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(Via Fedex)

May 16, 2023

Victoria County Clerk's Office
115 N. Bridge St., Rm. 103
Victoria, TX 77901

RE: Instructions to Clerk's Office for Posting TPDES Documents for Public Review

Dear Sir/Madam,

Texas Commission on Environmental Quality (TCEQ) requires that documents involved in the Texas Pollutant Discharge Elimination System (TPDES) permit renewal process be placed in a public location in the county where the facility resides. One such document is included with these instructions. This document must be accessible to the public for review and copying and remain in place until the final permit has been issued. **To comply with this requirement, Coleto Creek Power, LLC requests that the following steps be followed:**

- Upon receipt of the document, please stamp the **cover letter page (marked with red flag)** with the date it was received.
- Since the document is too large to hang on the bulletin board, please make two photocopies of the stamped page of the document. Place the first page on the public postings bulletin board with a short note instructing the public where to find the documents. Mail the second one to:

  Ryan Bayle
  Luminant Generation Company LLC
  Environmental Services
  6555 Sierra Drive
  Irving, TX 75039

  Or email a scanned copy to: ryan.bayle@luminant.com
- Place the document in the location described in the note referenced above. The location must be chosen for easy public access.
- **The document must remain available for public access until the new permit is issued.**
- **All subsequent documents and correspondence associated with the TPDES permit renewal must accompany the original document and also be made available in the same location.**

We appreciate your cooperation in this matter. If you have any questions, please feel free to contact me at 214-875-8294 or via e-mail at ryan.bayle@luminant.com.

Sincerely;

Ryan Bayle

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0002159000, U.S. Environmental Protection Agency (EPA) ID No. TX0070068, to discharge to water in the state

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

Applicant: Coleto Creek Power, LLC
6555 Sierra Drive
Irving, Texas 75039

Prepared By: Michael Abraha Redda
Wastewater Permitting Section
Water Quality Division
(512) 239-4631

Date: September 24, 2021 (***Revised March 3, 2022, June 24, 2022, and March 23, 2023***)

Permit Action: Major amendment with renewal; TPDES Permit No. WQ0002159000

I. EXECUTIVE DIRECTOR RECOMMENDATION

The executive director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The draft permit will expire at midnight, five years from the date of permit issuance according to the requirements of 30 Texas Administrative Code (TAC) §305.127(1)(C)(i).

II. APPLICANT ACTIVITY

The applicant currently operates Coleto Creek Power Station, a coal-fired steam electric generating facility. The generating capacity from Unit 1 is 632 megawatts (MW).

III. DISCHARGE LOCATION

As described in the application, the facility is located at 45 Farm-to-Market Road 2987, near the Town of Fannin, in Goliad County, Texas 77960. Discharge is directly to Coleto Creek Reservoir, which is part of Coleto Creek in Segment No. 1807 of the Guadalupe River Basin.

IV. RECEIVING STREAM USES

The designated uses for Segment No. 1807 are primary contact recreation, public water supply, and high aquatic life use.

V. STREAM STANDARDS

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

VI. DISCHARGE DESCRIPTION

The following is a quantitative description of the discharge described in the monthly effluent report data for the period November 2015 through May 2021. The "average of daily average" values presented in the following table are the average of all daily average values for the reporting period for each pollutant. The "maximum of daily maximum" values presented in the following table are the individual maximum values for the reporting period for each pollutant. Flows are expressed in million gallons per day (MGD). All pH values are expressed in standard units (SU). A parameter not required by the existing permit is, therefore, not applicable (N/A).

A. Flow

Outfall	Frequency	Average of Daily Average, MGD	Maximum of Daily Maximum, MGD
001	Continuous	388	555
002	No Discharge Reported During This Reporting Period.		
003	Intermittent	2.43	4.32

B. Temperature

Outfall	Average of Daily Average, °F	Maximum of Daily Maximum, °F
001	86[1]	106[1]
	84[2]	104[2]

C. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average		Maximum of Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
001	Free Available Chlorine	3.18	<0.01	3.86	<0.01
	Total Residual Chlorine	N/A	N/A	74.66	0.2
	Reservoir Elevation (feet-mean sea level)	(93.08) (min)		N/A	
		(96.18)		(98.82)	
003	Total Suspended Solids	N/A	5.95	N/A	19
	Oil and Grease	N/A	4.54	N/A	<5
	Total Copper	N/A	0.0026	N/A	0.006
	Total Iron	N/A	0.037	N/A	0.229
	pH	7.44 SU (min)		8.91 SU (max)	

No effluent limit violations were documented in the monthly effluent reports.

VII. DRAFT EFFLUENT LIMITATIONS

See Appendix C for a comparison of technology-based effluent limitations, water quality-based effluent limitations, existing effluent limitations, and effluent limitations established in the draft permit.

[1] Reservoir elevation was greater than 94 feet mean sea level.
[2] Reservoir elevation was less than or equal to 94 feet mean sea level.

OUTFALL LOCATIONS

Outfall	Latitude	Longitude
001	28.726033 N	97.203758 W

VIII. SUMMARY OF CHANGES FROM APPLICATION

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

1. Added monitoring and reporting requirements for total copper at Outfall 001. The permittee has requested for Outfall 003 to be change to internal Outfall 201. Outfall 003 has a water quality-based effluent limit for total copper; however, is TCEQ practice not to include water quality-based effluent limits for internal outfalls. Therefore, a technology-based effluent limit has been included at internal Outfall 201, and a once per month monitoring and reporting requirement included at Outfall 001 with a self-expiration date. This will allow TCEQ to gather analytical data at Outfall 001 and determine if a water quality-based effluent limitations for total copper are warranted.

2. Effluent limitations for *E. coli* have been added to internal Outfalls 101 and 301 to comply with requirements in 30 TAC Chapter 307, for the protection of human pathogens. EPA require effluent limitations for bacteria at outfalls that discharge domestic wastewater, as close to the sanitary source as possible. Effluent limitations for *E.* coli at internal Outfalls 101 and 301 are based on the requirements in 30 TAC §309.3(h)(1)(B) and 30 TAC §307.7(b)(1)(A)(i). A one-year compliance period has been included in the draft permit in accordance with 30 TAC §307.2(f), to allow time for the permittee to install any additional treatment that may be needed to comply with the new limits.

3. Based on information included in the application for the evaporation pond (Pond No. 4), its storage capacity was recalculated. The storage capacity has been reduced from 450 acre-feet to 250 acre-feet. The storage capacity was updated in Other Requirement No. 17.

4. In accordance with 40 CFR Part 423, there shall be no discharge of fly ash transport water on or after December 31, 2023, including fly ash transport water generated prior to December 31, 2023.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

A. The permittee requested the following amendments that the executive director recommends granting:

   1. *To authorize the discharge of coal pile runoff via new internal Outfall 301.* In the application the permittee also noted that domestic wastewater is discharged via internal Outfall 301 which is consistent with existing Other Requirement No. 22; therefore effluent limitations for biochemical oxygen demand, 5-day and *E. coli*, have been added to internal Outfall 301. Other Requirement No. 22 has been removed from the draft permit because effluent limits for the discharge of domestic wastewater have been added to the effluent page for internal Outfall 301.

2. *To change Outfall 002 to internal Outfall 101.* Outfall 002 (now internal Outfall 101) is authorized to discharge domestic wastewater. Due to the new configuration of the outfall, no significant dissolved oxygen (DO) impacts are anticipated in the receiving waters as a result of this discharge. However, due to the applicability of the statewide lake rule, the existing Outfall 002 (now internal Outfall 101) and the proposed internal Outfall 301 are subject to effluent limits of 10 mg/L biochemical oxygen demand, 5-day (BOD_5) and 4.0 mg/L minimum DO, as prescribed by the rule's requirements relating to treated domestic wastewater discharges. The effluent limits from Outfall 002 (now internal Outfall 101) are continued from the existing permit and the same effluent limits have been added to new internal Outfall 301.

3. *To change Outfall 003 to internal Outfall 201.* The permittee's request has been granted.

4. *To remove authorization for and references to Unit 2, because Unit 2 has never been constructed and the facility is not planning to construct at this time.* The effluent limitations and monitoring requirements to Unit 2 in the Final Phase of the existing permit were removed and are not continued in the draft permit. Removal of effluent limitations to Unit 2 meet the antibacksliding regulations in 40 CFR §122.44(l)(1).

5. *To remove references to the Leachate Pond (Pond No. 5) (never constructed) and other references to leachate from the combustion byproduct storage area for Unit 2 in Other Requirement No. 11.* Other Requirement No. 11 (now No. 17) has been revised and all references to Unit 2 have been removed and are not continued in the draft permit.

6. *To revise the list of wastestreams authorize to the evaporation pond in Other Requirement No. 11.* Other Requirement No. 11 (now No. 17) has been revised to include low volume waste stream, metal cleaning waste, and flow from the secondary ash pond as wastestreams authorized to flow to the evaporation pond.

7. *To update the description of the groundwater Quality Assessment Plan in Other Requirement No. 13.* Other Requirement No. 13 (now No. 21) has been revised based on the recommendations from the Water Quality Assessment Team made in the Interoffice Memorandum dated April 29, 2021.

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

1. Pages 3-13 were updated (May 2021 version).
2. The footnotes in the effluent page for Outfall 001 have been re-numbered.
3. Other Requirement No. 1 has been updated to include revised minimum analytical levels (MALs) from June 2010 *Procedures to Implement the Texas Surface Water Quality Standards.*
4. The terms defined in Other Requirements have been revised to be consistent with the terms in the current version of 40 CFR Part 423.
5. Other Requirement No. 11 (now No.17) was revised to remove leachate as an authorized wastestream flowing to the Primary Ash Pond (Pond No. 1) and the Secondary Ash Pond (Pond No. 2). The leachate was included in the existing

permit based on the construction of Unit 2. The facility has requested removal of all references to Unit 2, because Unit 2 was never constructed and does not have plans to construct Unit 2 in the near future. The table was revised. An additional column was added to indicate the designated outfalls associated with each pond.

6. Other Requirement No. 12 (now No. 19) has been revised to include the updated pond language. Existing Other Requirement No. 18 is now included in No. 19.

7. Existing Other Requirement No. 17 has been deleted from the permit because it is no longer applicable.

8. Existing Other Requirement No. 21 has been deleted from the permit because it is no longer applicable.

9. Other Requirement No. 22 was incorporated in the effluent limitation pages for outfalls discharging domestic wastewater and has been deleted.

10. Added Other Requirement No. 24 to address cooling water intake structure requirements under CWA §316(b).

11. Other Requirement No. 12 has been revised. The requirement prohibits the discharge of fly ash transport water on or after December 31, 2023, except those discharges to which 40 CFR §423.13(k)(2) applies or when the fly ash transport water is used in the flue gas desulfurization (FGD) scrubber, in accordance with 40 CFR §423.13(h)(2). The TCEQ has selected a compliance date of December 31, 2023 to allow the permittee adequate time to raise needed capital, plan and design systems, procure equipment, and construct and test system upgrades. The TCEQ acknowledges current disruptions to supply chains as a result of COVID-19. The compliance date of December 31, 2023 provides the time necessary to appropriately budget the capital expense and allow for the design, procurement, construction, and commissioning of equipment to adhere with the final rule and to address the discharge of fly ash transport water generated prior to December 31, 2023.

12. The permittee submitted on October 1, 2021 a Notice of Planned Participation (NOPP) as required in 40 CFR §423.19(f)(2) demonstrating that the Unit 1 at the Coleto Creek Power Plant qualifies as an electric generating unit that will achieve permanent cessation of coal combustion by December 31, 2028. Therefore, Other Requirement No. 26 has been added to the draft permit, which prohibits the discharge of bottom ash transport water after December 31, 2028.

    The permit must submit an annual progress report, where it will identify completed milestones, and update remaining milestones to be completed in accordance with 40 CFR §§423.19(f)(3) and (4). The annual progress report must be submitted by the end of September of each year, until the project has been completed, but no later than 180 days after December 31, 2028.

13. Added Other Requirement No. 25, which require the permittee to sample and analyze the discharge via Outfall 001 within 60 days of permit issuance once a representative sample is collected.

14. Added Other Requirement No. 27, which allows the permittee to amend the permit in accordance with 40 CFR §122.62(a)(3), to reflect updated effluent limitation guidelines following any revision of 40 CFR Part 423.

15. New See Other Requirement No. 28 has been added to the draft permit suspending the reporting requirements according to 30 TAC §§ 319.1-319.12 and any additional effluent reporting requirements contained in the permit are suspended from the effective date of the permit until startup of discharge via internal Outfall. The draft permit included the requirement to submit a written notice to the TCEQ at least forty-five days prior to anticipated discharge via internal Outfall 101, on Notification of Completion Form 20007.

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 applied to the TCEQ for a major amendment to Permit No. WQ0002159000 to authorize the discharge of coal pile runoff via new internal Outfall 301; to change Outfalls 002 and 003 to internal Outfalls 101 and 201; to remove the Final Phase from Outfall 001, which authorizes the discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) from Units 1 and 2 at a daily average flow not exceed 1,155 MGD; to remove all references to Unit 2 from the permit; to remove Pond 5 - Leachate Pond and other references to leachate from the combustion byproduct storage area for Unit 2 from Other Requirement No. 11; to list all the wastestreams authorized for disposal in the Evaporation Pond in Other Requirement No. 11; to update Other Requirement No. 13 to reflect that a Groundwater Monitoring Plan was submitted to and approved by the TCEQ; and to renew Other Requirement No. 15 regarding the thermal component of the discharge and references within the requirement to alternative standards under PL 92-500 316(a).

The existing permit authorizes the discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) from Unit 1 at a daily average flow not to exceed 557 MGD via Outfall 001 in the Interim Phase; once-through cooling water (condenser cooling water and auxiliary cooling water) from Units 1 and 2 at a daily average flow not to exceed 1,155 MGD via Outfall 001 in the Final Phase; treated domestic wastewater at a daily average flow not to exceed 0.10 MGD via Outfall 002; and ash transport waster commingled with low volume waste sources, metal cleaning waste, stormwater runoff, and leachate from the combustion byproduct storage area on an intermittent and flow-variable basis via Outfall 003.

B. WATER QUALITY SUMMARY

Discharge Route

The discharge route is directly to Coleto Creek Reservoir, which is part of Coleto Creek in Segment No. 1807 of the Guadalupe River Basin. The designated uses for Segment No. 1807 are primary contact recreation, public water supply, and high aquatic life use. Effluent limitations and conditions established in the draft permit comply 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 can be found at Section X.D. of this fact sheet.

Antidegradation Review
In accordance with 30 TAC § 307.5 and TCEQ's *Procedures to Implement the Texas Surface Water Quality Standards* (June 2010), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Coleto Creek, which has been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

Endangered Species Review
The discharge from this permit 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's) biological opinion on the State of Texas authorization of the 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's biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

Impaired Water Bodies
Segment No. 1807 is not currently listed on the state's inventory of impaired and threatened waters, the 2020 Clean Water Act Section 303(d) list.

Completed Total Maximum Daily Loads (TMDLs)
There are no completed TMDLs for Segment No. 1807.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

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

The draft permit authorizes the discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) from Unit 1 and previously monitored effluents (PMEs) (treated domestic wastewater, fly ash and bottom ash transport water, low volume waste sources, metal cleaning waste, stormwater runoff, and coal pile runoff) at a daily average flow not to exceed 557 MGD via Outfall 001; treated domestic wastewater at a daily average flow not to exceed 0.010 MGD via internal Outfall 101; fly ash and bottom ash transport water commingled with low volume waste sources, metal cleaning waste, and stormwater runoff on an intermittent and flow-variable basis via internal Outfall 201; and coal pile runoff and treated domestic wastewater from internal Outfall 101 on an intermittent and flow-variable basis via internal Outfall 301.

The discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) via Outfall 001, fly ash and bottom ash transport water, low volume waste sources, metal cleaning waste via internal Outfall 201, and coal pile runoff via internal Outfall 301 from this facility is subject to federal effluent limitation guidelines at 40 CFR Part 423. A new source determination was performed, and the discharge of once-through cooling water, fly ash and bottom ash transport water, low volume waste sources, metal cleaning waste, coal pile runoff are not a new source as defined at 40 CFR §122.2. Therefore, new source performance standards (NSPS) are not required for this discharge.

The discharge of domestic wastewater via internal Outfall 101 and 301 is subject to federal effluent limitation guidelines at 40 CFR Part 133 Secondary Treatment Regulation and 30 TAC Chapter 309.

The discharge of stormwater runoff via internal Outfall 201 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment.

Make-up cooling water for the Coleto Creek Power Plant is from the Coleto Creek Reservoir. Make-up water for potable water and boiler water treatment system originate from two onsite wells. The wastewater system at this facility consists of once-through cooling water (condenser cooling water and auxiliary cooling water), treated domestic wastewater, fly ash and bottom ash transport water, low volume waste sources, metal cleaning waste, stormwater runoff, and coal pile runoff.

Once-through cooling water is used to cool and condense waste streams for reuse and circulates continuously when the plant is generating electricity. Water is pumped from the Perdido Creek arm of the Reservoir into the condensers after passing through traveling intake screens. Once-through cooling water is not treated before discharge via Outfall 001; however, the water cools through a series of flumes before reaching the main part of the Reservoir. The circulating flow is periodically chlorinated upstream of the condensers to control biofouling.

Domestic wastewater is treated in an onsite package activated sludge treatment plant (activated sludge, clarification, and chlorination) and discharged via internal Outfall 101 or routed to the coal pile runoff pond for use in dust suppression.

Coleto Creek has four impoundments: Pond No. 1 (primary ash pond) receives low volume waste sources (water fraction from the oil water separators located through the plant, boiler blowdown, lab wastewater, plant drain wastewater, sump wastewater, air preheater wash wastewater, plant drain wastewater, sump wastewater, air preheater wash wastewater, boiler wash wastewater, electrostatic precipitator wash wastewater, condenser polishing regenerate, molybdate wash wastewater, and demineralizer wastewater), metal cleaning waste, fly ash and bottom ash transport water, and stormwater runoff; Pond 2 (secondary ash pond) receives clarified water from Pond No. 1 and either discharges via internal Outfall 201, is recirculated to the ash handling system as make-up for sluice, or routed to the Evaporation Pond (Pond No. 4). Pond No. 3 collects coal pile runoff where coal dust settles out, is also authorized to receive treated domestic wastewater from internal Outfall 101, and either discharges via internal Outfall 301 or routed

to Pond No. 4. Pond No. 4 receives low volume waste sources, metal cleaning waste, and effluent from Ponds No. 2 and No. 3. There is no discharge from Pond No. 4 to surface waters or any other pond.

2. CALCULATIONS

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

3. 316(B) COOLING WATER INTAKE STRUCTURES

Section 316(b) of the Clean Water Act (CWA) requires facilities to use the Best Technology Available (BTA) for minimizing Impingement Mortality and Entrainment (IM & E). Revised regulations in 40 CFR Part 125, Subpart J, published in the Federal Register on August 15, 2014, outline BTA for minimizing IM & E and establish standards for compliance with Section 316(b). The revised regulations apply to existing point source facilities that use a CWIS designed to withdraw 2.0 MGD or more from waters of the United States (WOTUS) and use 25 percent or more of the water withdrawn exclusively for cooling purposes.

a. SCREENING

Coleto Creek Power (owner) owns and Guadalupe-Blanco River Authority (GBRA)(Operator), operates the cooling water intake structure (CWIS) located on the Coleto Creek Reservoir, in Victoria and Goliad Counties, to obtain water for cooling purposes. The facility is subject to the requirements of Section 316(b) of the CWA because the CWIS withdraws more than 2 MGD of water from waters of the United States and more than 25% of the water withdrawn (actual intake flow) is used for cooling purposes within the facility.

Coleto Creek Reservoir is a cooling water impoundment and the facility's CWIS is operated in a manner consistent with a closed-cycle recirculating system (CCRS), as defined at 40 CFR § 125.92(c), withdrawing surface water for make-up purposes only.

The operation of a CCRS (i.e., cooling water impoundment) reduces withdrawals from surface waters effectively, thereby reducing the impingement and entrainment of aquatic organisms. The facility meets Best Technology Available standards. The executive director will review this determination upon receipt of additional information in accordance with 40 CFR § 122.21(r); 40 CFR Part 125, Subpart J; or both; as applicable.

b. PERMIT ACTION

Existing Other Requirement No. 25 (now No. 24) has been revised to include definitions for CCRS and actual intake flow, monitoring requirements, and record-keeping requirements. Additionally, the draft permit requires the permittee to notify the TCEQ of any changes in the method cooling water is obtained. Upon receipt of such notification, the

TCEQ may reopen the permit to include additional terms and conditions as necessary

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

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

2. AQUATIC LIFE CRITERIA

a. SCREENING

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

Acute freshwater criteria are applied at the edge of the zone of initial dilution (ZID), and chronic freshwater criteria are applied at the edge of the aquatic life mixing zone. The ZID for this discharge is defined as volume within a radius of 25 feet from the point where the discharge enters Coleto Creek Reservoir. The aquatic life mixing zone for this discharge is defined as volume within a radius of 200 feet from the point where the discharge enters Coleto Creek Reservoir.

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

effluent percentages are calculated based on the two-year maximum monthly average flow of 554 MGD:

Acute Effluent %	100%	Chronic Effluent %	100%

General Screening Procedures

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 lognormal 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-specific values for TSS, pH, hardness, and chloride according to the IPs. The segment values are 3.9 mg/L for TSS, 7.8 standard units for pH, 108 mg/L for hardness (as calcium carbonate, $CaCO_3$), and 75 mg/L for chloride. For additional details on the calculation of water quality-based effluent limitations, refer to the IPs.

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 equals or 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 equals or exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

Analytical data reported for Outfall 001 in the application was screened against calculated water quality-based effluent limitations for the protection of aquatic life. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for aquatic life protection. However, monitoring and reporting requirements for total copper have been added to the draft permit.

The permittee has requested a major amendment to change Outfalls 002 and 003 to internal Outfalls 101 and 201. Existing Outfall 003 (now

internal Outfall 201) has effluent limits for total copper based on water quality criteria; TCEQ typically does not include water quality effluent limits at internal outfalls. Therefore, a monitoring and reporting requirement has been included at Outfall 001 wich will self-expired a month before the permit expiration date. In addition, Other Requirement No. 25, has been included in the draft permit for analytical data be submitted within 90 days of discharge via Outfall 001.

3. WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA (7-DAY CHRONIC)

a. SCREENING AND REASONABLE POTENTIAL ANALYSIS

The existing permit includes chronic freshwater biomonitoring requirements at Outfall 001.

In the past three years, the permittee has performed nine chronic tests, with zero demonstrations of significant toxicity (i.e., zero failures).

A reasonable potential determination was performed in accordance with 40 CFR §122.44(d)(1)(ii) to determine whether the discharge will reasonably be expected to cause or contribute to an exceedance of a state water quality standard or criterion within that standard. Each test species is evaluated separately. The reasonable potential determination is based on representative data from the previous three years of chronic whole effluent toxicity (WET) testing. This determination was performed in accordance with the methodology outlined in the TCEQ letter to the EPA dated December 28, 2015 and approved by the EPA in a letter dated December 28, 2015.

With zero failures, a determination of no reasonable potential was made. WET limits are not required, and both test species may be eligible for the testing frequency reduction after one year of quarterly testing.

b. PERMIT ACTION

The provisions of this section apply to Outfall 001.

Based on information contained in the permit application, the 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 toxicity testing (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 survival and reproduction test using the water flea (*Ceriodaphnia dubia*). The frequency of the testing shall be 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 *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 latest revision. 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, or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

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

c. DILUTION SERIES

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

The dilution series outlined above was calculated using a 0.75 factor applied to the critical dilution. The critical dilution is the estimated effluent dilution at the edge of the aquatic life mixing zone, which is discussed 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 requirements for Outfall 001. In the past three years, the permittee has performed ten 24-hour acute tests, with zero demonstrations of

significant mortality (i.e., zero failures). Minimum 24-hour acute freshwater biomonitoring requirements are proposed in the draft permit as outlined below.

b. PERMIT ACTION

Twenty-four-hour 100% acute biomonitoring tests are required at Outfall 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 (*Ceriodaphnia dubia* or *Daphnia pulex*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

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

Toxicity tests shall be performed in accordance with protocols described in *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 latest revision.

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIA

a. SCREENING

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of fish tissue found in Table 2 of the *Texas Surface Water Quality Standards* (30 TAC Chapter 307).

Fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into lakes and reservoirs. The human health mixing zone for this discharge is defined as a volume within a radius of 200 feet from the point where the discharge enters Coleto Creek Reservoir. TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edge of the human health mixing zone for discharges greater than 10 MGD into lakes or reservoirs. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentage is calculated based on the two-year average monthly average flow of 420 MGD:

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

Analytical data reported for Outfall 001 in the application was screened against calculated water quality-based effluent limitations for the protection of human health. Reported analytical data does not exceed 70 percent of the calculated daily average water quality-based effluent limitation for human health protection. No additional limits or monitoring and reporting requirements have been added to the draft permit.

6. DRINKING WATER SUPPLY PROTECTION

a. SCREENING

Segment No. 1807, which receives the discharge(s) from this facility, is designated as a public water supply source. The screening procedure used to calculate water quality-based effluent limitations and determine the need for effluent limitations or monitoring requirements is identical to the procedure outlined in Section X.D.5.a of this fact sheet. Criteria in the "Water and Fish" section of Table 2 are based on either the drinking water standard or the combined effects of ingestion of drinking water and fish tissue. Effluent limitations or monitoring requirements to protect the drinking water supply (and other human health effects) were previously calculated and outlined in section X.D.5.b of this fact sheet.

b. PERMIT ACTION

Criteria in the "Water and Fish" section of Table 2 do not distinguish if the criteria are based on drinking water standard or the combined effects of ingestion of drinking water and fish tissue. Effluent limitations or monitoring requirements to protect the drinking water supply (and other human health effects) were previously calculated and outlined in section X.D.5.b of this fact sheet.

7. TOTAL DISSOLVED SOLIDS, CHLORIDE, AND SULFATE STANDARDS PROTECTION

a. SCREENING

Average concentrations of TDS, chloride, and sulfate reported in the application are all less than the respective criteria for Segment No. 1807; therefore, no further screening is necessary.

b. PERMIT ACTION

None.

8. PROTECTION OF pH STANDARDS

a. SCREENING

Outfall 001
Once-through cooling water is discharged via Outfall 001. There are no pH technology-based effluent limits requirements for the discharge of once-through cooling water, therefore, no pH screening was performed for this outfall.

Internal Outfall 101, 201, and 301
No screening was performed for these internal outfalls. However, pH technology-based effluent limits between 6.0 and 9.0 standards units are included in the draft permit at internal Outfalls 101, 201, and 301.

b. PERMIT ACTION

Outfall 001
None.

Internal Outfalls 101, 201, and 301
pH limits between 6.0 and 9.0 standard units are included in the draft permit at internal Outfalls 101, 201, and 301.

9. DISSOLVED OXYGEN (DO) PROTECTION

a. SCREENING

As documented in the TCEQ Interoffice Memorandum dated September 22, 2021, from the Water Quality Assessment Team to Industrial Permits Team, due to the low level of oxygen demanding constituents indicated for Outfall 001, the significant dilution expected of the waste streams previously discharged via Outfalls 002 and 003 (proposed internal Outfalls 101 and 201), no significant DO are anticipated in the receiving waters as a result of this discharge. However, due to the applicability of the statewide lake rule, the existing Outfall 002 (now internal Outfall 101) and the proposed internal Outfall 301 are subject to effluent limits of 10 mg/L BOD_5 and 4.0 mg/L DO, as prescribed by the rule's requirements relating to treated domestic wastewater discharges.

b. PERMIT ACTION

The following effluent limits at internal Outfalls 101 and 301 have been included:

Outfall	BOD_5				TSS			
	Daily Avg		Daily Max		Daily Avg		Daily Max	
	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L	lbs/day	mg/L
101	0.834	10	2.92	35	1.25	15	5.01	60
301	N/A	10	N/A	60	1.25	15	5.01	50

10. BACTERIA STANDARDS PROTECTION

a. SCREENING

Treated domestic wastewater is authorized for discharge via internal Outfall 101 and 301. Based on 30 TAC Chapter 307 and 309, protection from human pathogens is required.

b. PERMIT ACTION

Effluent limits for *E. coli* have been established at internal Outfall 101 and 301. A one-year compliance period is being established for *E. coli* in accordance with 30 TAC §307.2(f).

11. THERMAL STANDARDS PROTECTION

a. SCREENING

The temperature criteria for Segment No. 1807 is 93 °F. The existing permit and draft permit have the following sets of temperature limits at Outfall 001, based on the reservoir elevation.

Reservoir Elevation	Daily Avg	Daily Max
≥94 feet mean sea level	108 °F	110 °F
≤94 feet mean sea level	106 °F	110 °F

These temperature limitations were approved on previous permits based on an antidegradation review of the receiving waters performed by the Water Quality Standards Team, which stated that existing uses will be maintained and protected.

b. PERMIT ACTION

Existing temperature limits have been continued in the draft permit. Temperature limits may be revised at a future date.

XI. PRETREATMENT REQUIREMENTS

This facility is not defined as a publicly owned treatment works. 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 reviewing 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, the Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the executive director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment and is not a contested case proceeding.

After the public comment deadline, the executive director prepares a response to all significant public comments on the application, or the draft permit raised during the public comment period. The chief clerk then mails the executive director's response to comments and final decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person is not satisfied with the executive director's response and decision, they can request a contested case hearing or file a request to reconsider the executive director's decision within 30 days after the notice is mailed.

The executive director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the executive director's response to comments and final decision is mailed. If a hearing request or request for reconsideration is filed, the executive director will not issue the permit and will forward the application and request to the TCEQ commissioners for their consideration at a scheduled commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the executive director calls a public meeting or the commission grants a contested case hearing as described above, the commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the commission will consider all public comments in making its decision and shall either adopt the executive director's response to public comments or prepare its own response.

For additional information about this application, contact Michael Abraha Redda at (512) 239-4631.

XIV. ADMINISTRATIVE RECORD

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

A. PERMIT

TPDES Permit No. WQ0002159000 issued on January 4, 2010.

B. APPLICATION

TPDES wastewater permit application received on November 10, 2020 and additional information received on February 19, 2021.

C. 40 CFR CITATION(S)

40 CFR Part 423 (BPT, BCT, and BAT).

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

Letter dated April 29, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for thermal evaluation procedures).

Letter dated May 12, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for thermal evaluation procedures).

Letter dated May 28, 2014, from L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for pH evaluation procedures).

Letter dated June 2, 2014, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for pH evaluation procedures).

Letter dated December 28, 2015, from L'Oreal Stepney, P.E., Deputy Director, Office of Water, TCEQ, to Bill Honker, Director, Water Quality Protection Division, EPA (TCEQ proposed development strategy for procedures to determine reasonable potential for whole effluent toxicity limitations).

Letter dated December 28, 2015, from William K. Honker, P.E., Director, Water Quality Protection Division, EPA, to L'Oreal W. Stepney, P.E., Deputy Director, Office of Water, TCEQ (Approval of TCEQ proposed development strategy for procedures to determine reasonable potential for whole effluent toxicity limitations).

TCEQ Interoffice Memorandum dated February 5, 2021, from Jeff Paull of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Standards Memo).

TCEQ Interoffice Memorandum dated March 29, 2021, from Katie Cunningham of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Critical Conditions Memo).

TCEQ Interoffice Memorandum dated September 22, 2021 (supersedes and replaces the one dated April 23, 2021), from Gunnar Dubke, P.E. of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Modeling Memo).

TCEQ Interoffice Memorandum dated April 29, 2021, from Michael B. Pfeil of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Biomonitoring Memo).

TCEQ Interoffice Memorandum dated April 29, 2021, from Amanda Pirani, P.G. of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Geology Memo).

Letter dated February 19, 2021, from Renee Collins, Luminant Generation Company LLC, to Mónica Báez of the Industrial Permits Team, Wastewater Permitting Section (Analytical Data for Outfall 001).

Electronic correspondence between Ryan Bayle, Luminant Generation Company LLC, to Mónica Báez of the Industrial Permits Team, Wastewater Permitting Section on March 17, 2022 and July 6, 2022 (comments on the draft permit).

E. MISCELLANEOUS

The *State of Texas 2014 Integrated Report* – Texas 303(d) List (Category 5), TCEQ, November 19, 2015.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective March 1, 2018, as approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective March 6, 2014, as approved by EPA Region 6, for portions of the 2018 standards not approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective July 22, 2010, as approved by EPA Region 6, for portions of the 2014 standards not yet approved by EPA Region 6.

Texas Surface Water Quality Standards, 30 TAC §§307.1 - 307.10, TCEQ, effective August 17, 2000, and Appendix E, effective February 27, 2002, for portions of the 2010 standards not yet approved by EPA Region 6.

Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013).

Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition (EPA-821-R-02-012).

Procedures to Implement the Texas Surface Water Quality Standards, TCEQ, June 2010, as approved by EPA Region 6.

Procedures to Implement the Texas Surface Water Quality Standards, TCEQ, January 2003, for portions of the 2010 IPs not approved by EPA Region 6.

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

Appendix A
Calculated Technology-Based Effluent Limits

Coleto Creek Power, LP operates the Coleto Creek Power Station, a coal-fired electric generating facility. The facility has one unit with a net 650-megawatt capacity. This facility is subject to 40 CFR Part 423 – Steam Electric Power Generating Point Source Category. The facility commenced operations in 1978, therefore, the facility is not subject to New Source Performance Standards (NSPS).

Outfall 001

The draft permit authorizes the discharge of once-through cooling water (condenser cooling water and auxiliary cooling water) and previously monitored effluent (treated domestic wastewater, fly ash and bottom ash transport water, low volume waste sources, metal cleaning waste, stormwater runoff, and coal pile runoff) at a daily average flow not to exceed 557 million gallons per day (MGD).

a. Once-Through Cooling Water (condenser cooling water and auxiliary cooling water) – Effluent limitations for free available chlorine (FAC) are required according to best practicable control technology (BPT) - 40 CFR §423.12(b)(6), and effluent limitations for total residual chlorine (TRC) are required according to best available technology (BAT) - 40 CFR §423.13(b)(1) – For a plant with a total rated electric generating capacity of 25 or more megawatts.

FAC: Daily Average = 0.2 mg/L
Daily Maximum = 0.5 mg/L

The permitted flow is used to calculate the mass limits as follows [see 40 CFR §423.12(b)(6)]:

Loadings, lbs/day = (limit, mg/L) x (daily average flow, MGD) x (8.345) x (2 hrs/24 hrs)

Daily Average (lbs/day) = (0.2 mg/L) x (557 MGD) x (8.345)/12 = 77.5 lbs/day
Daily Maximum (lbs/day) = (0.5 mg/L) x (557 MGD) x (8.345/12 = 194 lbs/day

TRC: Daily Average = N/A
Daily Maximum = 0.2 mg/L

The permittee flow is used to calculate the mass limits as follows [see 40 CFR §423.13(b)(1)]:

Loadings, lbs/day = (limit, mg/L) x (daily average flow, MGD) x (8.345) x (2 hrs/24 hrs) x (Units)

Daily Maximum (lbs/day) = (0.2 mg/L) x (557 MGD) x (8.345) x (1)/12 = 77.5 lbs/day

pH – The pH of all discharges, except once-through cooling water, shall be within the range of 6.0 to 9.0 in accordance with 40 CFR §423.12 (b)(1).

The newly calculated technology-based limitations for Outfall 001 are less stringent than the effluent limitations in the existing permit. Therefore, the existing effluent limitations at Outfall 001 for FAC and TRC are continued in the draft permit from the existing permit as follow:

Outfall	Parameter	Daily Average	Daily Maximum
001	FAC	0.2 mg/L	0.5 mg/L
		77.4 lbs/day	193 lbs/day
	TRC	N/A	0.2 mg/L
			77.4 lbs/day

Internal Outfall 101

The draft permit authorizes the discharge of treated domestic wastewater at a daily average flow not to exceed 0.010 MGD. Technology-based effluent limits are based on 40 CFR Part 133 and 30 TAC §§ 309.3-4. The permittee has requested a major amendment to change the external Outfall 002 to internal Outfall 101, the following effluent limits are continued from existing permit at Outfall 002 (now internal Outfall 101):

Outfall	Parameter	Daily Average		Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
101	BOD_5	0.834	10	2.92	35
	TSS	1.25	15	5.01	60
	DO	4.0 (minimum)		N/A	
	Chlorine Residual	1.0 mg/L (minimum)		4.0 mg/L (maximum)	
	pH	Between 6.0 and 9.0 SU			

Internal Outfall 201

The draft permit authorizes the discharge of fly ash and bottom ash transport water commingled with low volume waste sources, metal cleaning waste, and stormwater runoff on an intermittent and flow-variable basis.

The discharge of stormwater runoff is not subject to 40 CFR Part 423.

a. Fly ash and bottom ash transport water – Effluent limitations for TSS and oil and grease are required according to 40 CFR §423.12(b)(4)[BPT], and effluent limitations for pH are required according to 40 CFR §423.12(b)(1) [BPT]:

TSS: Daily Average = 30 mg/L
TSS: Daily Maximum = 100 mg/L

Oil and Grease: Daily Average = 15 mg/L
Oil and Grease: Daily Maximum = 20 mg/L

pH: Between 6.0 and 9.0 SU

BAT effluent limit guidelines in 40 CFR § 423.13(h)(1)(i) states that except for discharges to which 40 CFR §423.13(h)(2) applies or when the fly ash transport water is used in the FGD scrubber, there shall be no discharge of pollutant in fly ash transport water on or after December 31, 2023.

BAT effluent limit guidelines in 40 CFR § 423.13(k)(1)(i) states that except for discharges to which 40 CFR §423.13(k)(2) applies or when the bottom ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in bottom ash transport water on or after December 31, 2028.

b. Low Volume Waste Sources – Effluent limitations for TSS and oil and grease are required according to 40 CFR §423.12(b)(3) [BPT], an effluent limitations for pH are required according to 40 CFR §423.12(b)(1) [BPT]:

TSS: Daily Average = 30 mg/L
Daily Maximum = 100 mg/L

Oil and grease: Daily Average = 15 mg/L
Daily Maximum = 20 mg/L

pH: Between 6.0 and 9.0 SU

c. Metal Cleaning Wastes – Effluent limitations for TSS, oil and grease, total copper, and total iron are required according to 40 CFR §423.12(b)(5) [BPT], and effluent limitations for pH are required according to 40 CFR §423.12(b)(1) [BPT]:

TSS:	Daily Average = 30 mg/L Daily Maximum = 100 mg/L
Oil and grease:	Daily Average = 15 mg/L Daily Maximum = 20 mg/L
Copper, Total:	Daily Average = 1.0 mg/L Daily Maximum = 1.0 mg/L[1]
Iron, Total:	Daily Average = 1.0 mg/L Daily Maximum = 1.0 mg/L
pH:	Between 6.0 and 9.0 SU

The daily average of 0.5 mg/L total copper in 30 TAC §319.22 Quality Levels-Inland Waters for total copper is more protective and is placed in the draft permit instead of daily average of 1.0 mg/L.

The following effluent limits are proposed at internal Outfall 201:

Outfall	Parameter	Daily Average	Daily Maximum
201	TSS	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	Total Copper	0.5 mg/L	1.0 mg/L
	Total Iron	1.0 mg/L	1.0 mg/L
	pH	Between 6.0 and 9.0 SU	

Internal Outfall 301

The draft permit authorizes the discharge of coal pile runoff and treated domestic wastewater from internal Outfall 301 on an intermittent and flow-variable basis. Technology-based effluent limits for BOD_5, DO, chloride residual, and pH are based on 40 CFR Part 133 and 30 TAC §§309.3-4. Daily maximum effluent limit for TSS are required according to best practicable control technology (BPT) - 40 CFR §423.12(b)(9), and effluent limitations for pH are required according to 40 CFR §423.12(b)(1) [BPT]:

TSS:	Daily Average = N/A Daily Maximum = 50 mg/L

The following effluent limits are proposed at internal Outfall 301

Outfall	Parameter	Daily Average	Daily Maximum
301	BOD_5	N/A	45 mg/L
	TSS	15 mg/L	50 mg/L
	pH	Between 6.0 and 9.0 SU	

Appendix B
Calculated Water Quality-Based Effluent Limits
Outfall 001

TEXTOX MENU #4 - LAKE OR RESERVOIR

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

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
Table 2, 2018 Texas Surface Water Quality Standards for Human Health
"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	Coleto Creek Power, LLC
TPDES Permit No:	WQ0002159000
Outfall No:	001
Prepared by:	Mónica Báez
Date:	September 3, 2021

DISCHARGE INFORMATION

Receiving Waterbody:	Coleto Creek Reservoir	
Segment No.:	1807	
TSS (mg/L):	3.9	Values from updated IPs dated 2021.
pH (Standard Units):	7.8	Values from updated IPs dated 2021.
Hardness (mg/L as $CaCO_3$):	108	Values from updated IPs dated 2021.
Chloride (mg/L):	75	Values from updated IPs dated 2021.
Effluent Flow for Aquatic Life (MGD):	557	
% Effluent for Chronic Aquatic Life (Mixing Zone):	100	
% Effluent for Acute Aquatic Life (ZID):	100	
Effluent Flow for Human Health (MGD):	557	
% Effluent for Human Health:	100	
Human Health Criterion (select: PWS, FISH, or INC	PWS	

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

Lake/Reservoir Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	177224.12	0.591		1.00	Assumed
Cadmium	6.55	-0.92	1014426.44	0.202		1.00	Assumed
Chromium (total)	6.34	-0.27	1514999.73	0.145		1.00	Assumed
Chromium (trivalent)	6.34	-0.27	1514999.73	0.145		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.90	828021.96	0.236		1.00	Assumed
Lead	6.31	-0.53	992511.98	0.205		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	777662.04	0.248		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	590477.64	0.303		1.00	Assumed
Zinc	6.52	-0.68	1312429.75	0.163		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*FW Acute Criterion (µg/L)*	*Chronic Criterion (µg/L)*	*WLAa (µg/L)*	*WLAc (µg/L)*	*LTAa (µg/L)*	*LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Aldrin	3.0	N/A	3.00	N/A	0.96	N/A	1.41	2.99
Aluminum	991	N/A	991	N/A	317	N/A	466	986
Arsenic	340	150	575	254	184	155	227	481
Cadmium	9.25	0.260	45.8	1.29	14.7	0.78	1.15	2.4
Carbaryl	2.0	N/A	2.00	N/A	0.64	N/A	0.94	1.99
Chlordane	2.4	0.004	2.40	0.004	0.77	0.002	0.004	0.008
Chlorpyrifos	0.083	0.041	0.083	0.041	0.027	0.025	0.037	0.078
Chromium (trivalent)	607	78.9	4192	545	1342	333	489	1035
Chromium (hexavalent)	15.7	10.6	15.7	10.6	5.02	6.5	7.4	15.6
Copper	15.27	10.11	64.6	43	20.7	26	30.4	64.3
Cyanide (free)	45.8	10.7	45.8	10.7	14.7	6.5	9.6	20.3
4,4'-DDT	1.1	0.001	1.10	0.0010	0.352	0.0006	0.0009	0.0019
Demeton	N/A	0.1	N/A	0.100	N/A	0.061	0.090	0.19
Diazinon	0.17	0.17	0.17	0.17	0.054	0.104	0.080	0.169
Dicofol [Kelthane]	59.3	19.8	59.3	20	19.0	12.1	17.8	37.6
Dieldrin	0.24	0.002	0.24	0.002	0.077	0.0012	0.002	0.004
Diuron	210	70	210	70	67	43	63	133
Endosulfan I (*alpha*)	0.22	0.056	0.220	0.056	0.070	0.034	0.050	0.106
Endosulfan II (*beta*)	0.22	0.056	0.220	0.056	0.070	0.034	0.050	0.106
Endosulfan sulfate	0.22	0.056	0.220	0.056	0.070	0.034	0.050	0.106
Endrin	0.086	0.002	0.086	0.002	0.028	0.0012	0.002	0.004
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.010	N/A	0.006	0.009	0.019
Heptachlor	0.52	0.004	0.520	0.004	0.166	0.002	0.004	0.008
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	0.08	1.13	0.080	0.360	0.049	0.072	0.15
Lead	70.2	2.74	342	13.3	109	8.1	12.0	25
Malathion	N/A	0.01	N/A	0.010	N/A	0.006	0.009	0.019
Mercury	2.4	1.3	2.40	1.30	0.77	0.79	1.13	2.39
Methoxychlor	N/A	0.03	N/A	0.030	N/A	0.018	0.027	0.057
Mirex	N/A	0.001	N/A	0.0010	N/A	0.0006	0.0009	0.0019
Nickel	500	55.5	2015	224	645	137	201	425
Nonylphenol	28	6.6	28.0	6.6	9.0	4.0	5.9	12.5
Parathion (ethyl)	0.065	0.013	0.065	0.013	0.021	0.008	0.012	0.025
Pentachlorophenol	19.5	14.95	19.5	15.0	6.24	9.1	9.17	19.4
Phenanthrene	30	30	30.0	30	9.6	18	14.1	29.9
Polychlorinated Biphenyls [PCBs]	2.0	0.014	2.00	0.014	0.64	0.009	0.013	0.027
Selenium	20	5	20.0	5.0	6.4	3.1	4.5	9.5
Silver	0.8	N/A	16.77	N/A	5.37	N/A	7.89	16.69
Toxaphene	0.78	0.0002	0.78	0.0002	0.250	0.0001	0.0002	0.0004
Tributyltin [TBT]	0.13	0.024	0.130	0.024	0.042	0.015	0.022	0.046
2,4,5 Trichlorophenol	136	64	136	64	43.5	39	57	121
Zinc	125.1	126.1	765	772	245	471	360	762

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Criterion (µg/L)*	*Fish Only Criterion (µg/L)*	*Fish Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Acrylonitrile	1.0	115	1150	1.0	0.9	1.4	2.9
Aldrin	1.146E-05	1.147E-05	1.147E-04	1.15E-05	1.07E-05	1.57E-05	3.31E-05
Anthracene	1109	1317	13170	1109	1031	1516	3208
Antimony	6	1071	10710	6.0	5.6	8	17
Arsenic	10	N/A	N/A	17	16	23	49
Barium	2000	N/A	N/A	2000	1860	2734	5785
Benzene	5	581	5810	5.0	4.7	6.8	14
Benzidine	0.0015	0.107	1.07	0.002	0.001	0.002	0.004
Benzo(*a*)anthracene	0.024	0.025	0.25	0.024	0.022	0.033	0.069
Benzo(*a*)pyrene	0.0025	0.0025	0.025	0.003	0.002	0.003	0.007
Bis(chloromethyl)ether	0.0024	0.2745	2.745	0.002	0.002	0.003	0.007
Bis(2-chloroethyl)ether	0.60	42.83	428.3	0.60	0.56	0.8	1.7
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phth	6	7.55	75.5	6.0	5.6	8	17
Bromodichloromethane [Dichlorobromomethane	10.2	275	2750	10.20	9.49	14	30
Bromoform [Tribromomethane]	66.9	1060	10600	67	62	91	193
Cadmium	5	N/A	N/A	25	23	34	72
Carbon Tetrachloride	4.5	46	460	4.5	4.2	6.2	13
Chlordane	0.0025	0.0025	0.025	0.003	0.002	0.003	0.007
Chlorobenzene	100	2737	27370	100	93	137	289
Chlorodibromomethane [Dibromochloromethane	7.5	183	1830	7.5	7.0	10	22
Chloroform [Trichloromethane]	70	7697	76970	70	65	96	202
Chromium (hexavalent)	62	502	5020	62	58	85	179
Chrysene	2.45	2.52	25.2	2.5	2.3	3.3	7.1
Cresols [Methylphenols]	1041	9301	93010	1041	968	1423	3011
Cyanide (free)	200	N/A	N/A	200	186	273	578
4,4'-DDD	0.002	0.002	0.02	0.002	0.002	0.003	0.006
4,4'-DDE	0.00013	0.00013	0.0013	0.0001	0.0001	0.0002	0.0004
4,4'-DDT	0.0004	0.0004	0.004	0.0004	0.0004	0.0005	0.0012
2,4'-D	70	N/A	N/A	70	65	96	202
Danitol [Fenpropathrin]	262	473	4730	262	244	358	758
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	0.17	0.16	0.23	0.49
m-Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	322	299	440	931
o-Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	600	558	820	1735
p-Dichlorobenzene [1,4-Dichlorobenzene]	75	N/A	N/A	75	70	103	217
3,3'-Dichlorobenzidine	0.79	2.24	22.4	0.79	0.73	1.1	2.3
1,2-Dichloroethane	5	364	3640	5.0	4.7	6.8	14
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	7.0	6.5	10	20
Dichloromethane [Methylene Chloride]	5	13333	133330	5.0	4.7	6.8	14
1,2-Dichloropropane	5	259	2590	5.0	4.7	6.8	14
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	2.8	2.6	3.8	8
Dicofol [Kelthane]	0.30	0.30	3	0.30	0.28	0.41	0.9
Dieldrin	2.0E-05	2.0E-05	2.0E-04	2.00E-05	1.86E-05	2.73E-05	5.78E-05
2,4-Dimethylphenol	444	8436	84360	444	413	607	1284
Di-*n*-Butyl Phthalate	88.9	92.4	924	89	83	122	257
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	7.80E-08	7.25E-08	1.07E-07	2.26E-07

HUMAN HEALTH-continued

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Criterion (µg/L)*	*Fish Only Criterion (µg/L)*	*Fish Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Endrin	0.02	0.02	0.2	0.020	0.019	0.027	0.058
Epichlorohydrin	53.5	2013	20130	54	50	73	155
Ethylbenzene	700	1867	18670	700	651	957	2025
Ethylene Glycol	46744	1.68E+07	1.68E+08	46744	43472	63904	135198
Fluoride	4000	N/A	N/A	4000	3720	5468	11569
Heptachlor	8.0E-05	0.0001	0.001	0.0001	0.0001	0.0001	0.0002
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.0003	0.0003	0.0004	0.0008
Hexachlorobenzene	0.00068	0.00068	0.0068	0.0007	0.0006	0.001	0.002
Hexachlorobutadiene	0.21	0.22	2.2	0.21	0.20	0.29	0.61
Hexachlorocyclohexane (*alpha*)	0.0078	0.0084	0.084	0.008	0.007	0.011	0.023
Hexachlorocyclohexane (*beta*)	0.15	0.26	2.6	0.15	0.14	0.21	0.43
Hexachlorocyclohexane (*gamma*) [Lindane]	0.2	0.341	3.41	0.20	0.19	0.27	0.58
Hexachlorocyclopentadiene	10.7	11.6	116	11	10	15	31
Hexachloroethane	1.84	2.33	23.3	1.8	1.7	2.5	5.3
Hexachlorophene	2.05	2.90	29	2.1	1.9	2.8	5.9
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	1092	1016	1493	3158
Lead	1.15	3.83	38.3	5.6	5.2	8	16
Mercury	0.0122	0.0122	0.122	0.012	0.011	0.017	0.035
Methoxychlor	2.92	3.0	30	2.9	2.7	4.0	8
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	13865.00	12894.45	18954.84	40102
Methyl *tert*-butyl ether [MTBE]	15	10482	104820	15	14	21	43
Nickel	332	1140	11400	1339	1245	1830	3873
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	10000	9300	13671	28923
Nitrobenzene	45.7	1873	18730	46	43	62	132
N-Nitrosodiethylamine	0.0037	2.1	21	0.004	0.003	0.005	0.011
N-Nitroso-di-*n*-Butylamine	0.119	4.2	42	0.12	0.11	0.16	0.34
Pentachlorobenzene	0.348	0.355	3.55	0.35	0.32	0.48	1.0
Pentachlorophenol	0.22	0.29	2.9	0.22	0.20	0.30	0.64
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.0006	0.0006	0.001	0.002
Pyridine	23	947	9470	23	21	31	67
Selenium	50	N/A	N/A	50	47	68	145
1,2,4,5-Tetrachlorobenzene	0.23	0.24	2.4	0.23	0.21	0.31	0.67
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	1.6	1.5	2.2	4.7
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	5.0	4.7	6.8	14
Thallium	0.12	0.23	2.3	0.12	0.11	0.16	0.35
Toluene	1000	N/A	N/A	1000	930	1367	2892
Toxaphene	0.011	0.011	0.11	0.011	0.010	0.015	0.032
2,4,5-TP [Silvex]	50	369	3690	50	47	68	145
1,1,1-Trichloroethane	200	784354	7843540	200	186	273	578
1,1,2-Trichloroethane	5	166	1660	5.0	4.7	6.8	14
Trichloroethylene [Trichloroethene]	5	71.9	719	5.0	4.7	6.8	14
2,4,5-Trichlorophenol	1039	1867	18670	1039	966	1420	3005
TTHM [Sum of Total Trihalomethanes]	80	N/A	N/A	80	74	109	231
Vinyl Chloride	0.23	16.5	165	0.23	0.21	0.31	0.67

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

Aquatic Life *Parameter*	*70% of Daily Avg. (µg/L)*	*85% of Daily Avg. (µg/L)*
Aldrin	0.99	1.20
Aluminum	326	396
Arsenic	159	193
Cadmium	0.81	0.98
Carbaryl	0.66	0.80
Chlordane	0.003	0.003
Chlorpyrifos	0.026	0.031
Chromium (trivalent)	342	416
Chromium (hexavalent)	5.17	6.3
Copper	21.3	25.8
Cyanide (free)	6.7	8.2
4,4'-DDT	0.0006	0.0008
Demeton	0.063	0.076
Diazinon	0.056	0.068
Dicofol [Kelthane]	12.4	15.1
Dieldrin	0.0013	0.0015
Diuron	44	53
Endosulfan I (*alpha*)	0.035	0.043
Endosulfan II (*beta*)	0.035	0.043
Endosulfan sulfate	0.035	0.043
Endrin	0.0013	0.0015
Guthion [Azinphos Methyl]	0.006	0.008
Heptachlor	0.003	0.003
Hexachlorocyclohexane (*gamma*) [Lindane]	0.050	0.061
Lead	8.4	10.2
Malathion	0.006	0.008
Mercury	0.79	0.96
Methoxychlor	0.019	0.023
Mirex	0.0006	0.0008
Nickel	141	171
Nonylphenol	4.1	5.0
Parathion (ethyl)	0.008	0.010
Pentachlorophenol	6.42	7.79
Phenanthrene	9.9	12.0
Polychlorinated Biphenyls [PCBs]	0.009	0.011
Selenium	3.1	3.8
Silver	5.52	6.70
Toxaphene	0.00013	0.00015
Tributyltin [TBT]	0.015	0.018
2,4,5 Trichlorophenol	40.2	48.8
Zinc	252	306

Human Health Parameter	*70% of Daily Avg. (µg/L)*	*85% of Daily Avg. (µg/L)*
Acrylonitrile	1.0	1.2
Aldrin	1.10E-05	1.33E-05
Anthracene	1061	1289
Antimony	5.7	7.0
Arsenic	16	20
Barium	1914	2324
Benzene	4.8	5.8
Benzidine	0.001	0.002
Benzo(*a*)anthracene	0.023	0.028
Benzo(*a*)pyrene	0.002	0.003
Bis(chloromethyl)ether	0.002	0.003
Bis(2-chloroethyl)ether	0.57	0.70
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phth	5.7	7.0
Bromodichloromethane [Dichlorobromomethane	10	12
Bromoform [Tribromomethane]	64	78
Cadmium	24	29
Carbon Tetrachloride	4.3	5.2
Chlordane	0.002	0.003
Chlorobenzene	96	116
Chlorodibromomethane [Dibromochloromethane	7.2	9
Chloroform [Trichloromethane]	67	81
Chromium (hexavalent)	59	72
Chrysene	2.3	2.8
Cresols [Methylphenols]	996	1210
Cyanide (free)	191	232
4,4'-DDD	0.002	0.002
4,4'-DDE	0.0001	0.0002
4,4'-DDT	0.0004	0.0005
2,4'-D	67	81
Danitol [Fenpropathrin]	251	304
1,2-Dibromoethane [Ethylene Dibromide]	0.16	0.20
m-Dichlorobenzene [1,3-Dichlorobenzene]	308	374
o-Dichlorobenzene [1,2-Dichlorobenzene]	574	697
p-Dichlorobenzene [1,4-Dichlorobenzene]	72	87
3,3'-Dichlorobenzidine	0.76	0.9
1,2-Dichloroethane	4.8	5.8
1,1-Dichloroethylene [1,1-Dichloroethene]	6.7	8
Dichloromethane [Methylene Chloride]	4.8	5.8
1,2-Dichloropropane	4.8	5.8
1,3-Dichloropropene [1,3-Dichloropropylene]	2.7	3.3
Dicofol [Kelthane]	0.29	0.35
Dieldrin	1.91E-05	2.32E-05
2,4-Dimethylphenol	425	516
Di-*n*-Butyl Phthalate	85	103
Dioxins/Furans [TCDD Equivalents]	7.46E-08	9.06E-08

Human Health-continued	*70% of Daily Avg.*	*85% of Daily Avg.*
Parameter	*(µg/L)*	*(µg/L)*
Endrin	0.019	0.023
Epichlorohydrin	51	62
Ethylbenzene	670	813
Ethylene Glycol	44733	54318
Fluoride	3828	4648
Heptachlor	0.00008	0.00009
Heptachlor Epoxide	0.0003	0.0003
Hexachlorobenzene	0.0007	0.0008
Hexachlorobutadiene	0.20	0.24
Hexachlorocyclohexane (*alpha*)	0.007	0.009
Hexachlorocyclohexane (*beta*)	0.14	0.17
Hexachlorocyclohexane (*gamma*) [Lindane]	0.19	0.23
Hexachlorocyclopentadiene	10	12
Hexachloroethane	1.8	2.1
Hexachlorophene	2.0	2.4
4,4'-Isopropylidenediphenol [Bisphenol A]	1045	1269
Lead	5.4	7
Mercury	0.012	0.014
Methoxychlor	2.8	3.4
Methyl Ethyl Ketone	13268	16112
Methyl *tert*-butyl ether [MTBE]	14	17
Nickel	1281	1556
Nitrate-Nitrogen (as Total Nitrogen)	9570	11620
Nitrobenzene	44	53
N-Nitrosodiethylamine	0.004	0.004
N-Nitroso-di-*n*-Butylamine	0.11	0.14
Pentachlorobenzene	0.33	0.40
Pentachlorophenol	0.21	0.26
Polychlorinated Biphenyls [PCBs]	0.0006	0.0007
Pyridine	22	27
Selenium	48	58
1,2,4,5-Tetrachlorobenzene	0.22	0.27
1,1,2,2-Tetrachloroethane	1.6	1.9
Tetrachloroethylene [Tetrachloroethylene]	4.8	5.8
Thallium	0.11	0.14
Toluene	957	1162
Toxaphene	0.011	0.013
2,4,5-TP [Silvex]	48	58
1,1,1-Trichloroethane	191	232
1,1,2-Trichloroethane	4.8	5.8
Trichloroethylene [Trichloroethene]	4.8	5.8
2,4,5-Trichlorophenol	994	1207
TTHM [Sum of Total Trihalomethanes]	77	93
Vinyl Chloride	0.22	0.27

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

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

Outfall	*Pollutant*	*Technology-Based*				*Water Quality-Based*				*Existing Permit*			
		Daily Avg		*Daily Max*		*Daily Avg*		*Daily Max*		*Daily Avg*		*Daily Max*	
		lbs/day	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*
001	Flow	557 MGD		560 MGD		---		---		**557 MGD**		**560 MGD**	
	Temperature	---		---		---		---		**108[1] °F**		**110 °F**	
	Temperature	---		---		---		---		**106[2] °F**		**110 °F**	
	Free Available Chlorine	77.4	0.2	---	---	---	---	---	---	**77.4**	**0.2**	**193**	**0.5**
	Total Residual Chlorine	N/A	N/A	77.4	0.2	---	---	---	---	**N/A**	**N/A**	**77.4**	**0.2**
	Total Copper	---	---	---	---	---	**Report[3]**	---	**Report[3]**	---	---	---	---
	Reservoir Elevation (feet-mean Mean Level)	---		---		---		---		**(Report)**		**(Report)**	
101	Flow	0.010 MGD		0.012 MGD		---		---		**0.010 MGD**		**0.012 MGD**	
	Biochemical Oxygen Demand, 5-day (BOD_5)	0.834	10	2.92	35	---	---	---	---	**0.834**	**10**	**2.92**	**35**
	Total Suspended Solids	1.25	15	5.01	60	---	---	---	---	**1.25**	**15**	**5.01**	**60**
	E. coli[4]	---		---		**Report[5]**		**Report[5]**		---		---	
	E. coli[6]	---		---		**126[5]**		**399[5]**		---		---	
	Chlorine Residual	N/A	1.0	N/A	4.0	---	---	---	---	N/A	**1.0**	N/A	**4.0**
	Dissolved Oxygen	---	4.0, min	---	---	---	4.0, min	---	---	---	**4.0, min**	---	---
	pH	6.0 SU (min)		9.0 SU (max)		---		---		**6.0 SU (min)**		**9.0 SU (max)**	

[1] Applicable when the reservoir elevation is greater than 94 feet mean sea level.
[2] Applicable when the reservoir elevation is less than or equal to 94 feet mean sea level.
[3] Monitoring and reporting requirements for total copper, will expire one month before the permit expiration date.
[4] Beginning from the date of permit issuance and lasting 364 days from the date of permit issuance.
[5] Bacteria levels are expressed in colony forming units (CFU) or most probable number (MPN) per 100 mL.
[6] Beginning 365 days from the date of permit issuance.

Outfall	*Pollutant*	*Technology-Based*				*Water Quality-Based*				*Existing Permit*			
		Daily Avg		*Daily Max*		*Daily Avg*		*Daily Max*		*Daily Avg*		*Daily Max*	
		lbs/day	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*
201	Flow	Report, MGD		Report, MGD		---		---		**Report, MGD**		**Report, MGD**	
	Total Suspended Solids	---	30	---	100	---	---	---	---	---	**30**	---	**100**
	Oil and Grease	---	15	---	20	---	---	---	---	---	**15**	---	**20**
	Total Copper	---	**0.5**[1]	---	**1.0**	---	---	---	---	---	0.057	---	0.121
	Total Iron	---	1.0	---	1.0	---	---	---	---	---	**1.0**		**1.0**
	pH	6.0 SU (min)		9.0 SU (max)		---		---		**6.0 SU (min)**		**9.0 SU (max)**	

Outfall	*Pollutant*	*Technology-Based*		*Water Quality-Based*		*Existing Permit*	
		Daily Avg	*Daily Max*	*Daily Avg*	*Daily Max*	*Daily Avg*	*Daily Max*
		mg/L	*mg/L*	*mg/L*	*mg/L*	*mg/L*	*mg/L*
301	Flow	**Report, MGD**	**Report, MGD**	---	---	---	---
	BOD_5	**N/A**	**45**	---	---	---	---
	Total Suspended Solids	**15**	**50**	---	---	---	---
	E. coli[2]	---	---	**Report**[3]	**Report**[3]	---	---
	E. coli[4]	---	---	**126**[3]	**399**[3]	---	---
	pH	**6.0 SU (min)**	**9.0 SU (max)**	---	---	---	---

[1] 30 TAC §319.22
[2] Beginning from the date of permit issuance and lasting 364 days from the date of permit issuance.
[3] Bacteria levels are expressed in colony forming units (CFU) or most probable number (MPN) per 100 mL.
[4] Beginning 365 days from the date of permit issuance.

TPDES PERMIT NO.
WQ0002159000
[For TCEQ office use only -
EPA I.D. No. TX0070068]

This major amendment replaces TPDES Permit No. WQ0002159000, issued on January 4, 2010.

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

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code
and 40 CFR Part 423

Coleto Creek Power, LLC

whose mailing address is

6555 Sierra Drive
Irving, Texas 75039

is authorized to treat and discharge wastes from Coleto Creek Power Station, a coal-fired steam electric generating facility (SIC 4911)

located at 45 Farm-to-Market Road 2987, near the Town of Fannin, Goliad County, Texas 77960

directly to Coleto Creek Reservoir, which is part of Coleto Creek in Segment No. 1807 of the Guadalupe 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, five years from the date of permit issuance.

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge once-through cooling water (condenser cooling water and auxiliary cooling water) from Unit 1 and previously monitored effluent (treated domestic wastewater, fly ash and bottom ash transport water, low volume waste sources, metal cleaning waste, stormwater runoff, and coal pile runoff) subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 557 million gallons per day (MGD). The daily maximum flow shall not exceed 560 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/L	lbs/day	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	Report, MGD		Report, MGD		N/A	Continuous	Record [1]
Temperature	108 [2,3] °F		110 [3] °F		110 °F	Continuous	Record
Temperature	106 [3,4] °F		110 [3] °F		110 °F	Continuous	Record
Free Available Chlorine [5]	77.4	0.2	193	0.5	0.5	1/week [6]	Grab
Total Residual Chlorine [7]	N/A	N/A	77.4	0.2	0.2	1/week [6]	Grab
Total Copper	Report [8]	Report [8]	Report [8]	Report [8]	N/A	1/month	Grab
Reservoir Elevation (feet-mean sea level) [9]	(Report)		(Report)		N/A	1/day	Record

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

3. Effluent monitoring samples shall be taken at the following location: At Outfall 001, where once-through cooling water is discharged from the canal that discharges to the Coleto Creek Reservoir.

[1] Flow may be calculated from pump curve data.
[2] Applicable when the reservoir elevation is greater than 94 feet mean sea level.
[3] See Other Requirement No. 4.
[4] Applicable when the reservoir elevation is less than or equal to 94 feet mean sea level.
[5] See Other Requirement No. 8.
[6] Samples must be representative of periods of chlorination.
[7] See Other Requirement No. 9.
[8] Monitoring and reporting requirements for total copper, will expire one month before the permit expiration date.
[9] See Other Requirement No. 2.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 101[1]

1. During the period beginning upon the date of permit issuance and lasting through the date of permit 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 0.010 million gallons per day (MGD). The daily maximum flow shall not exceed 0.012 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/L	lbs/day	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	0.010 MGD		0.012 MGD		N/A	1/day	Estimate
Biochemical Oxygen Demand, 5-day	0.834	10	2.92	35	35	1/week	Grab
Total Suspended Solids	1.25	15	5.01	60	60	1/week	Grab
E. coli [2]	Report [3]		Report [2]		N/A	1/week	Grab
E. coli [4]	126 [2]		399 [2]		399 [2]	1/week	Grab

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

3. The effluent must contain a minimum dissolved oxygen of 4.0 mg/L and must be monitored once per week by grab sample.

4. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week, by grab sample.

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

6. Effluent monitoring samples shall be taken at the following location: At Outfall 101, the effluent from the treatment facility prior to mixing with any other wastestreams.

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[1] See Other Requirement No. 28.
[2] Beginning from the date of permit issuance and lasting for 364 days from the date of permit issuance.
[3] Bacteria levels are expressed in colony-forming units (CFU) or most probable number (MPN) per 100 mL.
[4] Beginning 365 days from the date of permit issuance.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 201

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge fly ash transport water [1] and bottom ash transport water [2], low volume waste sources [3], metal cleaning waste [4], stormwater runoff subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day	Estimate
Total Suspended Solids	30	100	100	1/week	Grab
Oil and Grease	15	20	20	1/week	Grab
Total Copper	0.5	1.0	1.0	1/week	Grab
Total Iron	1.0	1.0	1.0	1/week	Grab

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 by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 201, the effluent from the secondary ash pond prior to mixing with once-through cooling water and discharge to Coleto Creek Reservoir.

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[1] See Other Requirement No. 12. Except for discharges to which 40 CFR §423.13(h)(2) applies or when the fly ash transport water is used in the FGD scrubber, there shall be no discharge of pollutant in fly ash transport water on or after December 31, 2023.

[2] See Other Requirement Nos. 13 and 26. Except for discharges to which 40 CFR §423.13(k)(2) applies or when the bottom ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in bottom ash transport water on or after December 31, 2028.

[3] See Other Requirement No. 10.

[4] See Other Requirement No. 11.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 301

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge coal pile runoff [1] and previously monitored effluent (treated domestic wastewater[2] from internal Outfall 101) subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day	Estimate
Biochemical Oxygen Demand [3]	N/A	45	65	1/month	Grab
Total Suspended Solids	N/A	50	50	1/week	Grab
E. coli [3,4]	Report [5]	Report [5]	Report [5]	1/week	Grab
E. coli [3,6]	126 [5]	399 [5]	399 [5]	1/week	Grab

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 by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 301, the effluent from the coal pile retention pond prior to mixing with once-through cooling water and discharge to Coleto Creek Reservoir.

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[1] See Other Requirement No. 15.
[2] See Other Requirement No. 28.
[3] Samples must be taken when there is a discharge from internal Outfall 101. See Other Requirement No. 28.
[4] Beginning from the date of permit issuance and lasting for 364 days from the date of permit issuance.
[5] Bacteria levels are expressed in colony-forming units (CFU) or most probable number (MPN) per 100 mL.
[6] Beginning 365 days from the date of permit issuance.

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

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

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

3. Sample Type

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

   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 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, effluent monitoring data 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 submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be 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; TWC 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 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. For Publicly Owned Treatment Works (POTWs), effective September 1, 2020, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. 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 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 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; or

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

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

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

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

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

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

5. Permit Transfer

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

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

6. Relationship to Hazardous Waste Activities

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

7. Relationship to Water Rights

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

8. Property Rights

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

9. Permit Enforceability

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

10. Relationship to Permit Application

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

11. Notice of Bankruptcy.

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

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

    b. This notification must indicate:

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

OPERATIONAL REQUIREMENTS

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

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

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

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

   b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment 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, 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 or upgrading of the domestic wastewater treatment 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 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 219) 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 14 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 14 and Compliance Monitoring Team (MC 224):

Pollutant
Copper (Total)

Test methods used must be sensitive enough to demonstrate compliance with the permit effluent limitations. If an effluent limit for a pollutant is less than the MAL, then the test method for that pollutant must be sensitive enough to demonstrate compliance at the MAL. Permit compliance/noncompliance determinations will be based on the effluent limitations contained in this permit, with consideration given to the MAL for the pollutants specified above.

Pollutant	MAL[1] (mg/L)
Copper (Total)	0.002
Iron (Total)	0.007

When an analysis of an effluent sample for a pollutant 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 shall be used for that measurement when making calculations 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 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 for ___[list pollutant(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 pollutant 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 pollutant, the level of detection achieved shall be used for that measurement when making calculations for the self-reporting form. A zero may not be used.

2. Reservoir elevation in the vicinity of the must be recorded on a daily basis to the nearest 0.1 foot (ft) mean sea level (msl). The permittee must report the maximum, minimum, and average elevation for each month on the NetDMR reporting system available through the TCEQ website.

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

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

[1] Minimum analytical level.

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

The *daily average temperature* must be calculated as the arithmetic average of all FWATs calculated during the calendar month.

The *daily maximum temperature* must be established as the highest FWAT calculated during the calendar month.

5. For continuous temperature measurements taken in accordance with page 2 of this permit, the reporting requirements in MONITORING AND REPORTING REQUIREMENT, Item 7 may be omitted if the continuously recorded temperature does not exceed the Daily Maximum temperature for more than 30 minutes for any single exceedance and not more than a total of 7 hours and 26 minutes in any calendar month.

6. The thermal component of this discharge is subject to review for compliance with Texas Water Quality Standards or qualification to alternative standards under PL 92-500 316(a).

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

8. FREE AVAILABLE CHLORINE

   A. The term *free available chlorine* (FAC) means the value obtained using any of the *chlorine-free available* methods in Table IB in 40 CFR §136.3(a) where the method has the capability of measuring free available chlorine, or other methods approved by the permitting authority.

   B. 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 discharge free available or total residual chlorine at any one time unless the permittee can demonstrate to the permitting agency that the units in a particular location cannot operate at or below this level of chlorination.

   C. Daily mass loading of FAC must be calculated using the following equation:

   $$\text{FAC (lbs/day)} = \text{FAC (mg/L)} \times \text{flow (MGD)} \times 8.345 \times (2 \text{ hours}/24 \text{ hours})$$

   where: FAC (mg/L) = concentration of FAC measured in the effluent during representative period of chlorination.

   flow (MGD) = total actual flow of discharge via outfall during sampling day

9. The term *total residual chlorine* (or total residual oxidants for intake water with bromides) means the value obtained using any of the *chlorine-total residual* methods in Table IB in 40 CFR §136.3(a), or other methods approved by the permitting authority.

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

   Simultaneous multi-unit chlorination is permitted.

10. The term *low volume waste sources* means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in this part. Low volume waste sources include, but are not limited to, the following: Wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition.

11. The term *metal cleaning waste* means any wastewater resulting from cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.

12. The term *fly ash* means the ash that is carried out of the furnace by a gas stream and collected by a capture device such as a mechanical precipitator, electrostatic precipitator, or fabric filter. Economizer ash is included in this definition when it is collected with fly ash. Ash is not included in this definition when it is collected in wet scrubber air pollution control systems whose primary purpose is particulate removal.

    Except for discharges to which 40 CFR §423.13(h)(2) applies or when the fly ash transport water is used in the FGD scrubber, there shall be no discharge of pollutants in fly ash transport water on and after December 31, 2023. Prior to this compliance date, whenever fly ash transport water is used in any other plant process or is sent to a treatment system at the plant (except when it is used in the FGD scrubber), the resulting effluent must comply with the discharge limitations in this permit

13. The term *bottom ash* means the ash, including boiler slag, which settles in the furnace or is dislodged from furnace walls. Economizer ash is included in this definition when it is collected with bottom ash.

14. The term *transport water* means any wastewater that is used to convey fly ash, bottom ash, or economizer ash from the ash collection or storage equipment, or boiler, and has direct contact with the ash. Transport water does not include low volume, short duration discharges of wastewater from minor leaks (*e.g.,* leaks from valve packing, pipe flanges, or piping), minor maintenance events (*e.g.,* replacement of valves or pipe sections), FGD paste equipment cleaning water, or bottom ash purge water.

15. The term *coal pile runoff* means the rainfall from or through any coal storage pile.

    Any untreated overflow from facilities designed, constructed and operated to treat the volume of *coal pile runoff* which is associated with a 10-year, 24-hour rainfall event is not subject to the total suspended solids limitations specified at Page 2c of this permit.

    The term *10 year, 24/hour rainfall event* means a rainfall event with a probable recurrence interval of once in ten years as defined by the National Weather Service in Technical Paper No. 40. *Rainfall Frequency Atlas of the United States*, May 1961 or equivalent regional rainfall probability information developed therefrom.

16. The term *flue gas desulfurization (FGD) wastewater* means any wastewater generated specifically from the wet flue gas desulfurization scrubber system that comes in contact with the flue gas or the FGD solids, including but not limited to, the blowdown from the FGD scrubber system, overflow or underflow from the solids separation process, FGD solids wash water, and the filtrate from the solids dewatering process. Wastewater generated from cleaning the FGD scrubber, cleaning FGD solids separation equipment, cleaning FGD solids dewatering equipment, or that is collected in

floor drains in the FGD process area is not considered FGD wastewater.

This permit does not authorize the discharge of FGD wastewater.

17. The following table describes the ponds currently used at the Coleto Creek Power Station:

Pond	Wastewater	Storage Capacity (acre-feet)	Type of Liner	Leak Detection System	Associated Outfall Number
Primary Ash Pond (Pond No. 1)	ATW, LVW, MCW	2701	Clay	MW	N/A (Pond No. 2)
Secondary Ash Pond (Pond No. 2)	ATW, LVW, MCW	304	Clay	MW	201
Coal Pile Retention Pond (Pond No. 3)	CPR, treated domestic wastewater	135	Clay	MW	301
Evaporation Pond (Pond No. 4)	MCW, LVW and wastewater from Pond Nos. 2 and 3.	250	Clay	MW	N/A (Evaporation Pond)

Legend:

ATW = Ash Transport Water (fly ash and bottom ash)
LVW = Low Volume Waste Source
MCW = Metal Cleaning Waste
CPR = Coal Pile Runoff
MW = Monitoring Well

18. There shall be no discharge from the Evaporation Pond (Pond No. 4) to surface water or routed to any other pond.

19. A wastewater pond must comply with the following requirements. A wastewater pond (or lagoon) is an earthen structure used to evaporate, hold, store, or treat water that contains a *waste* or *pollutant* or that would cause *pollution* upon *discharge* as those terms are defined in Texas Water Code § 26.001, but does not include a pond that contains only stormwater.

A. A wastewater pond **subject to 40 CFR Part 257, Subpart D** (related to coal combustion residuals) must comply with those requirements in lieu of the requirements in B through G of POND REQUIREMENTS.

B. An **existing** wastewater pond must be maintained to meet or exceed the original approved design and liner requirements; or, in the absence of original approved requirements, must be maintained to prevent unauthorized discharges of wastewater into or adjacent to water in the state. The permittee shall maintain copies of all liner construction and testing documents at the facility or in a reasonably accessible location and make the information available to the executive director upon request.

C. A **new** wastewater pond constructed after the issuance date of this permit must be lined in compliance with one of the following requirements if it will contain process wastewater as defined in 40 CFR § 122.2. The executive director will review ponds that will contain only non-process wastewater on a case-by-case basis to determine whether the pond must be lined. If a pond will contain only non-process wastewater, the owner shall notify the Industrial Permits Team (MC 148) to obtain a written determination at least 90 days before the pond is placed into service and copy the TCEQ Compliance Monitoring Team (MC 224) and regional office. The permittee must submit all information about the proposed pond contents that is reasonably necessary for the executive director to make a determination. If the executive director determines that a pond does not need to be lined, then the pond is exempt from C(1) through C(3) and D through G of POND REQUIREMENTS.

A wastewater pond that only contains domestic wastewater must comply with the design requirements in 30 TAC Chapter 217 and 30 TAC § 309.13(d) in lieu of items C(1) through C(3) of this subparagraph.

(1) Soil liner: The soil liner must contain clay-rich soil material (at least 30% of the liner material passing through a #200 mesh sieve, liquid limit greater than or equal to 30, and plasticity index greater than or equal to 15) that completely covers the sides and bottom of the pond. The liner must be at least 3.0 feet thick. The liner material must be compacted in lifts of no more than 8 inches to 95% standard proctor density at the optimum moisture content in accordance with ASTM D698 to achieve a permeability less than or equal to 1×10^{-7} (≤ 0.0000001) cm/sec. For in-situ soil material that meets the permeability requirement, the material must be scarified at least 8 inches deep and then re-compacted to finished grade.

(2) Synthetic membrane: The liner must be a synthetic membrane liner at least 40 mils in thickness that completely covers the sides and the bottom of the pond. The liner material used must be compatible with the wastewater and be resistant to degradation (e.g., from ultraviolet light, chemical reactions, wave action, erosion, etc.). The liner material must be installed and maintained in accordance with the manufacturer's guidelines. A wastewater pond with a synthetic membrane liner must include an underdrain with a leak detection and collection system.

(3) Alternate liner: The permittee shall submit plans signed and sealed by a Texas-licensed professional engineer for any other equivalently protective pond lining method to the TCEQ Industrial Permits Team (MC 148) and copy the regional office.

D. For a pond that must be lined according to subparagraph C (including ponds with in-situ soil liners), the permittee shall provide certification, signed and sealed by a Texas-licensed professional engineer, stating that the completed pond lining and any required underdrain with leak detection and collection system for the pond meet the requirements in subparagraph C(1) – C(3) before using the pond. The certification shall include the following minimum details about the pond lining system: (1) pond liner type (in-situ soil, amended in-situ soil, imported soil, synthetic membrane, or alternative), (2) materials used, (3) thickness of materials, and (4) either permeability test results or a leak detection and collection system description, as applicable.

The certification must be provided to the TCEQ Water Quality Assessment Team (MC 150), Industrial Permits Team (MC 148), and regional office. A copy of the liner certification and construction details (i.e., as-built drawings, construction QA/QC documentation, and post construction testing) must be kept on-site or in a reasonably accessible location (in either hardcopy or digital format) until the pond is closed.

E. Protection and maintenance requirements for a pond subject to subparagraph B or C (including ponds with in-situ soil liners).

(1) The permittee shall maintain a liner to prevent the unauthorized discharge of wastewater into or adjacent to water in the state.

(2) A liner must be protected from damage caused by animals. Fences or other protective devices or measures may be used to satisfy this requirement.

(3) The permittee shall maintain the structural integrity of the liner and shall keep the liner and embankment free of woody vegetation, animal burrows, and excessive erosion.

(4) The permittee shall inspect each pond liner and each leak detection system at least once per month. Evidence of damage or unauthorized discharge must be evaluated by a Texas-licensed professional engineer or Texas-licensed professional geoscientist within 30 days. The permittee is not required to drain an operating pond or to inspect below the waterline during these routine inspections.

a. A Texas-licensed professional engineer or Texas-licensed professional geoscientist must evaluate damage to a pond liner, including evidence of an unauthorized discharge without visible damage.

b. Pond liner damage must be repaired at the recommendation of a Texas-licensed professional engineer or Texas-licensed professional geoscientist. If the damage is significant or could result in an unauthorized discharge, then the repair must be documented and certified by a Texas-licensed professional engineer. Within 60 days after a repair is completed, the liner certification must be provided to the TCEQ Water Quality Assessments Team (MC 150) and regional office. A copy of the liner certification must be maintained at the facility or in a reasonably accessible location and made available to the executive director upon request.

c. A release determination and subsequent corrective action will be based on 40 CFR Part 257 or the Texas Risk Reduction Program (30 TAC Chapter 350), as applicable. If evidence indicates that an unauthorized discharge occurred, including evidence that the actual permeability exceeds the design permeability, the matter may also be referred to the TCEQ Enforcement Division to ensure the protection of the public and the environment.

F. For a pond subject to subparagraph B or C (including ponds with in-situ soil liners), the permittee shall have a Texas-licensed professional engineer perform an evaluation of each pond that requires a liner at least once every five years. The evaluation must include: (1) a physical inspection of the pond liner to check for structural integrity, damage, and evidence of leaking; (2) a review of the liner documentation for the pond; and (3) a review of all documentation related to liner repair and maintenance performed since the last evaluation. For the purposes of this evaluation, evidence of leaking also includes evidence that the actual permeability exceeds the design permeability. The permittee is not required to drain an operating pond or to inspect below the waterline during the evaluation. A copy of the engineer's evaluation report must be maintained at the facility or in a reasonably accessible location and made available to the executive director upon request.

G. For a pond subject to subparagraph B or C (including ponds with in-situ soil liners), the permittee shall maintain at least 2.0 feet of freeboard in the pond except when:

(1) the freeboard requirement temporarily cannot be maintained due to a large storm event that requires the additional retention capacity to be used for a limited period of time;

(2) the freeboard requirement temporarily cannot be maintained due to upset plant conditions that require the additional retention capacity to be used for treatment for a limited period of time; or

(3) the pond was not required to have at least 2.0 feet of freeboard according to the requirements at the time of construction.

20. The permittee must notify the Corrective Action Section (MC 127) of the Reclamation Division, in writing, at least 90 days prior to discontinuing use of any surface impoundment, pit, or basin authorized by this permit. The permittee must, at the request of the Executive Director, submit such information as is necessary to evaluate closure of the waste management unit(s) including, but not limited to, chemical analyses of bottom sediments, soils, and groundwater samples.

21. The permittee must implement the Groundwater Quality Assessment Plan "*the Plan*" dated November 2009, and any modifications that are approved by the TCEQ.

The permittee must submit, in writing, any request to modify the Plan to the Water Quality Assessment Team (MC 150) for review and approval. The request must include appropriate data and justification supporting the modification, as appropriate. The Executive Director may modify the Plan to ensure protection of groundwater quality.

Permittee must compile the results of the groundwater monitoring in a report to be submitted to the Water Quality Assessment Team (MC 150) and TCEQ Corpus Christi Region (MC Region 14) by September 30th of each year. The annual report must include laboratory reports, a summary of the groundwater data with trend analysis, annual potentiometric surface maps and a discussion of the results.

22. The chronic aquatic life mixing zone is defined as a volume within a radius of 100 feet from the point of discharge. Chronic toxic criteria apply at the edge of the chronic aquatic life mixing zone.

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

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the TCEQ Compliance Monitoring Team (MC-224), by the 25th 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 submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

24. COOLING WATER INTAKE STRUCTURE REQUIREMENTS

A. Specialized Definitions

(1) Actual Intake Flow (AIF), as defined at 40 CFR § 125.92(a), means the average volume of water withdrawn on an annual basis by the cooling water intake structures over the past three years. After October 14, 2019, AIF means the average volume of water

withdrawn on an annual basis by the cooling water intake structures over the previous five years. Actual intake flow is measured at a location within the *cooling water intake structure* that the Director deems appropriate. The calculation of actual intake flow includes days of zero flow. AIF does not include flows associated with emergency and fire suppression capacity.

(2) Closed Cycle Recirculating System (CCRS), as defined as 40 CFR § 125.92(c), means a system designed and properly operated using minimized make-up and blowdown flows withdrawn from a water of the United States to support contact or non-contact cooling uses within a facility, or a system designed to include certain impoundments. A closed-cycle recirculating system passes cooling water through the condenser and other components of the cooling system and reuses the water for cooling multiple times.

i. CCRS also includes a system with impoundments of waters of the United States (WOTUS). where the impoundment was constructed prior to October 14, 2014 and created for the purpose of serving as part of the cooling water system as documented in the project purpose statement for any required Clean Water Act section 404 permit obtained to construct the impoundment. In the case of an impoundment whose construction pre-dated the CWA requirement to obtain a section 404 permit, documentation of the project's purpose must be demonstrated to the satisfaction of the Director. This documentation could be some other license or permit obtained to lawfully construct the impoundment for the purposes of a cooling water system, or other such evidence as the Director finds necessary. For impoundments constructed in uplands or not in WOTUS, no documentation of a section 404 or other permit is required. If WOTUS are withdrawn for purposes of replenishing losses to a CCRS other than those due to blowdown, drift, and evaporation from the cooling system, the Director may determine a cooling system is a CCRS if the facility demonstrates to the satisfaction of the Director that make-up water withdrawals attributed specifically to the cooling portion of the cooling system have been minimized.

B. Monitoring Requirements

The permittee shall adhere to the requirements of 40 CFR § 125.96 when the CWIS is in operation. Specifically, the facility shall:

(1) monitor actual intake flow, as defined at 40 CFR § 125.92(a), withdrawn by CWIS for cooling purposes, including cooling water withdrawals and make-up water withdrawals, on a daily basis; and

(2) conduct visual or remote inspections on a weekly basis, as required by 40 CFR § 125.96(e).

Alternatives to the procedures described at 40 CFR § 125.96(e) have not been approved by the TCEQ. Requests for alternative procedures must be submitted in writing to the TCEQ Industrial Permits Team (MC 148) for review and approval.

Results of monitoring activities conducted during the term of this permit must be submitted to the TCEQ with the subsequent renewal permit application, as required by 40 CFR §122.21(r).

C. Record-Keeping Requirements

Records (e.g. electronic logs, data acquisition system records, operating procedures, operator logs, etc.) documenting the operation and maintenance described above shall be kept on site

until the subsequent permit is issued, per the requirements of 40 CFR § 125.97(d), and made available to TCEQ personnel upon request.

D. Changes to the Cooling Water Intake Structure

The facility must notify the TCEQ Industrial Permits Team (MC 148) and Region 14 Office in writing at least 30 days prior to any changes or modifications of the design or in the operation of the cooling water system or in the method by which cooling water is obtained.

If it is determined that the proposed CWIS configuration does not meet best technology available standards for impingement mortality and entrainment, the permit may be reopened to incorporate additional requirements.

25. Wastewater discharged via Outfall 001 must be sampled and analyzed as directed below for those parameters listed in Tables 1, 2, and 3 of Attachment A of this permit. Analytical testing for Outfall 001 must be completed within 60 days of discharge. Results of the analytical testing must be submitted within 90 days of discharge to the TCEQ Industrial Permits Team (MC 148) and Region 14 Office. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations, monitoring requirements, or both.

Table 1: Analysis is required for all pollutants in Table 1. Wastewater must be sampled and analyzed for those parameters listed in Table 1 for a minimum of four sampling events that are each at least one week apart.

Table 2: Analysis is required for those pollutants in Table 2 that are used at the facility that could in any way contribute to contamination in the Outfall 001 discharge. Sampling and analysis must be conducted for a minimum of four sampling events that are each at least one week apart.

Table 3: For all pollutants listed in Table 3, the permittee shall indicate whether each pollutant is believed to be present or absent in the discharge. Sampling and analysis must be conducted for each pollutant believed present for a minimum of one sampling event.

The permittee shall report the flow at Outfall 001 in MGD in the attachment. The permittee shall indicate on each table whether the samples are composite (C) or grab (G) by checking the appropriate box.

26. The permittee has submitted on October 1, 2021 a Notice of Planned Participation (NOPP) as required in 40 CFR §423.19(f)(2) demonstrating that Unit 1 at the Coleto Creek Power Plant qualifies as an electric generating unit that will achieve permanent cessation of coal combustion (see 40 CFR §423.18) by December 31, 2028; therefore, requesting authorization to continue the discharge of bottom ash transport waters pursuant to 40 CFR §423.13(k)(2)(ii). The permittee stated in the NOPP that the boiler is scheduled to cease coal-fired operations no later than July 17, 2027; therefore, there must be no discharge of bottom ash transport water after December 31, 2028. The permittee must submit an annual progress report, where it will identify completed milestones, and update remaining milestones to be completed in accordance with 40 CFR §423.19(f)(3) and 40 CFR §423.19(f)(4). The annual progress report must be submitted to the TCEQ Industrial Permits Team (MC 148), Region 14 Office, and Compliance Monitoring Team (MC 224) by the end of September of each year, until the project has been completed, but no later than 180 days after December 31, 2028.

27. The permittee may submit an amendment to request to reflect updated effluent limitation guidelines following any revision of 40 CFR Part 423. The request must be in accordance with 40 CFR §122.62(a)(3).

28. Reporting requirements according to 30 TAC §§ 319.1-319.12 and any additional effluent reporting requirements contained in internal Outfall 101 of the permit are suspended from the effective date of the permit until resumption of discharge via internal Outfall 101. The permittee shall provide written notice to the TCEQ Applications Review and Processing Team (MC 148), Compliance Monitoring Team (MC 224), and Region 14 Office, at least forty-five days prior to anticipated discharge via internal Outfall 101, on Notification of Completion Form 20007.

ATTACHMENT A

Table 1 -Conventional and Non-Conventional

Outfall No.: ☐C ☐G	**Effluent Concentration (mg/L)**				
Pollutant	**Sample 1.**	**Sample 2.**	**Sample 3.**	**Sample 4**	**Average**
Flow (MGD)					
BOD (5-day)					
CBOD (5-day)					
Chemical Oxygen Demand					
Total Organic Carbon					
Dissolved Oxygen					
Ammonia Nitrogen					
Total Suspended Solids					
Nitrate Nitrogen					
Total Organic Nitrogen					
Total Phosphorus					
Oil and Grease					
Total Residual Chlorine					
Total Dissolved Solids					
Sulfate					
Chloride					
Fluoride					
Total Alkalinity (mg/L as $CaCO_3$)					
Temperature (°F)					
pH (Standard Units; min/max)					

Pollutant	**Effluent Concentration (µg/L)[2]**					**MAL[3] (µg/L)**
	Sample 1	**Sample 2**	**Sample 3**	**Sample 4**	**Average**	
Aluminum, Total						2.5
Antimony, Total						5
Arsenic, Total						0.5
Barium, Total						3
Beryllium, Total						0.5
Cadmium, Total						1
Chromium, Total						3
Chromium, Hexavalent						3
Chromium, Trivalent						N/A
Copper, Total						2
Cyanide, Free						10
Lead, Total						0.5
Mercury, Total						0.005

[2] Indicate units if different than µg/L.
[3] Minimum Analytical Level

Pollutant	Effluent Concentration (µg/L)[2]					MAL[3] (µg/L)
	Sample 1	Sample 2	Sample 3	Sample 4	Average	
Nickel, Total						2
Selenium, Total						5
Silver, Total						0.5
Thallium, Total						0.5
Zinc, Total						5.0

Table 2

Outfall No.: ☐C ☐G Pollutant	Samp. 1 (µg/L)[4]	Samp. 2 (µg/L)[3]	Samp. 3 (µg/L)[3]	Samp. 4 (µg/L)[3]	Avg. (µg/L)[3]	MAL (µg/L)
Acrolein						0.7
Acrylonitrile						50
Anthracene						10
Benzene						10
Benzidine						50
Benzo(*a*)anthracene						5
Benzo(*a*)pyrene						5
Bis(2-chloroethyl)ether						10
Bis(2-ethylhexyl) phthalate						10
Bromodichloromethane						10
Bromoform						10
Carbon Tetrachloride						2
Chlorobenzene						10
Chlorodibromomethane						10
Chloroform						10
Chrysene						5
Cresols						10
1,2-Dibromoethane						10
m-Dichlorobenzene						10
o-Dichlorobenzene						10
p-Dichlorobenzene						10
3,3'-Dichlorobenzidine						5
1,2-Dichloroethane						10
1,1-Dichloroethylene						10
Dichloromethane						20
1,2-Dichloropropane						10
1,3-Dichloropropylene						10
2,4-Dimethylphenol						10
Di-*n*-Butyl Phthalate						10
Epichlorohydrin						1,000
Ethylbenzene						10
Ethylene Glycol						—

4 Indicate units if different than µg/L.

Outfall No.: ☐C ☐G Pollutant	Samp. 1 (µg/L)[4]	Samp. 2 (µg/L)[3]	Samp. 3 (µg/L)[3]	Samp. 4 (µg/L)[3]	Avg. (µg/L)[3]	MAL (µg/L)
Fluoride						500
Hexachlorobenzene						5
Hexachlorobutadiene						10
Hexachlorocyclopentadiene						10
Hexachloroethane						20
4,4′-Isopropylidenediphenol [bisphenol A]						—
Methyl Ethyl Ketone						50
Methyl *tert*-butyl ether [MTBE]						—
Nitrobenzene						10
N-Nitrosodiethylamine						20
N-Nitroso-di-*n*-Butylamine						20
Nonylphenol						333
Pentachlorobenzene						20
Pentachlorophenol						5
Phenanthrene						10
Polychlorinated Biphenyls (PCBs)[5]						0.2
Pyridine						20
1,2,4,5-Tetrachlorobenzene						20
1,1,2,2-Tetrachloroethane						10
Tetrachloroethylene						10
Toluene						10
1,1,1-Trichloroethane						10
1,1,2-Trichloroethane						10
Trichloroethylene						10
2,4,5-Trichlorophenol						50
TTHM (Total Trihalomethanes)						10
Vinyl Chloride						10

[5] Total of detects for PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, PCB-1016. If all values are non-detects, enter the highest non-detect preceded by a "<" symbol.

Table 3

Outfall No. ☐C ☐G Pollutant	Believed Present	Believed Absent	Avg. Conc. (mg/L)	Max. Conc. (mg/L)	No. of Samples	MAL (mg/L)
Bromide						0.400
Color (PCU)						—
Nitrate-Nitrite (as N)						—
Sulfide (as S)						—
Sulfite (as SO_3)						—
Surfactants						—
Boron, total						0.020
Cobalt, total						0.0003
Iron, total						0.007
Magnesium, total						0.020
Manganese, total						0.0005
Molybdenum, total						0.001
Tin, total						0.005
Titanium, total						0.030

CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

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 using the test organisms, procedures, and quality assurance requirements specified in this part of this 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 its most recent update:

1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). 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 occurs 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). 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 should 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, unless the test was invalid due to the intake water (i.e., the control) being toxic (i.e., failing to meet acceptability criteria). In such case, the requirement to perform a valid test is waived for that reporting period only. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution 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 WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

e. Testing Frequency Reduction

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

2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that

species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee will resume a quarterly testing frequency for that species until this 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 test; and the growth and survival endpoints in the fathead minnow test;

5) a critical dilution CV% of 40 or less for the young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow 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; and

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 the Fisher's exact test as described in the manual referenced in Part 1.b.

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 manual referenced in Part 1.b.

3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled *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 survival in 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 between the survival, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control.

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.

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 guidance manual referenced in Item 3 will be used when making a determination of test acceptability.

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

c. Dilution Water

1) Dilution water used in the toxicity tests must be the lake water collected as close to the point of intake as possible and concurrently with the effluent sample.

2) Total dissolved solids (TDS) shall be measured and reported for each sample collected for the testing, both intake water and effluent.

d. Samples and Composites

1) The permittee shall collect a minimum of three composite samples from Outfall 001.The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.

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

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

4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number 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 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 this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.

10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."

11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.

12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this part apply only when a test demonstrates a significant effect at the critical dilution. Significant effect and significant lethality were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction of the test organism in the control.

a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.

b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 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 Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.

d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.

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, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a 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 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, or within 90 days of being so instructed due to multiple toxic events, 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 analyses 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 describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At 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 alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase* I (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled *Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080) and *Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source 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, and 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.

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 suspected pollutant performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and substantiating documentation which identifies the pollutant and source 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.

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, i.e., there is a cessation of lethality, 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.

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 that 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 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 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 its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism.

h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Composites Collected

Date Time Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

	Percent effluent (%)					
REP	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						
PMSD						

*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults) Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): _____ YES _____ NO

PERCENT SURVIVAL

	Percent effluent					
Time of Reading	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

Is the mean survival at test end significantly less 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

Date Time Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving Water _____ Synthetic Dilution Water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

   Is the mean dry weight (growth) at 7 days significantly less 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 (WET) testing.

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 Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires 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 using 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 its most recent update:

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 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 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 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. The control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

d. This permit may be amended to require a WET limit, a best management practice, a chemical-specific limit, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic 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 Part 1.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.

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 Part 1.c., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.

c. Samples and Composites

1) The permittee shall collect one composite sample from Outfall 001.

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

3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 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.

3. Reporting

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

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.

b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.

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

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

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

1) For the water flea, Parameter TIE3D, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

2) For the fathead minnow, Parameter TIE6C, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

d. Enter the following codes for retests only:

1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."

4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration for 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 effluent concentrations are 6%, 13%, 25%, 50%, and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.

b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

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 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 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 analyses 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 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 a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source 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, and 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.

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 suspected pollutant performed during the quarter;

2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;

3) any data and substantiating documentation that identifies the pollutant(s) and source of effluent toxicity;

4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;

5) any data that 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.

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, i.e., there is a cessation of lethality, 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.

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 that 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 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 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 its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in item 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism.

h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 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 its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving 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, this 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, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical specific limit.

j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	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	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