and low volume wastewater via Outfall 008 from this facility is subject to federal effluent limitation guidelines at 40 CFR 423-Stein Electric Power Generating Point Source Category. The discharge of domestic wastewater via Outfall 006 and 007 from this facility is subject to federal effluent limitations guidelines at 40 CFR 133-Secondary Treatment Regulatory and 30 TAC 309.4-Domestic Wastewater Treatment Limitations. A new source determination was performed and the discharge of low volume wastewater, cooling tower blowdown, lignite pile runoff, bottom ash transport water, washdown and bottom ash transport water, metal cleaning waste, and treated domestic wastewater is not a new source as defined at 40 CFR §122.2.

## FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Therefore new source performance standards (NSPS) are not required for this discharge.

The discharge of material handling area runoff via Outfall 002, storm water runoff via Outfalls 003 and 004, and utility wastewater via Outfall 005 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment.

The wastewater system at this facility consists of:

- Outfall 001: Low volume wastewater, cooling tower blowdown, lignite pile runoff, and bottom ash transport water is collected in a retention pond for treatment by sedimentation and equalization where is then either routed through a clarifier and discharged to Lynn Creek or returned to the cooling water system.
- Outfall 002: Material handling area runoff, washdown bottom ash transport water, and low volume wastewater is collected in a sedimentation pond for the removal of solids and equalization and is then either discharged to Lynn Creek or is returned to the Flue Gas Desulphurization (FGD) system for reuse.
- Outfall 003: Low volume wastewater, bottom ash transport water, and storm water runoff are routed to an API separator and a Dissolved Air Flootation Unit for treatment and then is either discharged to Lynn Creek or is routed back to the storm water treatment system for further treatment or returned to the cooling water system.
- Outfall 004: Low volume wastewater, bottom ash transport water, and storm water runoff is collected and routed through a chemical waste equalization basin, a course pH adjustment tank, and a fine pH adjustment tank for treatment prior to either discharge to Lynn Creek or returning wastewaters to the FGD system or the bottom ash transport system.
- Outfall 005: Low volume wastewater, metal cleaning waste, bottom ash transport water, and utility wastewater is collected in an Inorganic Chemical (IC) retention basin and then routed to a caustic addition tank, and IC clarifier, IC cleanwater pH adjustment tanks, and IC sand filters for treatment and is then either discharged to an unnamed tributary of Lynn Creek or is returned to the FGD system or the bottom ash transport system.
- Outfall 006: Domestic wastewater is collected in a surge pit and then routed through an aeration basin, a clarifier, a slot settler, a sand filter, and a chlorine contact chamber for treatment prior to either discharge to Lynn Creek or the return to the FGD system.
- Outfall 007: Domestic wastewater is collected in a surge pit and then routed through an aeration basin, a clarifier, a slot settler, a sand filter, and a chlorine contact chamber for treatment prior to either discharge to Lynn Creek or the return to the FGD system.
- Outfall 008: Low volume wastewater and bottom ash transport water us routed to an API separator and a Dissolved Air Flootation Unit for treatment prior to discharge to Lynn Creek.

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2. CALCULATIONS

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

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 insure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to insure 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.

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 and/or conditions 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.

2. AQUATIC LIFE CRITERIAa. SCREENING

No discharges have been reported for the last two years. The wastewater generated from this facility via Outfalls 001, 002, 003, 004, 005, 006, 007 and 008 is re-used within the facility. Other Requirements in the draft permit requires the permittee to submit analytical data upon discharge of these outfalls. Analytical data reported will be screen with the calculated water quality-based effluent limitations (See Appendix B) and determine if monitoring and reporting and/or effluent limitations need to be added to the draft permit. Water quality-based effluent limitations are calculated from freshwater/marine aquatic life criteria found in Table 1 of the Texas Surface Water Quality Standards (30 TAC Chapter 307).

i.) Outfalls 002 and 008

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 do not apply to discharges to intermittent streams where there is no perennial waterbody within three miles downstream from the point of discharge. The following critical effluent percentage is being used:

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Acute Effluent %: 100%

ii.) Outfalls 001, 003, 004 and 005

There is no mixing zone or zone of initial dilution (ZID) for these discharges directly to an intermittent stream; acute freshwater criteria apply at the end of pipe. Acute and chronic freshwater criteria are applied in the lake or reservoir.

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. TCEQ uses the EPA horizontal jet plume model to estimate the dilution for acute and chronic protection of aquatic life for discharges into sections of lakes and reservoirs that are less than 200 feet wide. General assumptions used in the horizontal jet plume model are: a non-buoyant discharge, a submersed pipe, and no cross flow. The critical effluent percentages are as follows:

Acute Effluent % (stream)	100%
Acute Effluent (lake)	100%
Chronic Effluent % (lake)	100%

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. The LTA is the long-term average effluent concentration for which the WLA will never be exceeded using a selected percentile confidence level. The lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12). Assumptions used in deriving the effluent limitations include segment values for hardness, chlorides, pH and total suspended solids (TSS) according to the segment-specific values contained in the TCEQ guidance document, *Procedures to Implement the Texas Surface Water Quality Standards (IPs)*. The segment values are 66 mg/L CaCO<sub>3</sub> for hardness, 23 mg/L Chlorides, 7.1 standard units for pH, and 4 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.

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b. PERMIT ACTION

No analytical data is available for screening against water quality-based effluent limitations since the facility has not discharged for the last two years. The facility re-uses the wastewater for cooling water systems, FGD System, and/or bottom ash transport system.

The following effluent limitations for total selenium at Outfalls 001, 004, and 005, and total copper at Outfall 005 are more stringent from the existing permit for the protection of aquatic life:

<u>Outfall</u>	<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
001	Selenium, Total	0.00448 mg/L 0.0861 lbs/day	0.00949 mg/L 0.182 lbs/day
004	Selenium, Total	0.00448 mg/L 0.016 lbs/day	0.00949 mg/L 0.034 lbs/day
005	Copper, Total	0.0259 mg/L	0.0547 mg/L
	Selenium, Total	0.00448 mg/L 0.0081 lbs/day	0.00949 mg/L 0.017 lbs/day

An interim three-year compliance period is included in the draft permit for total selenium at Outfalls 001, 004 and 005, and total copper at Outfall 005 in accordance with 30 TAC §307.2(f).

The following effluent limitations are continued from the existing permit for the protection of aquatic life:

<u>Outfall</u>	<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
001	Copper, Total	Report, mg/L	Report, mg/L
002	Dissolved Oxygen	N/A	5.0 mg/L (min)
	Selenium, Total	0.0168 mg/L 0.87 lbs/day	0.0356 mg/L 1.83 lbs/day
006	Dissolved oxygen	N/A	4.0 mg/L (min)
007	Dissolved oxygen	N/A	4.0 mg/L (min)
008	Selenium, Total	0.0168 mg/L 0.01 lbs/day	0.0356 mg/L 0.02 lbs/day

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

a. SCREENING

The existing permit includes chronic freshwater biomonitoring requirements at Outfall(s) 001. The permittee conducted three tests for *Ceriodaphnia dubia* and one test for

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*Pimephales promelas* at Outfall 001 during the last five years, with one demonstration of significant lethality using *Ceriodaphnia dubia* (11% No Observed Effect Concentration, NOEC, 2/11/06). The following 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 001 based on the recommendations on the Interoffice Memorandum dated June 27, 2008, from the Water Quality Standards Team to the Industrial Team.

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:

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

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

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

If the permittee performs four consecutive quarterly tests in which neither test species demonstrates a significant lethality at or below the critical dilution, then the permittee may submit this information in writing and, upon written approval from the Water Quality Standards Team, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.

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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(s) 001. The permittee conducted two tests using *Daphnia pulex* and *Pimephales promelas* at Outfall 001, with no demonstration of significant mortality. 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(s) 001 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:

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

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIAa. SCREENINGi) Outfalls 002 and 008

The discharge point is located at a distance greater than three miles upstream of perennial waters. Human health screening is not applicable because of the distance between the discharge point and perennial waters that support fisheries.

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ii) Outfalls 001, 003, 004 and 005

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 in the lake or reservoir for a discharge to an intermittent stream that enters the lake or reservoir within 3 miles downstream of the discharge point. TCEQ uses the EPA horizontal jet plume model to estimate dilution for discharges into sections of lakes or reservoirs that are less than 200 feet wide. 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:

Human Health Effluent %: 100%

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

No analytical data is available for screening against water quality-based effluent limitations since the facility has not discharged in the last two years. Other Requirements in the draft permit requires the permittee to sample, analyze and submit the analytical upon discharge via Outfalls 001, 002, 003, 004, 005, 006, 007 and 008.

6. DRINKING WATER SUPPLY PROTECTIONa. SCREENING

Water Quality Segment No. 1252, which receives the discharge(s) from this facility, is designated as a public water supply. No analytical data was submitted with the application, since the facility has not discharged for the last two years. Other Requirements in the draft permit requires the permittee to submit analytical data upon the first discharge via Outfalls 001, 002, 003, 004, 005, 006, 007 and 008. Analytical data will than be screened with the calculated water quality-based effluent limitations (See Appendix B) and determine if effluent limits in to be added to the permit for the protection of public water supply.

b. PERMIT ACTION

None.

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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. This notice sets a deadline for public comment.

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.

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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 Monica Vallin-Baez at (512) 239-5784

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(S)

TCEQ Permit No. WQ0002430000 issued on October 22, 2004.

B. APPLICATION

TPDES wastewater permit application received on May 21, 2008.

C. 40 CFR CITATION(S)

40 CFR 423

40 CFR 133

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

TCEQ Interoffice Memorandum dated June 9, 2008, from David Flores, Water Quality Standards Team, Water Quality Assessment Section to Industrial Permits Team (Standards Memo).

TCEQ Interoffice Memorandum dated June 11, 2008, from Kenda Smith, Water Quality Assessment Team, Water Quality Assessment Section to Industrial Permit Team (TEXTOX Memo).

TCEQ Interoffice Memorandum dated June 26, 2008, from James E. Michalk, Water Quality Assessment Team, Water Quality Assessment Section to Industrial Permit Team (Modeling Memo).

TCEQ Interoffice Memorandum dated June 27, 2008, from Michael Pfeil, Water Quality Standards Team, Water Quality Assessment Section to Industrial Permit Team (Biomonitoring Memo).

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 (21 TexReg 9765, 4/40/97), and Appendix E, effective February 27, 2002.

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*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.*

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**Appendix A  
Calculated Technology-Based Effluent Limits**

NRG Texas Power LLC operates the Limestone Electric Generating Station. The Limestone Electric Generating Station consists of two lignite/coal fired electric generating units. The combined generating capacity from the two units is 1803 megawatts.

The Limestone Electric Generating Station is not subject to New Source Performance Standards (NSPS).

The discharge of low volume wastewater, cooling tower blowdown, lignite pile runoff and bottom ash transport water via Outfall 001; material handling area runoff, washdown and bottom ash transport water, and low volume wastewater via Outfall 002; bottom ash transport water, low volume wastewater via Outfall 003; bottom ash transport water, low volume wastewater via Outfall 004; low volume wastewater, metal cleaning waste, bottom ash transport water via Outfall 005; and bottom ash transport water and low volume wastewater via Outfall 008 are subject to effluent limitations guidelines at 40 CFR 423-Steam Electric Generating Services.

The discharge of treated domestic wastewater via Outfalls 006 and 007 are subject to effluent limitations guidelines at 40 CFR 133-Secondary Treatment Regulation and 30 TAC 309.4-Domestic Wastewater Treatment Limitations.

The discharge of material handling area runoff via Outfall 002, storm water runoff via Outfalls 003 and 004, and utility wastewater via Outfall 005 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment.

Outfall 001:

- a. The discharge of low volume wastewater is subject to best practicable control technology (BPT)-40 CFR 423.12(b)(3).

<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

- b. The discharge of cooling tower blowdown is subject to BPT 40 CFR 423.12(b)(7).

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
Free Available Chlorine	0.2 mg/L	0.5 mg/L

- c. The discharge of bottom ash transport water is subject to BPT 40 CFR 423.12(b)(4).

<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

- d. The discharge of lignite pile runoff is subject to BPT 40 CFR 423.12 (b)(9).

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
Total Suspended Solids	N/A	50 mg/L

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The lignite pile runoff is collected in a retention pond for treatment by sedimentation and equalization. Under 40 CFR 423.12(b)(10) states that the overflow from a storm water detention pond designed to treat the runoff from a 10-year, 24 hour storm is not subject to the limitations in 40 CFR 423.12(b)(9).

- e. Effluent Limitations for pH are based on BPT 40 CFR 423.12(b)(1). The pH of all discharges, except once through cooling water, shall be within the range of 6.0 and 9.0 standard units (SU).

Technology based limitations included in the permit at Outfall 001 and are continued from existing permit.

<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
Free Available Chlorine	0.2 mg/L	0.5 mg/L
pH	Between 6.0 and 9.0 S.U.	

Outfall 002:

- a. The discharge of low volume wastewater is subject to best practicable control technology (BPT)-40 CFR 423.12(b)(3).

<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

- b. The discharge of bottom ash transport water is subject to BPT 40 CFR 423.12(b)(4).

<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

- c. Effluent Limitations for pH are based on BPT 40 CFR 423.12(b)(1). The pH of all discharges, except once through cooling water, shall be within the range of 6.0 and 9.0 standard units (SU).

Technology based limitations included in the permit at Outfall 002 and are continued from existing permit.

<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 S.U.	

Outfall 003:

- a. The discharge of low volume wastewater is subject to best practicable control technology (BPT)-40 CFR 423.12(b)(3).

<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

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- b. The discharge of bottom ash transport water is subject to BPT 40 CFR 423.12(b)(4).

<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

- c. Effluent Limitations for pH are based on BPT 40 CFR 423.12(b)(1). The pH of all discharges, except once through cooling water, shall be within the range of 6.0 and 9.0 standard units (SU).

Technology based limitations included in the permit at Outfall 002 and are continued from existing permit.

<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 S.U.	

Outfall 004:

- a. The discharge of low volume wastewater is subject to best practicable control technology (BPT)-40 CFR 423.12(b)(3).

<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

- b. The discharge of bottom ash transport water is subject to BPT 40 CFR 423.12(b)(4).

<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

- c. Effluent Limitations for pH are based on BPT 40 CFR 423.12(b)(1). The pH of all discharges, except once through cooling water, shall be within the range of 6.0 and 9.0 standard units (SU).

Technology based limitations included in the permit at Outfall 002 and are continued from existing permit.

<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 S.U.	

Outfall 005:

- a. The discharge of low volume wastewater is subject to best practicable control technology (BPT)-40 CFR 423.12(b)(3).

<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

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- b. The discharge of bottom ash transport water is subject to BPT 40 CFR 423.12(b)(4).

<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

- c. The discharge of metal cleaning waste is subject to BPT 40 CFR 423.12(b)(5).

<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

The calculated water quality-based effluent limits (APPENDIX B) calculated for total copper are more stringent than the technology based for the protection of aquatic life. Therefore, effluent limits for total copper established in the draft permit are based on water-quality and are continued from the existing permit.

- d. Effluent Limitations for pH are based on BPT 40 CFR 423.12(b)(1). The pH of all discharges, except once through cooling water, shall be within the range of 6.0 and 9.0 standard units (SU).

Technology based limitations included in the permit at Outfall 005 and are continued from existing permit.

<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
Iron, Total	1.0 mg/L	1.0 mg/L
pH	Between 6.0 and 9.0 S.U.	

Outfalls 006 and 007

- a. The discharge of treated domestic wastewater is subject to 40 CFR 133.102-Secondary Treatment Regulation and 30 TAC 309-Domestic Wastewater Effluent Limitations.

<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
Biochemical Oxygen Demand (5-day)	10 mg/L	35 mg/L
Total Suspended Solids	15 mg/L	60 mg/L
pH	Between 6.0 and 9.0 S.U.	

- b. The effluent shall contain a chlorine residual of at least 1.0 mg/L and shall not exceed a chlorine residual of 4.0 mg/L after a detention time of at least 20 minutes (based on peak flow), and shall be monitored daily, when discharging domestic wastewater, by grab sample. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

Technology based limitations included in the permit at Outfalls 006 and 007 and are continued from existing permit.

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<u>Parameter</u>	<u>Daily Average</u>	<u>Daily Maximum</u>
Biochemical Oxygen Demand (5-day)	10 mg/L	35 mg/L
Total Suspended Solids	15 mg/L	60 mg/L
Chlorine Residual	1.0 mg/L (min)	4.0 mg/L (max)
pH	Between 6.0 and 9.0 S.U.	

Outfall 008:

- a. The discharge of low volume wastewater is subject to best practicable control technology (BPT)-40 CFR 423.12(b)(3).

<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

- b. The discharge of bottom ash transport water is subject to BPT 40 CFR 423.12(b)(4).

<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

- c. Effluent Limitations for pH are based on BPT 40 CFR 423.12(b)(1). The pH of all discharges, except once through cooling water, shall be within the range of 6.0 and 9.0 standard units (SU).

Technology based limitations included in the permit at Outfall 008 and are continued from existing permit.

<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 S.U.	

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

**Appendix B**  
**Calculated Water Quality-Based Effluent Limits**

**TEXTOX MENU #8 - INTERMITTENT STREAM WITHIN 3 MILES OF A LAKE OR RESERVOIR**

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

Table 1, 1997 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: NRG Texas Power LLC  
 TPDES Permit No: WQ0002430000  
 Outfall No: 001 and 003  
 Prepared by: Monica Baez  
 Date: October 10, 2008

**DISCHARGE INFORMATION:**

Immediate Receiving Waterbody: Lynn Creek  
 TSS (immediate): 4  
 pH (immediate): 7.1  
 Hardness (immediate): 66  
 Chloride (immediate): 23  
 Effluent Flow for Aquatic Life (MGD): <10  
 Percent Effluent for Zone of Initial Dilution: 100  
 Perennial Receiving Waterbody: Lake Limestone  
 Segment No.: 1252  
 TSS (perennial): 4  
 pH (perennial): 7.1  
 Hardness (perennial): 66  
 Chloride (perennial): 23  
 Percent Effluent for Mixing Zone: 100  
 Percent Effluent for Zone of Initial Dilution: 100  
 Effluent Flow for Human Health (MGD): <10  
 Percent Effluent for Human Health: 100  
 Public Water Supply Use?: yes

**CALCULATE TOTAL/DISSOLVED RATIO:**

<i>Stream/River Metal</i>	<i>Intercept (h)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Water Effects Ratio (WER)</i>	
Aluminum	N/A	N/A	N/A	1.00	Assumed	Assumed
Arsenic	5.68	-0.73	173978.75	0.59		Assumed
Cadmium	6.6	-1.13	831136.22	0.23		Assumed
Chromium (Total)	6.52	-0.93	912187.69	0.22		Assumed
Chromium (+3)	6.52	-0.93	912187.69	0.22		Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	Assumed
Copper	6.02	-0.74	375383.87	0.40		Assumed
Lead	6.45	-0.8	929719.64	0.21		Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	Assumed
Nickel	5.69	-0.57	222241.83	0.53		Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	Assumed
Silver	6.38	-1.03	575278.59	0.30		Assumed

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

	6.1	-0.7	477043.53	0.34		1.00	Assumed
<i>Lake Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (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	173978.75	0.59		1.00	Assumed
Cadmium	6.55	-0.92	991071.09	0.201		1.00	Assumed
Chromium (Total)	6.34	-0.27	1504678.80	0.14		1.00	Assumed
Chromium (+3)	6.34	-0.27	1504678.80	0.14		1.00	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.9	809367.96	0.24		1.00	Assumed
Lead	6.31	-0.53	979282.98	0.20		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	762841.67	0.25		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	575278.59	0.30		1.00	Assumed
Zinc	6.52	-0.68	1290028.21	0.16		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

<i>Parameter</i>	<i>Acute Standard (immediate) (ug/L)</i>	<i>Acute Standard (perennial) (ug/L)</i>	<i>Chronic Standard (ug/L)</i>	<i>WLAa (immediate)</i>	<i>WLAa (perennial)</i>	<i>WLAc</i>	<i>LTAa (immediate)</i>	<i>LTAa (perennial)</i>	<i>LTAc</i>	<i>Daily Avg. (ug/L)</i>	<i>Daily Max. (ug/L)</i>
Aldrin	3	3	N/A	3.00	3.00	N/A	1.72	0.96	N/A	1.41	2.99
Aluminum (d)	991	991	N/A	991.00	991.00	N/A	567.84	317.12	N/A	466.17	986.24
Arsenic (d)	360	360	190	610.53	610.53	322.22	349.83	195.37	196.56	287.19	607.60
Cadmium (d)	21.084	21.084	0.818	91.18	104.67	4.06	52.25	33.49	2.48	3.64	7.71
Carbaryl	2	2	N/A	2.00	2.00	N/A	1.15	0.64	N/A	0.94	1.99
Chlordane	2.4	2.4	0.0043	2.40	2.40	0.00	1.38	0.77	0.00	0.00	0.01
Chlorpyrifos	0.083	0.083	0.041	0.08	0.08	0.04	0.05	0.03	0.03	0.04	0.08
Chromium (+3) (d)	1235.619	1235.619	147.279	5744.08	8672.46	1033.71	3291.36	2775.19	630.56	926.93	1961.05
Chromium (+6) (d)	16.000	16.000	11	16.00	16.00	11.00	9.17	5.12	6.71	7.53	15.92
Copper (d)	12.976	12.976	8.972	32.46	54.98	38.02	18.60	17.60	23.19	25.86	54.72
Cyanide (free)	45.78	45.78	10.69	45.78	45.78	10.69	26.23	14.65	6.52	9.59	20.28
4,4'-DDT	1.1	1.1	0.001	1.10	1.10	0.00	0.63	0.35	0.00	0.00	0.00
Dementon	N/A	N/A	0.1	N/A	N/A	0.10	N/A	N/A	0.06	0.09	0.19
Dicofol	59.3	59.3	19.8	59.30	59.30	19.80	33.98	18.98	12.08	17.75	37.56
Dieldrin	2.5	2.5	0.0019	2.50	2.50	0.00	1.43	0.80	0.00	0.00	0.00
Diuron	210	210	70	210.00	210.00	70.00	120.33	67.20	42.70	62.77	132.80
Endosulfan I (alpha)	0.22	0.22	0.056	0.22	0.22	0.06	0.13	0.07	0.03	0.05	0.11
Endosulfan II (beta)	0.22	0.22	0.056	0.22	0.22	0.06	0.13	0.07	0.03	0.05	0.11
Endosulfan sulfate	0.22	0.22	0.056	0.22	0.22	0.06	0.13	0.07	0.03	0.05	0.11
Endrin	0.18	0.18	0.0023	0.18	0.18	0.00	0.10	0.06	0.00	0.00	0.00
Guthion	N/A	N/A	0.01	N/A	N/A	0.01	N/A	N/A	0.01	0.01	0.02
Heptachlor	0.52	0.52	0.0038	0.52	0.52	0.00	0.30	0.17	0.00	0.00	0.01
Hexachlorocyclohexane (Lindane)	2	2	0.08	2.00	2.00	0.08	1.15	0.64	0.05	0.07	0.15
Lead (d)	48.107	48.107	1.875	227.01	236.55	9.22	130.08	75.70	5.62	8.27	17.49
Malathion	N/A	N/A	0.01	N/A	N/A	0.01	N/A	N/A	0.01	0.01	0.02
Mercury	2.400	2.400	1.3	2.40	2.40	1.30	1.38	0.77	0.79	1.13	2.39
Methoxychlor	N/A	N/A	0.03	N/A	N/A	0.03	N/A	N/A	0.02	0.03	0.06
Mirex	N/A	N/A	0.001	N/A	N/A	0.00	N/A	N/A	0.00	0.00	0.00
Nickel (d)	997.895	997.895	110.935	1884.99	4042.84	449.44	1080.10	1293.71	274.16	403.01	852.63
Parathion (ethyl)	0.065	0.065	0.013	0.07	0.07	0.01	0.04	0.02	0.01	0.01	0.02
Pentachlorophenol	10.029	10.029	6.331	10.03	10.03	6.33	5.75	3.21	3.86	4.72	9.98
Phenanthrene	30	30	30	30.00	30.00	30.00	17.19	9.60	18.30	14.11	29.86

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Polychlorinated Biphenyls (PCBs)	2	2	0.014	2.00	2.00	0.01	1.15	0.64	0.01	0.01	0.03
Selenium	20	20	5	20.00	20.00	5.00	11.46	6.40	3.05	4.48	9.49
Silver, (free ion)	0.92	0.92	N/A	7.17	7.17	N/A	4.11	2.29	N/A	3.37	7.13
Toxaphene	0.78	0.78	0.0002	0.78	0.78	0.00	0.45	0.25	0.00	0.00	0.00
Tributyltin (TBT)	0.13	0.13	0.024	0.13	0.13	0.02	0.07	0.04	0.01	0.02	0.05
2,4,5 Trichlorophenol	136	136	64	136.00	136.00	64.00	77.93	43.52	39.04	57.39	121.41
Zinc (d)	82.294	82.294	74.537	239.32	506.94	459.16	137.13	162.22	280.09	201.59	426.48

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	Water and FW Fish (ug/L)	FW Fish Only (ug/L)	WLAh	LTAh	Daily Avg. (ug/L)	Daily Max. (ug/L)
Acrylonitrile	1.28	10.9	1.28	1.19	1.75	3.70
Aldrin	0.00408	0.00426	0.00	0.00	0.01	0.01
Arsenic (d)	50	N/A	84.80	78.86	115.92	245.25
Barium (d)	2000	N/A	2000.00	1860.00	2734.20	5784.60
Benzene	5	106	5.00	4.65	6.84	14.46
Benzidine	0.00106	0.00347	0.00	0.00	0.00	0.00
Benzo(a)anthracene	0.099	0.81	0.10	0.09	0.14	0.29
Benzo(a)pyrene	0.099	0.81	0.10	0.09	0.14	0.29
Bis(chloromethyl)ether	0.00462	0.0193	0.00	0.00	0.01	0.01
Cadmium (d)	5	N/A	24.82	23.08	33.93	71.79
Carbon Tetrachloride	3.76	8.4	3.76	3.50	5.14	10.88
Chlordane	0.021	0.0213	0.02	0.02	0.03	0.06
Chlorobenzene	776	1380	776.00	721.68	1060.87	2244.42
Chloroform	100	1292	100.00	93.00	136.71	289.23
Chromiumd	100	3320	701.87	652.74	959.53	2030.02
Chrysene	0.417	8.1	0.42	0.39	0.57	1.21
Cresols	3313	13116	3313.00	3081.09	4529.20	9582.19
Cyanide (free)	200	N/A	200.00	186.00	273.42	578.46
4,4'-DDD	0.0103	0.01	0.01	0.01	0.01	0.03
4,4'-DDE	0.0073	0.007	0.01	0.01	0.01	0.02
4,4'-DDT	0.0073	0.007	0.01	0.01	0.01	0.02
2,4'-D	70	N/A	70.00	65.10	95.70	202.46
Danitol	0.709	0.721	0.71	0.66	0.97	2.05
Dibromochloromethane	9.2	71.6	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)	22.8	161	22.80	21.20	31.17	65.94
Dieldrin	0.00171	0.002	0.00	0.00	0.00	0.00
p-Dichlorobenzene	75	N/A	75.00	69.75	102.53	216.92
1,2-Dichloroethane	5	73.9	5.00	4.65	6.84	14.46
1,1-Dichloroethylene	1.63	5.84	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	1.27	1.34	1.27	1.18	1.74	3.67
Fluoride	4000	N/A	4000.00	3720.00	5468.40	11569.20
Heptachlor	0.0026	0.00265	0.00	0.00	0.00	0.01
Heptachlor Epoxide	0.159	1.1	0.16	0.15	0.22	0.46
Hexachlorobenzene	0.0194	0.0198	0.02	0.02	0.03	0.06
Hexachlorobutadiene	2.99	3.6	2.99	2.78	4.09	8.65
Hexachlorocyclohexane (alpha)	0.163	0.413	0.16	0.15	0.22	0.47
Hexachlorocyclohexane (beta)	0.57	1.45	0.57	0.53	0.78	1.65
Hexachlorocyclohexane (gamma) (Lindane)	0.2	2	0.20	0.19	0.27	0.58
Hexachloroethane	84.2	278	84.20	78.31	115.11	243.53
Hexachlorophene	0.0531	0.053	0.05	0.05	0.07	0.15
Lead (d)	4.98	25.3	24.49	22.77	33.48	70.82

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Mercury	0.0122	0.0122	0.01	0.01	0.02	0.04
Methoxychlor	2.21	2.22	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	1.53E+05
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	10000.00	9300.00	13671.00	28923.00
Nitrobenzene	37.3	233	37.30	34.69	50.99	107.88
N-Nitrosodiethylamine	0.0382	7.68	0.04	0.04	0.05	0.11
N-Nitroso-di-n-Butylamine	1.84	13.5	1.84	1.71	2.52	5.32
PCB's (Polychlorinated Biphenyls)	0.0013	0.0013	0.00	0.00	0.00	0.00
Pentachlorobenzene	6.1	6.68	6.10	5.67	8.34	17.64
Pentachlorophenol	1	135	1.00	0.93	1.37	2.89
Pyridine	88.1	13333	88.10	81.93	120.44	254.81
Selenium	50	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	323	5.00	4.65	6.84	14.46
Toxaphene	0.005	0.014	0.01	0.00	0.01	0.01
2,4,5-TP (Silvex)	47	50.3	47.00	43.71	64.25	135.94
2,4,5-Trichlorophenol	953	1069	953.00	886.29	1302.85	2756.36
Trichloroethylene	5	612	5.00	4.65	6.84	14.46
1,1,1-Trichloroethane	200	12586	200.00	186.00	273.42	578.46
TTHM (Sum of Total Trihalomethanes)	100	N/A	100.00	93.00	136.71	289.23
Vinyl Chloride	2	415	2.00	1.86	2.73	5.78

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	70%	85%
<b>Aquatic Life</b>		
Aldrin	0.988	1.200
Aluminum	326.316	396.241
Arsenic	201.035	244.114
Cadmium	2.550	3.097
Carbaryl	0.659	0.800
Chlordane	0.003	0.003
Chlorpyrifos	0.026	0.031
Chromium (+3)	648.848	787.887
Chromium (+6)	5.268	6.397
Copper	18.105	21.985
Cyanide (free)	6.710	8.148
4,4'-DDT	0.001	0.001
Dementon	0.063	0.076
Dicofol	12.428	15.091
Dieldrin	0.001	0.001
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	5.786	7.026
Malathion	0.006	0.008
Mercury	0.790	0.960
Methoxychlor	0.019	0.023
Mirex	0.001	0.001
Nickel	282.109	342.561
Parathion (ethyl)	0.008	0.010

## FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Pentachlorophenol	3.302	4.010
Phenanthrene	9.878	11.995
Polychlorinated Biphenyls (PCBs)	0.009	0.011
Selenium	3.138	3.811
Silver, (free ion)	2.360	2.866
Toxaphene	0.000	0.000
Tributyltin (TBT)	0.015	0.018
2,4,5 Trichlorophenol	40.172	48.780
Zinc	141.110	171.348

*Human Health*

Acrylonitrile	1.225	1.487
Aldrin	0.004	0.005
Arsenic (d)	8114.699	98.536
Barium (d)	1913.940	2324.070
Benzene	4.785	5.810
Benzidine	0.001	0.001
Benzo(a)anthracene	0.095	0.115
Benzo(a)pyrene	0.095	0.115
Bis(chloromethyl)ether	0.004	0.005
Cadmium (d)	23.753	28.843
Carbon Tetrachloride	3.598	4.369
Chlordane	0.020	0.024
Chlorobenzene	742.609	901.739
Chloroform	95.697	116.204
Chromium(d)	671.670	815.599
Chrysene	0.399	0.485
Cresols	3170.442	3849.822
Cyanide (free)	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 (d)	23.434	28.455
Mercury	0.012	0.014

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Methoxycylor	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	84.309	102.375
Selenium	47.849	58.102
1,2,4,5-Tetrachlorobenzene	0.231	0.280
Tetrachloroethylene	4.785	5.810
Toxaphene	0.005	0.006
2,4,5-TP (Silvex)	44.978	54.616
2,4,5-Trichlorophenol	911.992	1107.419
Trichloroethylene	4.785	5.810
1,1,1-Trichloroethane	191.394	232.407
TTHM (Sum of Total Trihalomethanes)	95.697	116.204
Vinyl Chloride	1.914	2.324

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

TEXTOX MENU #1 - INTERMITTENT STREAM

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

Table 1, 1997 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.

TPDES Permit No: WQ0002430000  
 Permittee Name: NRG Texas Power LLC  
 Outfall No: 002 and 008  
 Prepared By: Monica Baez  
 Date: 10-Oct-08

DISCHARGE INFORMATION:

Immediate Receiving Waterbody: channel of Lynn Creek  
 Segment No: 1252  
 TSS: 4  
 pH: 7.1  
 Hardness: 66  
 Chloride: 23  
 Effluent Flow for Aquatic Life (MGD):  
 Critical Low Flow [7Q2] (cfs): 0  
 Acute Effluent % for Aquatic Life: 100

CALCULATE TOTAL/DISSOLVED RATIO:

<i>Stream/River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partitioning Coefficient (K<sub>po</sub>)</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	173978.75	0.59		1	Assumed
Cadmium	6.6	-1.13	831136.22	0.23		1	Assumed
Chromium (Total)	6.52	-0.93	912187.69	0.22		1	Assumed
Chromium (+3)	6.52	-0.93	912187.69	0.22		1	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Copper	6.02	-0.74	375383.87	0.40		1	Assumed
Lead	6.45	-0.8	929719.64	0.21		1	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Nickel	5.69	-0.57	222241.83	0.53		1	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1	Assumed
Silver	6.38	-1.03	575278.59	0.30		1	Assumed
Zinc	6.1	-0.7	477043.53	0.34		1	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

<i>Parameter</i>	<i>Acute Standard (ug/L)</i>	<i>WLAa</i>	<i>LTAa</i>	<i>Daily Avg. (ug/L)</i>	<i>Daily Max. (ug/L)</i>
Aldrin	3	3.00	1.72	2.53	5.35
Aluminum(d)	991	991.00	567.84	834.73	1765.99
Arsenic(d)	360	610.53	349.83	514.26	1087.98
Cadmium(d)	21.084	91.18	52.25	76.80	162.49
Carbaryl	2	2.00	1.15	1.68	3.56

## FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Chlordane	2.4	2.40	1.38	2.02	4.28
Chlorpyrifos	0.083	0.08	0.05	0.07	0.15
Chromium (+3)(d)	1235.62	5744.08	3291.36	4838.30	10236.13
Chromium (+6)(d)	16	16.00	9.17	13.48	28.51
Copper(d)	12.976	32.46	18.60	27.34	57.84
Cyanide (free)	45.78	45.78	26.23	38.56	81.58
4,4'-DDT	1.1	1.10	0.63	0.93	1.96
Dementon	N/A	N/A	N/A	N/A	N/A
Dicofol	59.3	59.30	33.98	49.95	105.67
Dieldrin	2.5	2.50	1.43	2.11	4.46
Diuron	210	210.00	120.33	176.89	374.23
Endosulfan I (alpha)	0.22	0.22	0.13	0.19	0.39
Endosulfan II (beta)	0.22	0.22	0.13	0.19	0.39
Endosulfan sulfate	0.22	0.22	0.13	0.19	0.39
Endrin	0.18	0.18	0.10	0.15	0.32
Guthion	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.52	0.52	0.30	0.44	0.93
Hexachlorocyclohexane (Lindane)	2	2.00	1.15	1.68	3.56
Lead(d)	48.107	227.01	130.08	191.21	404.54
Malathion	N/A	N/A	N/A	N/A	N/A
Mercury	2.4	2.40	1.38	2.02	4.28
Methoxychlor	N/A	N/A	N/A	N/A	N/A
Mirex	N/A	N/A	N/A	N/A	N/A
Nickel(d)	997.895	1884.99	1080.10	1587.75	3359.11
Parathion (ethyl)	0.065	0.07	0.04	0.05	0.12
Pentachlorophenol	10.0291916	10.03	5.75	8.45	17.87
Phenanthrene	30	30.00	17.19	25.27	53.46
Polychlorinated Biphenyls (PCBs)	2	2.00	1.15	1.68	3.56
Selenium	20	20.00	11.46	16.85	35.64
Silver, (free ion)	0.92	7.17	4.11	6.04	12.77
Toxaphene	0.78	0.78	0.45	0.66	1.39
Tributyltin (TBT)	0.13	0.13	0.07	0.11	0.23
2,4,5 Trichlorophenol	136	136.00	77.93	114.55	242.36
Zinc(d)	82.294	239.32	137.13	201.59	426.48

## CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	70%	85%
Aldrin	1.769	2.148
Aluminum	584.310	709.520
Arsenic	359.979	437.117
Cadmium	53.761	65.282
Carbaryl	1.179	1.432
Chlordane	1.415	1.718
Chlorpyrifos	0.049	0.059
Chromium (+3)	3386.81	4112.55
Chromium (+6)	9.434	11.455
Copper	19.139	23.240
Cyanide (free)	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 I (alpha)	0.130	0.158
Endosulfan II (beta)	0.130	0.158

## FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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	133.850	162.532
Malathion	N/A	N/A
Mercury	1.415	1.718
Methoxychlor	N/A	N/A
Mirex	N/A	N/A
Nickel	1111.42	1349.58
Parathion (ethyl)	0.038	0.047
Pentachlorophenol	5.913	7.181
Phenanthrene	17.689	21.479
Polychlorinated Biphenyls (PCBs)	1.179	1.432
Selenium	11.792	14.319
Silver, (free ion)	4.226	5.131
Toxaphene	0.460	0.558
Tributyltin (TBT)	0.077	0.093
2,4,5 Trichlorophenol	80.188	97.371
Zinc	141.110	171.348

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

TEXTTOX MENU #8 - INTERMITTENT STREAM WITHIN 3 MILES OF A LAKE OR RESERVOIR

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

- Table 1, 1997 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: NRG Texas Power LLC  
 TPDES Permit No: WQ0002430000  
 Outfall No: 004 and 005  
 Prepared by: Monica Baez  
 Date: October 10, 2008

DISCHARGE INFORMATION:

Immediate Receiving Waterbody: unnamed tributary  
 TSS (immediate): 4  
 pH (immediate): 7.1  
 Hardness (immediate): 66  
 Chloride (immediate): 23  
 Effluent Flow for Aquatic Life (MGD): <10  
 Percent Effluent for Zone of Initial Dilution: 100  
 Perennial Receiving Waterbody: Lake Limestone  
 Segment No.: 1252  
 TSS (perennial): 4  
 pH (perennial): 7.1  
 Hardness (perennial): 66  
 Chloride (perennial): 23  
 Percent Effluent for Mixing Zone: 100  
 Percent Effluent for Zone of Initial Dilution: 100  
 Effluent Flow for Human Health (MGD): <10  
 Percent Effluent for Human Health: 100  
 Public Water Supply Use?: yes

CALCULATE TOTAL/DISSOLVED RATIO:

Stream/River Metal	Intercept (b)	Slope (m)	Partition Coefficient (Kp)	Dissolved Fraction (Cd/Ct)		Water Effects Ratio (WER)	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	173978.75	0.59		1.00	Assumed
Cadmium	6.6	-1.13	831136.22	0.23		1.00	Assumed
Chromium (Total)	6.52	-0.93	912187.69	0.22		1.00	Assumed
Chromium (+3)	6.52	-0.93	912187.69	0.22		1.00	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.02	-0.74	375383.87	0.40		1.00	Assumed
Lead	6.45	-0.8	929719.64	0.21		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	5.69	-0.57	222241.83	0.53		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	575278.59	0.30		1.00	Assumed
Zinc	6.1	-0.7	477043.53	0.34		1.00	Assumed

Lake Metal	Intercept (b)	Slope (m)	Partition Coefficient (Kp)	Dissolved Fraction (Cd/Ct)		Water Effects Ratio (WER)	
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	173978.75	0.59		1.00	Assumed
Cadmium	6.55	-0.92	991071.09	0.201		1.00	Assumed
Chromium (Total)	6.34	-0.27	1504678.80	0.14		1.00	Assumed
Chromium (+3)	6.34	-0.27	1504678.80	0.14		1.00	Assumed
Chromium (+6)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.9	809367.96	0.24		1.00	Assumed
Lead	6.31	-0.53	979282.98	0.20		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	762841.67	0.25		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	575278.59	0.30		1.00	Assumed
Zinc	6.52	-0.68	1290028.21	0.16		1.00	Assumed

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	Acute Standard		Chronic Standard (ug/L)	WLAa			LTAa			Daily Avg. (ug/L)	Daily Max. (ug/L)
	(immediate) (ug/L)	(perennial) (ug/L)		(immediate)	(perennial)	WLAc	(immediate)	(perennial)	LTAc		
Aldrin	3	3	N/A	3.00	3.00	N/A	1.72	0.96	N/A	1.41	2.99
Aluminum (d)	991	991	N/A	991.00	991.00	N/A	567.84	317.12	N/A	466.17	986.24
Arsenic (d)	360	360	190	610.53	610.53	322.22	349.83	195.37	196.56	287.19	607.60
Cadmium (d)	21.084	21.084	0.818	91.18	104.67	4.06	52.25	33.49	2.48	3.64	7.71
Carbaryl	2	2	N/A	2.00	2.00	N/A	1.15	0.64	N/A	0.94	1.99
Chlordane	2.4	2.4	0.0043	2.40	2.40	0.00	1.38	0.77	0.00	0.00	0.01
Chlorpyrifos	0.083	0.083	0.041	0.08	0.08	0.04	0.05	0.03	0.03	0.04	0.08
Chromium (+3) (d)	1235.619	1235.619	147.279	5744.08	8672.46	1033.71	3291.36	2775.19	630.56	926.93	1961.05
Chromium (+6) (d)	16.000	16.000	11	16.00	16.00	11.00	9.17	5.12	6.71	7.53	15.92
Copper (d)	12.976	12.976	8.972	32.46	54.98	38.02	18.60	17.60	23.19	25.86	54.72
Cyanide (free)	45.78	45.78	10.69	45.78	45.78	10.69	26.23	14.65	6.52	9.59	20.28
4,4'-DDT	1.1	1.1	0.001	1.10	1.10	0.00	0.63	0.35	0.00	0.00	0.00
Dementon	N/A	N/A	0.1	N/A	N/A	0.10	N/A	N/A	0.06	0.09	0.19
Dicofol	59.3	59.3	19.8	59.30	59.30	19.80	33.98	18.98	12.08	17.75	37.56
Dieldrin	2.5	2.5	0.0019	2.50	2.50	0.00	1.43	0.80	0.00	0.00	0.00
Diuron	210	210	70	210.00	210.00	70.00	120.33	67.20	42.70	62.77	132.80
Endosulfan I (alpha)	0.22	0.22	0.056	0.22	0.22	0.06	0.13	0.07	0.03	0.05	0.11
Endosulfan II (beta)	0.22	0.22	0.056	0.22	0.22	0.06	0.13	0.07	0.03	0.05	0.11
Endosulfan sulfate	0.22	0.22	0.056	0.22	0.22	0.06	0.13	0.07	0.03	0.05	0.11
Endrin	0.18	0.18	0.0023	0.18	0.18	0.00	0.10	0.06	0.00	0.00	0.00
Euthion	N/A	N/A	0.01	N/A	N/A	0.01	N/A	N/A	0.01	0.01	0.02
Heptachlor	0.52	0.52	0.0038	0.52	0.52	0.00	0.30	0.17	0.00	0.00	0.01
Hexachlorocyclohexane (Lindane)	2	2	0.08	2.00	2.00	0.08	1.15	0.64	0.05	0.07	0.15
Lead (d)	48.107	48.107	1.875	227.01	236.55	9.22	130.08	75.70	5.62	8.27	17.49
Malathion	N/A	N/A	0.01	N/A	N/A	0.01	N/A	N/A	0.01	0.01	0.02
Mercury	2.400	2.400	1.3	2.40	2.40	1.30	1.38	0.77	0.79	1.13	2.39
Methoxychlor	N/A	N/A	0.03	N/A	N/A	0.03	N/A	N/A	0.02	0.03	0.06
Mirex	N/A	N/A	0.001	N/A	N/A	0.00	N/A	N/A	0.00	0.00	0.00
Nickel (d)	997.895	997.895	110.935	1884.99	4042.84	449.44	1080.10	1293.71	274.16	403.01	852.63
Parathion (ethyl)	0.065	0.065	0.013	0.07	0.07	0.01	0.04	0.02	0.01	0.01	0.02
Pentachlorophenol	10.029	10.029	6.331	10.03	10.03	6.33	5.75	3.21	3.86	4.72	9.98
Phenanthrene	30	30	30	30.00	30.00	30.00	17.19	9.60	18.30	14.11	29.86
Polychlorinated Biphenyls (PCBs)	2	2	0.014	2.00	2.00	0.01	1.15	0.64	0.01	0.01	0.03
Selenium	20	20	5	20.00	20.00	5.00	11.46	6.40	3.05	4.48	9.49
Silver, (free ion)	0.92	0.92	N/A	7.17	7.17	N/A	4.11	2.29	N/A	3.37	7.13
Toxaphene	0.78	0.78	0.0002	0.78	0.78	0.00	0.45	0.25	0.00	0.00	0.00
Tributyltin (TBT)	0.13	0.13	0.024	0.13	0.13	0.02	0.07	0.04	0.01	0.02	0.05
2,4,5 Trichlorophenol	136	136	64	136.00	136.00	64.00	77.93	43.52	39.04	57.39	121.41
Zinc (d)	82.294	82.294	74.537	239.32	506.94	459.16	137.13	162.22	280.09	201.59	426.48

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

Parameter	Water and FW Fish		WLAh	LTAh	Daily Avg. (ug/L)	Daily Max. (ug/L)
	(ug/L)	Only (ug/L)				
Acrylonitrile	1.28	10.9	1.28	1.19	1.75	3.70
Aldrin	0.00408	0.00426	0.00	0.00	0.01	0.01
Arsenic (d)	50	N/A	84.80	78.86	115.92	245.25
Barium (d)	2000	N/A	2000.00	1860.00	2734.20	5784.60
Benzene	5	106	5.00	4.65	6.84	14.46
Benzidine	0.00106	0.00347	0.00	0.00	0.00	0.00
Benzo(a)anthracene	0.099	0.81	0.10	0.09	0.14	0.29
Benzo(a)pyrene	0.099	0.81	0.10	0.09	0.14	0.29
Bis(chloromethyl)ether	0.00462	0.0193	0.00	0.00	0.01	0.01
Cadmium (d)	5	N/A	24.82	23.08	33.93	71.79
Carbon Tetrachloride	3.76	8.4	3.76	3.50	5.14	10.88
Chlordane	0.021	0.0213	0.02	0.02	0.03	0.06
Chlorobenzene	776	1380	776.00	721.68	1060.87	2244.42
Chloroform	100	1292	100.00	93.00	136.71	289.23
Chromium(d)	100	3320	701.87	652.74	959.53	2030.02
Chrysene	0.417	8.1	0.42	0.39	0.57	1.21
Cresols	3313	13116	3313.00	3081.09	4529.20	9582.19
Cyanide (free)	200	N/A	200.00	186.00	273.42	578.46
4,4'-DDD	0.0103	0.01	0.01	0.01	0.01	0.03
4,4'-DDE	0.0073	0.007	0.01	0.01	0.01	0.02
4,4'-DDT	0.0073	0.007	0.01	0.01	0.01	0.02
2,4'-D	70	N/A	70.00	65.10	95.70	202.46
Danitrol	0.709	0.721	0.71	0.66	0.97	2.05
Dibromochloromethane	9.2	71.6	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)	22.8	161	22.80	21.20	31.17	65.94

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Dieldrin	0.00171	0.002	0.00	0.00	0.00	0.00
p-Dichlorobenzene	75	N/A	75.00	69.75	102.53	216.92
1,2-Dichloroethane	5	73.9	5.00	4.65	6.84	14.46
1,1-Dichloroethylene	1.63	5.84	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	1.27	1.34	1.27	1.18	1.74	3.67
Fluoride	4000	N/A	4000.00	3720.00	5468.40	11569.20
Heptachlor	0.0026	0.00265	0.00	0.00	0.00	0.01
Heptachlor Epoxide	0.159	1.1	0.16	0.15	0.22	0.46
Hexachlorobenzene	0.0194	0.0198	0.02	0.02	0.03	0.06
Hexachlorobutadiene	2.99	3.6	2.99	2.78	4.09	8.65
Hexachlorocyclohexane (alpha)	0.163	0.413	0.16	0.15	0.22	0.47
Hexachlorocyclohexane (beta)	0.57	1.45	0.57	0.53	0.78	1.65
Hexachlorocyclohexane (gamma) (Lindane)	0.2	2	0.20	0.19	0.27	0.58
Hexachloroethane	84.2	278	84.20	78.31	115.11	243.53
Hexachlorophene	0.0531	0.053	0.05	0.05	0.07	0.15
Lead (d)	4.98	25.3	24.49	22.77	33.48	70.82
Mercury	0.0122	0.0122	0.01	0.01	0.02	0.04
Methoxychlor	2.21	2.22	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	1.53E+05
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	10000.00	9300.00	13671.00	28923.00
Nitrobenzene	37.3	233	37.30	34.69	50.99	107.88
N-Nitrosodiethylamine	0.0382	7.68	0.04	0.04	0.05	0.11
N-Nitroso-di-n-Butylamine	1.84	13.5	1.84	1.71	2.52	5.32
PCB's (Polychlorinated Biphenyls)	0.0013	0.0013	0.00	0.00	0.00	0.00
Pentachlorobenzene	6.1	6.68	6.10	5.67	8.34	17.64
Pentachlorophenol	1	135	1.00	0.93	1.37	2.89
Pyridine	88.1	13333	88.10	81.93	120.44	254.81
Selenium	50	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	323	5.00	4.65	6.84	14.46
Toxaphene	0.005	0.014	0.01	0.00	0.01	0.01
2,4,5-TP (Silvex)	47	50.3	47.00	43.71	64.25	135.94
2,4,5-Trichlorophenol	953	1069	953.00	886.29	1302.85	2756.36
Trichloroethylene	5	612	5.00	4.65	6.84	14.46
1,1,1-Trichloroethane	200	12586	200.00	186.00	273.42	578.46
TTHM (Sum of Total Trihalomethanes)	100	N/A	100.00	93.00	136.71	289.23
Vinyl Chloride	2	415	2.00	1.86	2.73	5.78

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS

Parameter	70%	85%
<i>Aquatic Life</i>		
Aldrin	0.988	1.200
Aluminum	326.316	396.241
Arsenic	201.035	244.114
Cadmium	2.550	3.097
Carbaryl	0.659	0.800
Chlordane	0.003	0.003
Chlorpyrifos	0.026	0.031
Chromium (+3)	648.848	787.887
Chromium (+6)	5.268	6.397
Copper	18.105	21.985
Cyanide (free)	6.710	8.148
4,4'-DDT	0.001	0.001
Dementon	0.063	0.076
Dicofol	12.428	15.091
Dieldrin	0.001	0.001
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	5.786	7.026
Malathion	0.006	0.008
Mercury	0.790	0.960
Methoxychlor	0.019	0.023
Mirex	0.001	0.001
Nickel	282.109	342.561
Parathion (ethyl)	0.008	0.010
Pentachlorophenol	3.302	4.010
Phenanthrene	9.878	11.995

## FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Polychlorinated Biphenyls (PCBs)	0.009	0.011
Selenium	3.138	3.811
Silver, (free ion)	2.360	2.866
Toxaphene	0.000	0.000
Tributyltin (TBT)	0.015	0.018
2,4,5 Trichlorophenol	40.172	48.780
Zinc	141.110	171.348
<b>Human Health</b>		
Acrylonitrile	1.225	1.487
Aldrin	0.004	0.005
Arsenic (d)	8114.699	98.536
Barium (d)	1913.940	2324.070
Benzene	4.785	5.810
Benzidine	0.001	0.001
Benzo(a)anthracene	0.095	0.115
Benzo(a)pyrene	0.095	0.115
Bis(chloromethyl)ether	0.004	0.005
Cadmium (d)	23.753	28.843
Carbon Tetrachloride	3.598	4.369
Chlordane	0.020	0.024
Chlorobenzene	742.609	901.739
Chloroform	95.697	116.204
Chromium(d)	671.670	815.599
Chrysene	0.399	0.485
Cresols	3170.442	3849.822
Cyanide (free)	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
Danitrol	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 (d)	23.434	28.455
Mercury	0.012	0.014
Methoxycylor	2.115	2.568
Methyl Ethyl Kétone	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	84.309	102.375
Selenium	47.849	58.102
1,2,4,5-Tetrachlorobenzene	0.231	0.280
Tetrachloroethylene	4.785	5.810
Toxaphene	0.005	0.006
2,4,5-TP (Silvex)	44.978	54.616
2,4,5-Trichlorophenol	911.992	1107.419
Trichloroethylene	4.785	5.810
1,1,1-Trichloroethane	191.394	232.407
TTHM (Sum of Total Trihalomethanes)	95.697	116.204
Vinyl Chloride	1.914	2.324

## Compliance History Report

Customer/Respondent/Owner-Operator:	CN603207218    NRG Texas Power LLC	Classification: AVERAGE	Rating: 1.34
Regulated Entity:	RN100542927    LIMESTONE ELECTRIC GENERATING STATION	Classification: AVERAGE	Site Rating: 0.88
ID Number(s):	AIR OPERATING PERMITS	ACCOUNT NUMBER	LI0027L
	AIR OPERATING PERMITS	PERMIT	75
	WASTEWATER	PERMIT	WQ0002430000
	WASTEWATER	PERMIT	TPDES0082651
	WASTEWATER	PERMIT	TX0082651
	PETROLEUM STORAGE TANK REGISTRATION	REGISTRATION	33319
	AIR NEW SOURCE PERMITS	PERMIT	8576
	AIR NEW SOURCE PERMITS	PERMIT	8579
	AIR NEW SOURCE PERMITS	PERMIT	34999
	AIR NEW SOURCE PERMITS	PERMIT	34901
	AIR NEW SOURCE PERMITS	PERMIT	42002
	AIR NEW SOURCE PERMITS	PERMIT	43797
	AIR NEW SOURCE PERMITS	PERMIT	46764
	AIR NEW SOURCE PERMITS	ACCOUNT NUMBER	LI0027L
	AIR NEW SOURCE PERMITS	AFS NUM	4828900010
	AIR NEW SOURCE PERMITS	EPA ID	PSDTX37IM4
	AIR NEW SOURCE PERMITS	PERMIT	52233
	AIR NEW SOURCE PERMITS	PERMIT	73811
	AIR NEW SOURCE PERMITS	REGISTRATION	73908
	AIR NEW SOURCE PERMITS	REGISTRATION	74601
	AIR NEW SOURCE PERMITS	PERMIT	50527
	AIR NEW SOURCE PERMITS	PERMIT	51712
	AIR NEW SOURCE PERMITS	REGISTRATION	76757
	AIR NEW SOURCE PERMITS	PERMIT	79188
	AIR NEW SOURCE PERMITS	EPA ID	PSDTX1072
	AIR NEW SOURCE PERMITS	REGISTRATION	80272
	AIR NEW SOURCE PERMITS	REGISTRATION	80218
	AIR NEW SOURCE PERMITS	EPA ID	HAP14
	WASTEWATER LICENSING	LICENSE	WQ0002430000
Location:	APPROXIMATELY 9 MILES NORTH OF JEWETT TEXAS ON FM 39		
TCEQ Region:	REGION 09 - WACO		
Date Compliance History Prepared:	December 08, 2008		
Agency Decision Requiring Compliance History:	Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.		
Compliance Period:	May 21, 2003 to December 08, 2008		

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

Name: Monica Vallin-Baez Phone: 239 - 5784

### 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 of the site during the compliance period?    | Yes   |
| 3. If Yes, who is the current owner?   | <u>NRG Texas LP</u><br><u>NRG Texas Power LLC</u>           |
| 4. If Yes, who was/were the prior owner(s)?  | <u>Texas Genco, LP</u><br><u>Texas Genco Holdings, Inc.</u> |
| 5. When did the change(s) in ownership occur?  | <u>12/15/2004</u>   |
| 6. Rating Date: 9/1/2008 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.

Effective Date: 01/26/2007

ADMINORDER 2006-1030-IWD-E

Classification: Moderate

Citation: 2D TWC Chapter 26, SubChapter A 26.121(a)  
30 TAC Chapter 305, SubChapter F 305.125(1)

Rqmt Prov: Effluent Limits PERMIT

Description: Failure to comply with permit effluent limits as documented by a TCEQ record review of self-reported data.

Effective Date: 02/08/2008

ADMINORDER 2007-1237-AIR-E

Classification: Major

Citation: 30 TAC Chapter 101, SubChapter A 101.10(e)  
5C THC Chapter 382, SubChapter D 382.085(b)

Description: Failed to submit the 2005 emissions inventory in a timely manner

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	05/23/2003	(205992)
2	05/30/2003	(61597)
3	05/30/2003	(61613)
4	05/30/2003	(61694)
5	05/30/2003	(61696)
6	05/30/2003	(61786)
7	05/30/2003	(61814)
8	05/30/2003	(61827)
9	05/30/2003	(61832)
10	06/03/2003	(61539)
11	06/11/2003	(112761)
12	06/19/2003	(118915)
13	06/19/2003	(118919)
14	06/25/2003	(205996)
15	07/25/2003	(206000)
16	08/15/2003	(149810)
17	08/22/2003	(315705)
18	09/03/2003	(247793)
19	09/25/2003	(315707)
20	10/03/2003	(250967)
21	10/10/2003	(251588)
22	10/23/2003	(315709)
23	11/05/2003	(254292)
24	11/18/2003	(255112)
25	11/21/2003	(315710)
26	12/09/2003	(256932)
27	12/09/2003	(257006)
28	12/09/2003	(257021)
29	12/09/2003	(257027)
30	12/09/2003	(257043)
31	12/09/2003	(257057)
32	12/09/2003	(257231)
33	12/09/2003	(257232)
34	12/19/2003	(315711)
35	01/23/2004	(315712)
36	02/20/2004	(315694)
37	02/24/2004	(263291)
38	02/24/2004	(263821)
39	02/24/2004	(263822)
40	02/24/2004	(263824)

41	02/24/2004	(263835)
42	02/24/2004	(263837)
43	03/22/2004	(266107)
44	03/22/2004	(266110)
45	03/22/2004	(266113)
46	03/25/2004	(315696)
47	04/07/2004	(268521)
48	04/23/2004	(315697)
49	05/06/2004	(271624)
50	05/06/2004	(271626)
51	05/21/2004	(315699)
52	06/03/2004	(274282)
53	06/03/2004	(274289)
54	06/17/2004	(276244)
55	06/17/2004	(276248)
56	06/23/2004	(277256)
57	06/24/2004	(315701)
58	07/14/2004	(280206)
59	07/22/2004	(315703)
60	07/27/2004	(278017)
61	08/06/2004	(286847)
62	08/06/2004	(287462)
63	08/25/2004	(360584)
64	09/01/2004	(291549)
65	09/01/2004	(292211)
66	09/01/2004	(292213)
67	09/23/2004	(360585)
68	10/07/2004	(336739)
69	10/07/2004	(336754)
70	10/22/2004	(337069)
71	10/22/2004	(338060)
72	10/22/2004	(360586)
73	11/22/2004	(360587)
74	12/13/2004	(343689)
75	12/13/2004	(343722)
76	12/14/2004	(343952)
77	12/22/2004	(360588)
78	01/07/2005	(346493)
79	01/24/2005	(347402)
80	01/25/2005	(386633)
81	02/18/2005	(350109)
82	02/23/2005	(386631)
83	02/28/2005	(371444)
84	03/02/2005	(371685)
85	03/04/2005	(372891)
86	03/08/2005	(373345)
87	03/24/2005	(386632)
88	03/25/2005	(375182)
89	04/06/2005	(373070)
90	04/06/2005	(376744)
91	04/22/2005	(424456)
92	05/10/2005	(379119)
93	05/13/2005	(380970)
94	05/24/2005	(424457)
95	05/24/2005	(424459)
96	06/27/2005	(424458)
97	07/18/2005	(400721)
98	07/18/2005	(400797)
99	07/25/2005	(401281)

100	08/25/2005	(406956)
101	09/01/2005	(405822)
102	09/16/2005	(406245)
103	09/16/2005	(418520)
104	09/22/2005	(445209)
105	09/22/2005	(445210)
106	09/22/2005	(445211)
107	09/27/2005	(432855)
108	10/05/2005	(433499)
109	10/13/2005	(434247)
110	10/14/2005	(434534)
111	10/14/2005	(434544)
112	10/20/2005	(445208)
113	11/17/2005	(437766)
114	11/23/2005	(437879)
115	12/01/2005	(439092)
116	12/06/2005	(435861)
117	12/06/2005	(439513)
118	02/02/2006	(454202)
119	02/22/2006	(456468)
120	02/22/2006	(456484)
121	03/02/2006	(457808)
122	03/22/2006	(460167)
123	03/22/2006	(460176)
124	03/28/2006	(460670)
125	04/13/2006	(461330)
126	06/02/2006	(481183)
127	06/06/2006	(481353)
128	06/09/2006	(482083)
129	06/09/2006	(482104)
130	06/29/2006	(484207)
131	07/06/2006	(484632)
132	07/10/2006	(483249)
133	08/03/2006	(489868)
134	08/11/2006	(497088)
135	09/26/2006	(514060)
136	10/11/2006	(515699)
137	11/08/2006	(518172)
138	11/08/2006	(518174)
139	11/08/2006	(518764)
140	11/09/2006	(518947)
141	01/19/2007	(536108)
142	01/23/2007	(536146)
143	01/23/2007	(537565)
144	01/26/2007	(536153)
145	02/01/2007	(538903)
146	02/02/2007	(538937)
147	02/02/2007	(538951)
148	02/05/2007	(538082)
149	02/28/2007	(541928)
150	03/06/2007	(542586)
151	03/09/2007	(543436)
152	03/28/2007	(554145)
153	04/05/2007	(555411)
154	05/14/2007	(559608)
155	05/23/2007	(559622)
156	05/29/2007	(561331)
157	05/30/2007	(561945)
158	06/14/2007	(564218)

159 06/18/2007 (564348)  
 160 07/13/2007 (563751)  
 161 07/13/2007 (566391)  
 162 07/17/2007 (566823)  
 163 07/17/2007 (566836)  
 164 08/03/2007 (570671)  
 165 08/08/2007 (571199)  
 166 08/08/2007 (571242)  
 167 08/08/2007 (571246)  
 168 08/21/2007 (571543)  
 169 09/20/2007 (594684)  
 170 10/04/2007 (596822)  
 171 10/15/2007 (597250)  
 172 10/22/2007 (598130)  
 173 11/08/2007 (571241)  
 174 11/08/2007 (599935)  
 175 11/09/2007 (601011)  
 176 12/13/2007 (611983)  
 177 01/03/2008 (612942)  
 178 01/03/2008 (613052)  
 179 01/10/2008 (613460)  
 180 02/14/2008 (617511)  
 181 02/22/2008 (619170)  
 182 03/07/2008 (636551)  
 183 03/18/2008 (639268)  
 184 03/18/2008 (639271)  
 185 03/18/2008 (639411)  
 186 04/04/2008 (640465)  
 187 05/09/2008 (654940)  
 188 06/02/2008 (653567)  
 189 06/02/2008 (680246)  
 190 06/23/2008 (681926)  
 191 07/02/2008 (684295)  
 192 08/15/2008 (688893)  
 193 08/18/2008 (688947)  
 194 09/18/2008 (702732)  
 195 09/24/2008 (702742)  
 196 11/24/2008 (708711)

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

Date: 10/13/2003 (251588) CN603207218  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)  
 Description: Failure to submit a reportable emission event within the required 24 hour time period; therefore, non-exempting the event and violating provisions of the permit.  
 Date: 09/01/2004 (292211) CN603207218  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)  
 Description: Failure to adhere to the 15 percent opacity limit set forth in Special Condition #5 of permit number 8576 and failure to notify the Waco Regional Office within 24 hours of discovery of a reportable opacity event from the Unit 1 Boiler.  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)  
 Description: Failure to adhere to the 15 percent opacity limit set forth in Special Condition #5 of permit number 8576 and the facility failed to submit some of the notification information required by 30 TAC 101.201(a)(3).  
 Date: 02/18/2005 (350109) CN603207218  
 Self Report? NO Classification: Moderate  
 Citation: 30 TAC Chapter 101, SubChapter F 101.222(d)(2)  
 30 TAC Chapter 116, SubChapter B 116.115(c)  
 S.C. #5 of Permit 8576 PERMIT

Description: Failure to meet opacity limitation as stated in Special Condition # 5 of Permit 8576.  
Date: 08/19/2005 (405822) CN603207218  
Self Report? NO Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter F 101.222(d)(2)  
Description: Failure to meet the requirements of 30 TAC 101.222(d)(2). Event was caused by operator error.  
Self Report? NO Classification: Moderate  
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)  
Permit No. 8576 PERMIT  
Description: Failure to meet the 15 percent opacity limit set forth in Special Condition #5 of Permit Number 8576.  
Date: 01/25/2007 (536153) CN603207218  
Self Report? NO Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter F 101.201(e)  
Description: Failure to report an excess opacity event within 24 hours of discovery.  
Self Report? NO Classification: Moderate  
Citation: 30 TAC Chapter 116, SubChapter B 116.115(c)  
Description: Failure to adhere to the 15 percent opacity limit.  
Date: 07/02/2007 (566391) CN603207218  
Self Report? YES Classification: Moderate  
Citation: 30 TAC Chapter 122, SubChapter B 122.145(2)(A)  
5C THC Chapter 382, SubChapter D 382.085(b)  
Description: Failure to comply with the reporting requirements of 30 TAC 122.145(2)(A).  
Self Report? YES Classification: Moderate  
Citation: 30 TAC Chapter 122, SubChapter B 122.143(4)  
5C THC Chapter 382, SubChapter D 382.085(b)  
Description: Failure to comply with the terms and conditions codified in Permit No. O-00075, pursuant to 30 TAC 122.143(4).  
Date: 09/24/2008 (702742) CN603207218  
Self Report? YES Classification: Moderate  
Citation: 30 TAC Chapter 101, SubChapter F 101.222(d)(3)  
30 TAC Chapter 111, SubChapter A 111.111(a)(1)(C)  
5C THSC Chapter 382 382.085(b)  
Description: Failure to meet an affirmative defense as provided by Title 30 Texas Administrative Code (TAC), Chapter 101, Rule 101.222(d)(3); and subsequent failure to comply with 30 TAC 111.111 (a)(1)(C).

F. Environmental audits.

N/A

G. Type of environmental management systems (EMSs).

N/A

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