FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0001026000, U.S. Environmental Protection Agency (EPA) ID No. TX0006378, to discharge to water in the state

Issuing Office:	Texas Commission on Environmental Quality (TCEQ) P.O. Box 13087 Austin, Texas 78711-3087
Applicant:	NRG Texas Power LLC 910 Louisiana Street, 7th Floor Houston, Texas 77002
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Date:	May 17, 2021
Permit Action:	Major Amendment with Renewal; TPDES Permit No. WQ0001026000

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 S.R. Bertron Electric Generating Station, (a non-operational natural gas-fired steam-electric power-generation facility).

III. DISCHARGE LOCATION

As described in the application, the facility is located at 2012 Miller Cut Off Road, approximately two miles northeast of the intersection of State Highway 225 and State Highway 134, and approximately a mile and a half north of the intersection of State Highway 225 and Miller Cut Off Road in the City of LaPorte, Harris County, Texas 77571. Discharge is via Outfall 001 directly to San Jacinto Bay in Segment No. 2427 of the Bays and Estuaries; and via Outfalls 002, 003, and 004 directly to Houston Ship Channel/San Jacinto River Tidal in Segment No. 1005 of the San Jacinto River Basin.

IV. RECEIVING STREAM USES

The designated uses for Segment No. 2427 are primary contact recreation and high aquatic life use. The designated uses for Segment No. 1005 are non-contact recreation 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 of August 2014 through December 2020. 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. The following units of measure are used in the summary below:

MGD	million gallons per day
°F	degrees Fahrenheit
mg/L	milligrams per liter
lbs/day	pounds per day
#/100 mls	most probable number (MPN) per 100 milliliters, or colony forming units (CFU) per 100 milliliters
SU	standard units.

A. Flow

Outfall	Frequency	Average of Daily Average	Maximum of Daily Maximum
001	Intermittent	No Discharge	No Discharge
101	Intermittent	0.26 MGD	0.42 MGD
201	Intermittent	0.14 MGD	0.21 MGD
301	Intermittent	0.479 MGD	1.365 MGD
401	Intermittent	No Discharge	No Discharge
51A	Intermittent	0.0088 MGD	0.244 MGD
51B	Intermittent	0.036 MGD	0.504 MGD
601	Intermittent	0.0039 MGD	0.081 MGD

B. Temperature

Outfall		Average of Daily Average	Maximum of Daily Maximum
001		No Discharge	No Discharge

C. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average	Maximum of Daily Maximum
001	Total Residual Chlorine	No Discharge	No Discharge
	Free Available Chlorine	No Discharge	No Discharge
101	Total Suspended Solids	11.3 mg/L	28 mg/L
	Oil and Grease	< 3.7 mg/L	5 mg/L
	pH	7.9 SU (min)	8.87 SU

Outfall	Pollutant	Average of Daily Average	Maximum of Daily Maximum
201	Total Suspended Solids	11.6 mg/L	97 mg/L
	Oil and Grease	< 4.6 mg/L	5 mg/L
	pH	6.93 SU (min)	8.9 SU
301	Total Suspended Solids	12 mg/L	34 mg/L
	Oil and Grease	< 3.7 mg/L	5 mg/L
	Iron, total	0.665 mg/L	1.5 mg/L
	Copper, total	0.016 mg/L	0.027 mg/L
	pH	7.91 SU (min)	8.7 SU
401	Total Suspended Solids	No Discharge	No Discharge
	Oil and Grease	No Discharge	No Discharge
	pH	No Discharge	No Discharge
51A	Total Suspended Solids	4.42 mg/L	24 mg/L
	Oil and Grease	4.5 mg/L	8 mg/L
	pH	7.1 SU (min)	8.7 SU
51B	Total Suspended Solids	4.34 mg/L	150 mg/L
	Oil and Grease	3.58 mg/L	8 mg/L
	pH	7 SU (min)	9 SU
601	Biochemical Oxygen Demand (5-day)	<2 mg/L	<10 mg/L
	Total Suspended Solids	8.3	79 mg/L
	Total Residual Chlorine	1.06 mg/L (min)	N/A
	Enterococci	12.1 #/100 mls	1200 #/100 mls
	pH	7.36 SU (min)	8.8 SU

D. Effluent Limitation Exceedances

Outfall	Pollutant	Exceedances of Daily Average	Exceedances of Daily Maximum
301	Total Suspended Solids	1	0
	Total Iron	1	1
51B	Total Suspended Solids	1	1
601	Total Suspended Solids	0	1
	Enterococci	0	1

The limited number of exceedances listed above do not demonstrate a recurring pattern of non-compliance that requires any specific corrective action to be taken in this permit action.

VII. DRAFT EFFLUENT LIMITATIONS

A. Effluent limitations are established in the draft permit as follows:

Outfall	Pollutant	Daily Average	Daily Maximum
001 (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	75 mg/L
	Oil and Grease	N/A	15 mg/L
	pH	6.0 SU (min)	9.0 SU
51A (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
601 (Interim)	Flow	Report (MGD)	Report (MGD)
	Biochemical Oxygen Demand (5-day)	20 mg/L	45 mg/L
	Total Suspended Solids	20 mg/L	45 mg/L
	Enterococci	35 #/100 mls	104 #/100 mls
	pH	6.0 SU (min)	9.0 SU
002 (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	75 mg/L
	Oil and Grease	N/A	15 mg/L
	Copper, total	0.5 mg/L	1.0 mg/L
	Iron, total	1.0 mg/L	1.0 mg/L
	pH	6.0 SU (min)	9.0 SU
003 (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
004 (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
001 (Final)	Flow	740.2 MGD	740.2 MGD
	Temperature (˚F)	108 ˚F	110 ˚F
	Total Residual Chlorine	N/A	412 lbs/day 0.2 mg/L
	Free Available Chlorine	103 lbs/day 0.2 mg/L	257 lbs/day 0.5 mg/L

Outfall	Pollutant	Daily Average	Daily Maximum
101 (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
201 (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
301 (Final)	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	75 mg/L
	Oil and Grease	N/A	15 mg/L
	Copper, total	0.5 mg/L	1.0 mg/L
	Iron, total	1.0 mg/L	1.0 mg/L
	pH	6.0 SU (min)	9.0 SU
401 (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
51A (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
51B (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
601 (Final)	Flow	Report (MGD)	Report (MGD)
	Biochemical Oxygen Demand (5-day)	20 mg/L	45 mg/L
	Total Suspended Solids	20 mg/L	45 mg/L
	Enterococci	35 #/100 mls	104 #/100 mls
	pH	6.0 SU (min)	9.0 SU

B. Outfall locations are documented as follows.

Outfall	Latitude	Longitude
001	29.725839 N	95.056134 W
002	29.728336 N	95.060552 W
003	29.727775 N	95.059732 W
004	29.728336 N	95.060552 W

VIII. SUMMARY OF CHANGES FROM APPLICATION

A. The applicant requested the following amendments that the executive director did not grant.

The request to suspend the monitoring and reporting requirements for Outfalls 001, 101, 201, 301, 401, 51A and 51B during the interim phase was not granted. The application indicates that discharges may still occur via Outfalls 001 and 51A during the interim phase. The discharges formerly via internal Outfalls 101, 201, 301, 401 and 51B will discharge via interim final Outfalls 002, 003, and 004, during the interim phase. The monitoring frequencies for all outfalls during the interim phases will be designated as "when discharge occurs" in the draft permit.

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

1. The draft permit modifies former Other Requirement No. 11 (renumbered as Other Requirement No. 9 in the draft permit). This provision, which documents the CWIS operational requirements for the facility, was modified to acknowledge that water is not currently used for cooling purposes and that the permittee is required to provide notification to the TCEQ if changes in operations at the facility, that would result in the resumption of the use of water for cooling purposes, occur.

   The facility is currently non-operational as a power generation facility and is not currently using water for cooling purposes.

2. The draft permit includes a provision (Other Requirement No. 14) which requires the permittee to conduct effluent analysis of all final outfalls during the interim and final phases of the permit. The application submitted did not include required effluent analysis due to no recent discharges via currently permitted external outfalls.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

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

1. Include an interim phase for the period the facility is not operating. The draft permit includes interim phase requirements that are effective from date of permit issuance and lasting until the facility reactivates power generation operations at the facility. The draft permit includes a provision (Other Requirement No. 13) that requires the permittee to provide notification to the TCEQ when it resumes

normal operations at the facility and proceeds from interim phase to final phase requirements.

2. For the interim phase of the permit, the permit authorizes the discharge of stormwater commingled with *de minimis* quantities of legacy low volume waste sources and legacy metal cleaning wastes on an intermittent and flow-variable basis via Outfall 002.

3. For the interim phase of the permit, the permit authorizes the discharge of stormwater commingled with *de minimis* quantities of legacy low volume waste sources on an intermittent and flow-variable basis via Outfalls 003 and 004.

4. Change the frequency of the monitoring requirements for all outfalls to be required only when discharge occurs.

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

1. The permit's standard requirements section (pages 3-13) has been updated (October 2020 version).

2. Other Requirement No. 4 has been revised to include updated definitions from 40 CFR Part 423.

3. Former Other Requirment No. 5 has been revised to include updated standard requirements and design specifications for pond liners. Former Other Requirement No. 6 has been removed from the draft permit because this revision includes the same requirement language.

4. Former Other Requirement No. 7 has been renumbered as Other Requirement No. 6 in the draft permit.

5. Former Other Requirements No. 8 has been renumbered as Other Requirement No. 7 in the draft permit.

6. Former Other Requirement No. 9 has been removed from the draft permit. This provision, which documents that this permit may be reviewed by TCEQ after the completion of any new intensive water quality survey, is deemed to be archaic and no longer necessary to be continued in the draft permit.

7. Former Other Requirement No. 10 has been renumbered as Other Requirement No. 8 in the draft permit.

8. Former Other Requirement No. 12 updated and renumbered to Other Requirement No. 10.

9. Former Other Requirement No. 13 has been renumbered as Other Requirement No. 11.

10. Former Other Requirement No. 14 has been renumbered as Other Requirement No. 12 in the draft permit. Additionally, this provision has been modified to state that the thermal plume study plan is required to be submitted one year after power generating operations resume at the facility.

11. Requirements for 7-day chronic and 24-hour acute whole effluent toxicity testing at Outfall 001 have been removed from the draft permit for the interim phase of the permit. The removal of these requirements are based on the removal of the authorization to discharge once through cooling water and previously monitored effluents [stormwater and low volume waste sources (primarily boiler blowdown) via Outfall 101; stormwater and metal cleaning wastes via Outfall 301; and stormwater and low volume waste sources (primarily house recirculating wastewater) via Outfall 401] via Outfall 001. The removal of these requirements during the interim phase of the permit meets the anti-backsliding exemption in 40 CFR Part 122.44(l)(2)(i)(A), which allows backsliding in cases where "*Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation.*"

12. Effluent limitations and monitoring requirements for temperature, total residual chlorine, and free available chlorine at Outfall 001; and effluent limitations for flow at Outfall 001 have been removed from the interim phase requirements in the draft permit . The removal of these requirements are based on the removal of the authorization to discharge once through cooling water via Outfall 001. The removal of these requirements meets the anti-backsliding exemption in 40 CFR Part 122.44(l)(2)(i)(A), which allows backsliding in cases where "*Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation.*"

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 for a major amendment to include an interim phase for the period the facility is not operating; authorize the discharge of stormwater commingled with de minimis quantities of legacy low volume waste sources and legcy metal cleaning wastes on an intermittent and flow-variable basis via Outfall 002, and stormwater commingled with de minimis quantities of legacy low volume waste sources on an intermittent and flow-variable basis via Outfalls 003 and 004 during the interim phase; suspend the monitoring and reporting requirements for Outfalls 001, 101, 201, 301, 401, 51A and 51B during the interim phase; and change the frequency of the monitoring requirements for all outfalls to be required only when discharge occurs. The existing permit authorizes the discharge of once through cooling water, previously monitored effluents (stormwater, low volume waste sources, metal cleaning wastes, and treated domestic wastewater), and stormwater at a daily average flow not to exceed 740,200,000 gallons per day via Outfall 001. The draft permit authorizes the discharge of stormwater commingled with previously monitored effluents (stormwater commingled with *de minimis* quantities of legacy low volume waste sources from internal Outfall 51A and treated domestic wastewater from internal Outfall 601) on an intermittent and flow-variable basis via Outfall 001, stormwater commingled with *de minimis* quantities of legacy low volume waste sources and metal cleaning wastes on an intermittent and flow-variable basis via

Outfall 002, and stormwater commingled with *de minimis* quantities of legacy low volume waste sources on an intermittent and flow-variable basis via Outfalls 003 and 004 for the interim phase; and the discharge of once through cooling water, previously monitored effluents (stormwater, low volume waste sources, metal cleaning wastes, and treated domestic wastewater), and stormwater at a daily average flow not to exceed 740,200,000 gallons per day via Outfall 001 for the final phase.

The executive director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the General Land Office and has determined that the action is consistent with the applicable CMP goals and policies.

B. WATER QUALITY SUMMARY

Discharge Route(s)
The discharge route is via Outfall 001 directly to San Jacinto Bay in Segment No. 2427 of the Bays and Estuaries; and via Outfalls 002, 003, and 004 directly to Houston Ship Channel/San Jacinto River Tidal in Segment No. 1005 of the San Jacinto River Basin. The designated uses Segment No. 2427 are primary contact recreation and high aquatic life use. The designated uses for Segment No. 1005 are non-contact recreation 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 San Jacinto Bay and Houston Ship Channel/San Jacinto River Tidal, which have been identified as having high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

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 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. 1005 is currently listed on the State's inventory of impaired and threatened waters (the 2020 Clean Water Act Section 303(d) list). The listings are for dioxin in edible tissue and PCBs in edible tissue from Downstream I-10 to Morgans Point (AUs 1005_01 thru 1005_04). Segment No. 2427 is also currently listed on the State's inventory of impaired and threatened waters (the 2020 Clean Water Act Section 303(d) list). The listings are for dioxin in edible tissue and PCBs in edible tissue throughout the entire segment (AU 2427_01). The issuance of this permit is not anticipated to cause any additional adverse impact to the receiving water with respect to the listed impairments because dioxin has not been identified as associated with the proposed discharge and the permit continues the prohibition of the discharge of polychlorinated biphenyl compounds in Other Requirement No. 3.

Completed Total Maximum Daily Loads (TMDLs)
Segment No. 2427 is included in the agency's document *Fourteen Total Maximum Daily Loads for Nickel in the Houston Ship Channel System* (TMDL Project No. 1). The discharge was screened using the methods outlined in the documents *Procedures to Implement the Texas Surface Water Quality Standards* (IPs), TCEQ, June 2010 and *Implementation Plan for Dissolved Nickel in the Houston Ship Channel* (TMDL Implementation Plan), TCEQ, July 2001. The discharge authorized in this draft permit was considered during the development of the TMDL and included in the waste load allocation. The TMDL indicates that the water quality criteria for dissolved nickel are generally being met in the Houston Ship Channel and a specific limit for nickel is not recommended for this facility.

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 stormwater commingled with previously monitored effluents (stormwater commingled with de minimis quantities of legacy low volume waste sources from internal Outfall 51A and treated domestic wastewater from internal Outfall 601) on an intermittent and flow-variable basis via Outfall 001, stormwater commingled with *de minimis* quantities of legacy low volume waste sources and metal cleaning wastes on an intermittent and flow-variable basis via Outfall 002, and stormwater commingled with *de minimis* quantities of legacy low volume waste sources on an intermittent and flow-variable basis via Outfalls 003 and 004 for the interim phase; and the discharge of once through cooling water, previously monitored effluents (stormwater, low volume waste sources, metal cleaning wastes, and treated domestic wastewater), and stormwater at a daily average flow not to exceed 740,200,000 gallons per day via Outfall 001 for the final phase.

The discharges of once-through cooling water, low volume waste sources, and metal cleaning wastes from this facility are subject to federal effluent limitation guidelines at 40 CFR Part 423. A new source determination was performed, and the discharges of once-through cooling water, low volume waste sources, and

metal cleaning wastes are not new sources as defined at 40 CFR §122.2. Therefore, new source performance standards (NSPS) are not required for these discharges.

The discharges of treated domestic wastewater and stormwater from this facility are not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment.

The S. R. Bertron Electric Generating Station is a non-operational natural gas-fired steam-electric power-generation facility. There are no current plans for re-activation of the power-generation operations at the facility, however the permittee requested the permit include two tiers to represent the current non-operational status (interim phase) and an operational status that is commensurate with the requirements when the facility was previously in operation.

2. CALCULATIONS

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

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

Outfall	**Pollutant**	**Daily Average**	**Daily Maximum**
001 (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	75 mg/L
	Oil and Grease	N/A	15 mg/L
	pH	6.0 SU (min)	9.0 SU
51A (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
601 (Interim)	Flow	Report (MGD)	Report (MGD)
	Biochemical Oxygen Demand (5-day)	20 mg/L	45 mg/L
	Total Suspended Solids	20 mg/L	45 mg/L
	pH	6.0 SU (min)	9.0 SU
002 (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	75 mg/L
	Oil and Grease	N/A	15 mg/L
	Copper, total	0.5 mg/L	1.0 mg/L
	Iron, total	1.0 mg/L	1.0 mg/L
	pH	6.0 SU (min)	9.0 SU

Outfall	Pollutant	Daily Average	Daily Maximum
003 (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
004 (Interim)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
001 (Final)	Flow	740.2 MGD	740.2 MGD
	Temperature (°F)	108 °F	110 °F
	Total Residual Chlorine	N/A	412 lbs/day 0.2 mg/L
	Free Available Chlorine	103 lbs/day 0.2 mg/L	257 lbs/day 0.5 mg/L
101 (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
201 (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
301 (Final)	Flow	Report (MGD)	Report (MGD)
	Total Organic Carbon	N/A	75 mg/L
	Oil and Grease	N/A	15 mg/L
	Copper, total	0.5 mg/L	1.0 mg/L
	Iron, total	1.0 mg/L	1.0 mg/L
	pH	6.0 SU (min)	9.0 SU
401 (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
51A (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU

Outfall	Pollutant	Daily Average	Daily Maximum
51B (Final)	Flow	Report (MGD)	Report (MGD)
	Total Suspended Solids	30 mg/L	100 mg/L
	Oil and Grease	15 mg/L	20 mg/L
	pH	6.0 SU (min)	9.0 SU
601 (Final)	Flow	Report (MGD)	Report (MGD)
	Biochemical Oxygen Demand (5-day)	20 mg/L	45 mg/L
	Total Suspended Solids	20 mg/L	45 mg/L
	pH	6.0 SU (min)	9.0 SU

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

The facility is currently in non-operational status and is not currently withdrawing water for cooling purposes.

b. PERMIT ACTION

Former Other Requirement No. 11 has been renumbered to Other Requirement No. 9 and modified in the draft permit to acknowledge that water is not currently used for cooling purposes and that the permittee is required to provide notification to the TCEQ if changes in operations at the facility, that would result in the resumption of the use of water for cooling purposes, occur.

Former Other Requirement No. 11 has been renumbered to Other Requirement No. 9 and revised to require the permittee to submit applicable requirements established at 40 CFR § 122.21(r)(1)(ii) to the TCEQ Industrial Permits Team (MC 148) and Region 12 Office at least 180 days prior to the planned commencement of cooling water withdrawals. The draft permit prohibits utilization of the CWIS for cooling water withdrawals or the discharge of once-through cooling water prior to receiving an approval from the TCEQ that the CWIS configuration meets BTA standards for Impingement Mortality and Entrainment (IM&E). If it is determined that the CWIS configuration does not meet

BTA standards for IM&E, the permit may be reopened to incorporate additional requirements.

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 saltwater aquatic life criteria found in Table 1 of the *Texas Surface Water Quality Standards* (30 TAC Chapter 307).

i) OUTFALL 001

Acute saltwater criteria are applied at the edge of the zone of initial dilution (ZID), and chronic saltwater criteria are applied at the edge of the aquatic life mixing zone. The ZID for this discharge is defined as a volume within a radius of 20 feet from the point where the discharge enters San Jacinto Bay. The aquatic life mixing zone for this discharge is defined as a volume within a radius of 80 feet from the point where the discharge enters San Jacinto Bay.

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 bays, estuaries, or wide tidal

rivers and for discharges into sections of bays, estuaries, and wide tidal rivers that are less than 400 feet wide. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentages are calculated based on the permitted daily average flow of 740.2 MGD:

Acute Effluent %	100%
Chronic Effluent %	100%

ii) OUTFALLS 002, 003, & 004

This permit amendment requests authorization to discharge stormwater commingled with *de minimis* quantities of legacy wastewaters on an intermittent and variable basis. Typically, critical conditions are not developed for stormwater outfalls because discharges of stormwater are not typically screened against water quality criteria.

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 the segment-specific value for TSS according to the *IPs*. The segment value is 12 mg/L for TSS. 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

No analytical data is available for screening against water quality-based effluent limitations because the facility is not in operation and no discharge has occurred via Outfall 001 during the current permit term. The draft permit includes effluent testing requirements (Other Requirement No. 14) for the external outfalls for both phases of the permit.

3. WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA

a. SCREENING AND REASONABLE POTENTIAL ANALYSIS

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

The plant is currently not in operation. Therefore, there is no recent WET testing history available for review.

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 RP determination is based on representative data from the previous three years of chronic 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.

No WET testing has been performed in the past five years. With no testing, and therefore zero failures, a determination of no RP was made. WET limits are not required, and the permittee may be eligible for the testing frequency reduction after one year of quarterly testing occurs should they resume operation.

b. PERMIT ACTION

The provisions of this section apply to Outfall 001 for the final phase only.

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 7-day survival and growth test using the mysid shrimp (*Mysidopsis bahia*). The frequency of the testing shall be once per quarter.

ii) Chronic static renewal 7-day larval survival and growth test using the inland silverside (*Menidia beryllina*). The frequency of the 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 Marine and Estuarine Organisms,* Third Edition (EPA-821-R-02-014) 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 marine biomonitoring requirements for Outfall 001.

The plant is currently not in operation. Therefore, there is no recent WET testing history available for review.

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 (final phase only) at a frequency of once per six months for the life of the permit. This toxicity testing requirement is derived from the information submitted with the application.

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

i) Acute 24-hour static toxicity test using the mysid shrimp (*Mysidopsis bahia*). 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 inland silverside (*Menidia beryllina*). 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).

i) OUTFALL 001

Fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into bays, estuaries and wide tidal rivers. The human health mixing zone for this discharge is defined as a volume within a radius of 160 feet from the point where the discharge enters San Jacinto Bay. 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 a bay, estuary, or wide tidal river and for discharges into sections of bays, estuaries, or wide tidal rivers that are less than 400 feet wide. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentage is calculated based on the permitted daily average flow of 740.2 MGD:

Human Health Effluent %:	100%

ii) OUTFALLS 002, 003, & 004

This permit amendment requests authorization to discharge stormwater commingled with *de minimis* quantities of legacy wastewaters on an intermittent and variable basis. Typically, critical conditions are not developed for stormwater outfalls because discharges of stormwater are not typically screened against water quality criteria due to the intermittent and flow-variable nature of the discharge.

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

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

b. PERMIT ACTION

No analytical data is available for screening against water quality-based effluent limitations because the facility is not in operation and no discharge has occurred via Outfall 001 during the current permit term. The draft permit includes effluent testing requirements (Other Requirement No. 14) for the external outfalls for both phases of the permit.

6. DRINKING WATER SUPPLY PROTECTION

a. SCREENING

Segments Nos. 1005 and 2427, which receive the discharges from this facility, are not designated as a public water supply. Screening reported analytical data of the effluent against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable.

b. PERMIT ACTION

None.

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

a. SCREENING

Segments Nos. 1005 and 2427, which receive the discharges from this facility, does not have criteria established for TDS, chloride, or sulfate in 30 TAC Chapter 307; therefore, no screening was performed for TDS, chloride, or sulfate in the effluent.

b. PERMIT ACTION

None.

8. PROTECTION OF pH STANDARDS

a. SCREENING

i. OUTFALLS 001, 002, 003, and 004 (INTERIM PHASE)

The draft permit authorizes the discharge of stormwater commingled with *de minimis* quantities of legacy wastewaters (aka, stormwater associated with industrial activities) on an intermittent and flow-variable basis. Consistent with the procedures for pH screening that were submitted to EPA with a letter dated May 28, 2014, and approved by EPA in a letter dated June 2, 2014, requiring these intermittent discharges of stormwater associated with industrial activity to meet pH limits of 6.0 – 9.0 standard units reasonably assumes instream compliance with *Texas Surface Water Quality Standards* pH criteria.

ii. OUTFALL 001 (FINAL PHASE)

The existing permit does not include effluent limitations for pH at Outfall 001 which discharges once-through cooling water directly into San Jacinto Bay, Segment No. 2427. The absence of effluent limitations for pH are consistent with the guidance in the federal guidelines and the typical practice to not impose effluent limitations for pH on the discharge of once-through cooling water, subject to 40 CFR §423.12(b)(1).

b. PERMIT ACTION

i. OUTFALLS 001, 002, 003, and 004 (INTERIM PHASE)

For the interim phase of the permit, the draft permit includes pH limits of 6.0 – 9.0 standard units at Outfall 001 which discharges

directly to Segment No. 2427 and Outfalls 002, 003, and 004 which discharge directly to Segment No. 1005.

ii. OUTFALL 001 (FINAL PHASE)

The draft permit does not include effluent limitations for pH at Outfall 001 which discharges once-through cooling water directly into San Jacinto Bay, Segment No. 2427. The absence of effluent limitations for pH are based on the requirements in 40 CFR §423.12(b)(1).

9. DISSOLVED OXYGEN PROTECTION

a. SCREENING

As documented in the TCEQ Interoffice Memorandum dated January 26, 2021, a dissolved oxygen analysis of the referenced discharge was conducted for Outfall 601. The QUAL-TX model used for evaluation is described and documented in the *Waste Load Evaluation WLE-1R for the Houston Ship Channel System* (September 2006).

b. PERMIT ACTION

Based on model results, the existing effluent limit of 20 mg/L BOD_5 at Outfall 601 is predicted to be adequate to maintain the dissolved oxygen level above the criterion stipulated by the Standards Implementation Team for San Jacinto Bay (4.0 mg/L). Due to the intermittent nature and lack of oxygen-demanding constituents expected to be present at Outfall 001, no dissolved oxygen depletion is anticipated as a result of this discharge.

10. BACTERIA STANDARDS PROTECTION

a. SCREENING

The draft permit authorizes the discharge of treated domestic wastewater (monitored at internal Outfall 601) directly into San Jacinto Bay via Outfall 001. Based on the rules and requirements for the disinfection of domestic wastewater located in 30 TAC §307.7(a)(1)(B) and in 30 TAC §309.3(g)(1) and 30 TAC §309.3 (h)(1)(B), discharges of treated domestic wastewater into a marine waterbody are required to be limited for enterococci bacteria.

b. PERMIT ACTION

The draft permit includes the following effluent limitations for the protection of the water quality criteria for enterococci bacteria.

Outfall	Parameter	Daily Average	Daily Maximum
601	Enterococci	35 #/100 mls	104 #/100 mls

11. THERMAL STANDARDS PROTECTION

a. SCREENING

The discharge of once-through cooling water is authorized during the final phase for Outfall 001. No thermal sources have been identified for the interim phase of the permit.

b. PERMIT ACTION

The existing effluent limitations for temperature at Outfall 001 are continued in the final phase of the permit. Former Other Requirement No. 14 required the permittee to submit a plan to characterize the thermal plume in the receiving water through either the use of a model, mass balance, or via collected or existing in-stream temperature data. No plan was developed, submitted, or implemented due to the shutdown of power generation activities at the facility. The provision is renumbered to Other Requirement No. 12 and modified to specify that the permittee is required to develop and submit the plan to the TCEQ, within one year after resumption of the discharge of once-through cooling water via Outfall 001 under final phases requirements.

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 Sunderlin at (512) 239-4523.

XIV. ADMINISTRATIVE RECORD

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

A. PERMIT(S)

TPDES Permit No. WQ0001026000 issued on July 18, 2014.

B. APPLICATION

TPDES wastewater permit application received on June 23, 2020.

C. 40 CFR CITATION(S)

40 CFR Part 423 (BPT 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 October 1, 2020, 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 October 20, 2020, 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 January 26, 2021, from Xing Lu, 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 January 27, 2021, from Michael B. Pfeil of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Biomonitoring Memo).

Emails dated May 11, 2021 and May 17, 2021 from Carl Burch, Environmental Manager, Regulatory Compliance, NRG Energy, to Michael Sunderlin, Wastewater Permitting Section, Water Quality Division, TCEQ (comments on draft permit).

E. MISCELLANEOUS

The *State of Texas 2020 Integrated Report* – Texas 303(d) List (Category 5), TCEQ, May 12, 2020.

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 Marine and Estuarine Organisms, Third Edition (EPA-821-R-02-014).

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

The S. R. Bertron Electric Generating Station is a non-operational natural gas-fired steam-electric power-generation facility. There are no current plans for re-activation of the power-generation operations at the facility, however the permittee requested the permit include two tiers to represent the current non-operational status (Interim Phase) and an operational status (Final Phase), that is commensurate with the requirements when the facility was previously in operation, in case the plans change and the facility is re-activated in the future.

I. INTERIM PHASE

Although the facility is no longer in operation, the discharge of treated domestic wastewater and stormwater commingled with *de minimis* quantities of legacy wastewaters (low-volume waste sources and metal cleaning wastes) occurs via the following outfalls during the interim phase.

A. OUTFALL 001

The draft permit authorizes the discharge of stormwater commingled with previously monitored effluents (stormwater commingled with *de minimis* quantities of legacy low volume waste sources from internal Outfall 51A and treated domestic wastewater from internal Outfall 601) via Outfall 001 during the interim phase. No treatment is associated with Outfall 001.

Technology based effluent limitations for total organic carbon, oil and grease, and pH are based on BPJ and are consistent with the effluent limitations established for stormwater discharges in other TPDES individual permits. Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

B. OUTFALL 51A

The draft permit authorizes the discharge of stormwater commingled with *de minimis* quantities of legacy low volume waste sources via internal Outfall 51A during the interim phase. No treatment is associated with internal Outfall 51A.

Technology-based effluent limitations for total suspended solid and oil & grease are required by 40 CFR §423.12(b)(3). Technology-based effluent limitations for pH are required by 40 CFR §423.12(b)(1). Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

C. OUTFALL 601

The draft permit authorizes the discharge of treated domestic wastewater via Outfall 601 during the interim phase. The domestic wastewater treatment plant is operational to support the facility maintenance staff. The domestic wastewater treatment system consists of a surge pit, which provides screening and equalization; an activated sludge aeration chamber, which provides for aeration and mixing; a clarifier which provides for sedimentation; an aerobic sludge digester, and a chlorine contact chamber which provides for disinfection, prior to discharge via internal Outfall 601. After the treated domestic wastewater is discharged via internal Outfall 601 it commingles with other wastewaters from the non-operational facility and is discharged via Outfall 001.

Technology based effluent limitations for biochemical oxygen demand (5-day), total suspended solids, pH, and chlorine residual are continued from the existing TPDES permit based upon 30 TAC 309. Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

D. OUTFALL 002

The draft permit authorizes the discharge of stormwater commingled with *de minimis* quantities of legacy metal cleaning waste sources and legacy low volume waste sources via Outfall 002 during the interim phase. No treatment is associated with Outfall 002.

The draft permit authorizes the discharge of stormwater commingled with de minimis quantities of legacy metal cleaning waste and legacy low volume waste sources via Outfall 002 during the interim phase. No treatment is associated with Outfall 002.

E. OUTFALL 003

The draft permit authorizes the discharge of stormwater commingled with *de minimis* quantities of legacy low volume waste sources via Outfall 003 during the interim phase. No treatment is associated with Outfall 003.

Technology-based effluent limitations for total suspended solid and oil & grease are required by 40 CFR §423.12(b)(3). Technology-based effluent limitations for pH are required by 40 CFR §423.12(b)(1). Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

F. OUTFALL 004

The draft permit authorizes the discharge of stormwater commingled with *de minimis* quantities of legacy low volume waste sources via Outfall 004 during the interim phase. No treatment is associated with Outfall 004.

Technology-based effluent limitations for total suspended solid and oil & grease are required by 40 CFR §423.12(b)(3). Technology-based effluent limitations for pH are required by 40 CFR §423.12(b)(1). Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

II. FINAL PHASE

After resumption of normal operations, the draft permit authorizes the following discharges during the final phase.

A. OUTFALL 001

The draft permit authorizes the discharge of once through cooling water, previously monitored effluents from internal outfalls (101, 201, 301, 401, 51A, 51B, and 601), and stormwater via Outfall 001 during the final phase. No treatment is associated with Outfall 001.

The effluent limitations for previously monitored effluents (low volume waste sourcess, metal cleaning wastes, and treated domestic wastewaters) are addressed at the applicable internal outfalls.

The discharge of once through cooling water and the applicable effluent limitations are continued from the existing permits.

Best Practicable Control Technology (BPT) Free Available Chlorine (FAC) effluent limitations according to 40 CFR 423.12 (b) (6):

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

The permitted flow is used in the calculation of once through cooling water loading (lbs/day) effluent limitations. Lbs/day effluent limitations for FAC are calculated according to 40 CFR 423.12 (b) (8) as follows:

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

Daily Avg loading = [(0.2 mg/L) x (740.2 MGD) x (8.345)/12] = 103 lbs/day

Daily Max loading = [(0.5 mg/L) x (740.2 MGD) x (8.345)/12] = 257 lbs/day

Best Available Technology Economically Achievable (BAT) Total Residual Chlorine (TRC) effluent limitations according to 40 CFR 423.13 (b) (1):

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

The permitted flow is used in the calculation of once through cooling water loading (lbs/day) effluent limitations. Lbs/day effluent limitations for TRC are calculated according to 40 CFR 423.13 (b) (2) as follows:

Loadings, lbs/day = [(limit, mg/L) x (flow, MGD) x (8.345) x (4 units) x (2 hrs/24 hrs)]

Daily Avg loading = [(0.2 mg/L) x (740.2 MGD) x (8.345)/3] = 412 lbs/day

Temperature limits are included and continued in the draft permit based upon BPJ.

Daily Avg Temperature = 108 °F
Daily Max Temperature = 110 °F

Note that the pH of all discharges, except once through cooling water, shall be within the range of 6.0 to 9.0 SU in accordance with 40 CFR 423.12 (b) (1) (BPT). Therefore, pH effluent limitations are not required at Outfall 001.

B. OUTFALL 101

The draft permit authorizes the discharge of stormwater and low volume waste sources (primarily boiler blowdown) via internal Outfall 101 during the final phase. No treatment is associated with internal Outfall 101.

Technology-based effluent limitations for total suspended solid and oil & grease are required by 40 CFR §423.12(b)(3). Technology-based effluent limitations for pH are required by 40 CFR §423.12(b)(1). Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

C. OUTFALL 201

The draft permit authorizes the discharge of stormwater and low volume waste sources (primarily water treatment wastes) via internal Outfall 201 during the final phase. No treatment is associated with internal Outfall 201.

Technology-based effluent limitations for total suspended solid and oil & grease are required by 40 CFR §423.12(b)(3). Technology-based effluent limitations for pH are required by 40 CFR §423.12(b)(1). Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

D. OUTFALL 301

The draft permit authorizes the discharge of metal cleaning wastes commingled with stormwater via internal Outfall 301 during the final phase. No treatment is associated with internal Outfall 201.

Technology based effluent limitations for pH are continued from the existing TPDES permit based upon 40 CFR 423.12(b)(1). Effluent limitations for TSS, oil & grease, and total iron are continued from the existing TPDES permit based upon 40 CFR 423.12(b)(5). Effluent limitations for total copper are continued from the existing TPDES permit based upon 30 TAC § 319.23.

E. OUTFALL 401

The draft permit authorizes the discharge of stormwater and low volume waste sources (primarily house recirculating wastewater) via internal Outfall 401 during the final phase. No treatment is associated with internal Outfall 401.

Technology-based effluent limitations for total suspended solid and oil & grease are required by 40 CFR §423.12(b)(3). Technology-based effluent limitations for pH are required by 40 CFR §423.12(b)(1). Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

F. OUTFALL 51A

The draft permit authorizes the discharge of stormwater and low volume waste sources (primarily floor drainage) via internal Outfall 51A during the final phase. No treatment is associated with internal Outfall 51A.

Technology-based effluent limitations for total suspended solid and oil & grease are required by 40 CFR §423.12(b)(3). Technology-based effluent limitations for pH are required by 40 CFR §423.12(b)(1). Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

G. OUTFALL 51B

The draft permit authorizes the discharge of stormwater and low volume waste sources (primarily floor drainage) via internal Outfall 51B during the final phase. No treatment is associated with internal Outfall 51B.

Technology-based effluent limitations for total suspended solid and oil & grease are required by 40 CFR §423.12(b)(3). Technology-based effluent limitations for pH are required by 40 CFR §423.12(b)(1). Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

H. OUTFALL 601

The draft permit authorizes the discharge of treated domestic wastewater via Outfall 601 during the final phase. The domestic wastewater treatment system consists of a surge pit, which provides screening and equalization; an activated sludge aeration chamber, which provides for aeration and mixing; a clarifier which provides for sedimentation; an aerobic sludge digester, and a chlorine contact chamber which provides for disinfection, prior to discharge via internal Outfall 601. After the treated domestic wastewater is discharged via internal Outfall 601 it commingles with other wastewaters from the facility and is discharged via Outfall 001.

Technology based effluent limitations for biochemical oxygen demand (5-day), total suspended solids, pH, and chlorine residual are continued from the existing TPDES permit based upon 30 TAC 309. Monitoring requirements for flow are required by 40 CFR §122.44(i)(1)(ii).

Appendix B
Calculated Water Quality-Based Effluent Limits

TEXTOX MENU #5 - BAY OR WIDE TIDAL RIVER

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

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Saltwater 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:	NRG Texas Power LLC
TPDES Permit No:	WQ0001026000
Outfall No:	001
Prepared by:	MICHAEL SUNDERLIN
Date:	02/24/2021

DISCHARGE INFORMATION

Receiving Waterbody:	San Jacinto Bay
Segment No:	2427
TSS (mg/L):	12
Effluent Flow for Aquatic Life (MGD)	740.2
% Effluent for Chronic Aquatic Life (Mixing Zone):	100
% Effluent for Acute Aquatic Life (ZID):	100
Oyster Waters?	**no**
Effluent Flow for Human Health (MGD):	740.2
% Effluent for Human Health:	100

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

Estuarine Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Cadmium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (total)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (trivalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	4.85	-0.72	11830	0.876		1.00	Assumed
Lead	6.06	-0.85	138898	0.375		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	5.86	-0.74	115188	0.420		1.00	Assumed
Zinc	5.36	-0.52	62925	0.570		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*SW Acute Criterion (µg/L)*	*SW Chronic Criterion (µg/L)*	*WLAa (µg/L)*	*WLAc (µg/L)*	*LTAa (µg/L)*	*LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Acrolein	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aldrin	1.3	N/A	1.30	N/A	0.416	N/A	0.611	1.29
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	149	78	149	78.0	47.7	47.6	69.9	147
Cadmium	40.0	8.75	40.0	8.75	12.8	5.34	7.84	16.5
Carbaryl	613	N/A	613	N/A	196	N/A	288	610
Chlordane	0.09	0.004	0.0900	0.00400	0.0288	0.00244	0.00358	0.00758
Chlorpyrifos	0.011	0.006	0.0110	0.00600	0.00352	0.00366	0.00517	0.0109
Chromium (trivalent)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (hexavalent)	1090	49.6	1090	49.6	349	30.3	44.4	94.0
Copper	13.5	3.6	15.4	4.11	4.93	2.51	3.68	7.79
Copper (oyster waters)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyanide (free)	5.6	5.6	5.60	5.60	1.79	3.42	2.63	5.57
4,4'-DDT	0.13	0.001	0.130	0.00100	0.0416	0.000610	0.000896	0.00189
Demeton	N/A	0.1	N/A	0.100	N/A	0.0610	0.0896	0.189
Diazinon	0.819	0.819	0.819	0.819	0.262	0.500	0.385	0.815
Dicofol [Kelthane]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	0.71	0.002	0.710	0.00200	0.227	0.00122	0.00179	0.00379
Diuron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan I (*alpha*)	0.034	0.009	0.0340	0.00900	0.0109	0.00549	0.00807	0.0170
Endosulfan II (*beta*)	0.034	0.009	0.0340	0.00900	0.0109	0.00549	0.00807	0.0170
Endosulfan sulfate	0.034	0.009	0.0340	0.00900	0.0109	0.00549	0.00807	0.0170
Endrin	0.037	0.002	0.0370	0.00200	0.0118	0.00122	0.00179	0.00379
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Heptachlor	0.053	0.004	0.0530	0.00400	0.0170	0.00244	0.00358	0.00758
Hexachlorocyclohexane (*gamma*) [Lindane]	0.16	N/A	0.160	N/A	0.0512	N/A	0.0752	0.159
Lead	133	5.3	355	14.1	113	8.62	12.6	26.8
Malathion	N/A	0.01	N/A	0.0100	N/A	0.00610	0.00896	0.0189
Mercury	2.1	1.1	2.10	1.10	0.672	0.671	0.986	2.08
Methoxychlor	N/A	0.03	N/A	0.0300	N/A	0.0183	0.0269	0.0569
Mirex	N/A	0.001	N/A	0.00100	N/A	0.000610	0.000896	0.00189
Nickel	118	13.1	118	13.1	37.8	7.99	11.7	24.8
Nonylphenol	7	1.7	7.00	1.70	2.24	1.04	1.52	3.22
Parathion (ethyl)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	15.1	9.6	15.1	9.60	4.83	5.86	7.10	15.0
Phenanthrene	7.7	4.6	7.70	4.60	2.46	2.81	3.62	7.66
Polychlorinated Biphenyls [PCBs]	10	0.03	10.0	0.0300	3.20	0.0183	0.0269	0.0569
Selenium	564	136	564	136	180	83.0	121	258
Silver	2	N/A	4.76	N/A	1.52	N/A	2.24	4.74
Toxaphene	0.21	0.0002	0.210	0.000200	0.0672	0.000122	0.000179	0.000379
Tributyltin [TBT]	0.24	0.0074	0.240	0.00740	0.0768	0.00451	0.00663	0.0140
2,4,5 Trichlorophenol	259	12	259	12.0	82.9	7.32	10.7	22.7
Zinc	92.7	84.2	163	148	52.1	90.1	76.5	161

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Only Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Acrylonitrile	115	115	107	157	332
Aldrin	1.147E-05	0.0000115	0.0000107	0.0000156	0.0000331
Anthracene	1317	1317	1225	1800	3809
Antimony	1071	1071	996	1464	3097
Arsenic	N/A	N/A	N/A	N/A	N/A
Barium	N/A	N/A	N/A	N/A	N/A
Benzene	581	581	540	794	1680
Benzidine	0.107	0.107	0.0995	0.146	0.309
Benzo(*a*)anthracene	0.025	0.0250	0.0233	0.0341	0.0723
Benzo(*a*)pyrene	0.0025	0.00250	0.00233	0.00341	0.00723
Bis(chloromethyl)ether	0.2745	0.275	0.255	0.375	0.793
Bis(2-chloroethyl)ether	42.83	42.8	39.8	58.5	123
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.55	7.55	7.02	10.3	21.8
Bromodichloromethane [Dichlorobromomethane]	275	275	256	375	795
Bromoform [Tribromomethane]	1060	1060	986	1449	3065
Cadmium	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	46	46.0	42.8	62.8	133
Chlordane	0.0025	0.00250	0.00233	0.00341	0.00723
Chlorobenzene	2737	2737	2545	3741	7916
Chlorodibromomethane [Dibromochloromethane]	183	183	170	250	529
Chloroform [Trichloromethane]	7697	7697	7158	10522	22262
Chromium (hexavalent)	502	502	467	686	1451
Chrysene	2.52	2.52	2.34	3.44	7.28
Cresols [Methylphenols]	9301	9301	8650	12715	26901
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.00200	0.00186	0.00273	0.00578
4,4'-DDE	0.00013	0.000130	0.000121	0.000177	0.000375
4,4'-DDT	0.0004	0.000400	0.000372	0.000546	0.00115
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	473	473	440	646	1368
1,2-Dibromoethane [Ethylene Dibromide]	4.24	4.24	3.94	5.79	12.2
m-Dichlorobenzene [1,3-Dichlorobenzene]	595	595	553	813	1720
o-Dichlorobenzene [1,2-Dichlorobenzene]	3299	3299	3068	4510	9541
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	2.24	2.24	2.08	3.06	6.47
1,2-Dichloroethane	364	364	339	497	1052
1,1-Dichloroethylene [1,1-Dichloroethene]	55114	55114	51256	75346	159406
Dichloromethane [Methylene Chloride]	13333	13333	12400	18227	38563
1,2-Dichloropropane	259	259	241	354	749
1,3-Dichloropropene [1,3-Dichloropropylene]	119	119	111	162	344
Dicofol [Kelthane]	0.30	0.300	0.279	0.410	0.867
Dieldrin	2.0E-05	0.0000200	0.0000186	0.0000273	0.0000578
2,4-Dimethylphenol	8436	8436	7845	11532	24399
Di-*n*-Butyl Phthalate	92.4	92.4	85.9	126	267
Dioxins/Furans [TCDD Equivalents]	7.97E-08	7.97E-08	7.41E-08	1.08E-07	2.30E-07
Endrin	0.02	0.0200	0.0186	0.0273	0.0578
Epichlorohydrin	2013	2013	1872	2751	5822
Ethylbenzene	1867	1867	1736	2552	5399
Ethylene Glycol	1.68E+07	16800000	15624000	22967280	48590640

Parameter	*Fish Only Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.0001	0.000100	0.0000930	0.000136	0.000289
Heptachlor Epoxide	0.00029	0.000290	0.000270	0.000396	0.000838
Hexachlorobenzene	0.00068	0.000680	0.000632	0.000929	0.00196
Hexachlorobutadiene	0.22	0.220	0.205	0.300	0.636
Hexachlorocyclohexane (*alpha*)	0.0084	0.00840	0.00781	0.0114	0.0242
Hexachlorocyclohexane (*beta*)	0.26	0.260	0.242	0.355	0.751
Hexachlorocyclohexane (*gamma*) [Lindane]	0.341	0.341	0.317	0.466	0.986
Hexachlorocyclopentadiene	11.6	11.6	10.8	15.8	33.5
Hexachloroethane	2.33	2.33	2.17	3.18	6.73
Hexachlorophene	2.90	2.90	2.70	3.96	8.38
4,4'-Isopropylidenediphenol [Bisphenol A]	15982	15982	14863	21848	46224
Lead	3.83	10.2	9.50	13.9	29.5
Mercury	0.0250	0.0250	0.0233	0.0341	0.0723
Methoxychlor	3.0	3.00	2.79	4.10	8.67
Methyl Ethyl Ketone	9.92E+05	992000	922560	1356163	2869161
Methyl *tert*-butyl ether [MTBE]	10482	10482	9748	14329	30317
Nickel	1140	1140	1060	1558	3297
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	1873	1873	1742	2560	5417
N-Nitrosodiethylamine	2.1	2.10	1.95	2.87	6.07
N-Nitroso-di-*n*-Butylamine	4.2	4.20	3.91	5.74	12.1
Pentachlorobenzene	0.355	0.355	0.330	0.485	1.02
Pentachlorophenol	0.29	0.290	0.270	0.396	0.838
Polychlorinated Biphenyls [PCBs]	6.4E-04	0.000640	0.000595	0.000874	0.00185
Pyridine	947	947	881	1294	2739
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.24	0.240	0.223	0.328	0.694
1,1,2,2-Tetrachloroethane	26.35	26.4	24.5	36.0	76.2
Tetrachloroethylene [Tetrachloroethylene]	280	280	260	382	809
Thallium	0.23	0.230	0.214	0.314	0.665
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.0110	0.0102	0.0150	0.0318
2,4,5-TP [Silvex]	369	369	343	504	1067
1,1,1-Trichloroethane	784354	784354	729449	1072290	2268587
1,1,2-Trichloroethane	166	166	154	226	480
Trichloroethylene [Trichloroethene]	71.9	71.9	66.9	98.2	207
2,4,5-Trichlorophenol	1867	1867	1736	2552	5399
TTHM [Sum of Total Trihalomethanes]	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	16.5	16.5	15.3	22.5	47.7

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

Aquatic Life ***Parameter***	***70% of Daily Avg. (µg/L)***	***85% of Daily Avg. (µg/L)***
Acrolein	N/A	N/A
Aldrin	0.428	0.519
Aluminum	N/A	N/A
Arsenic	48.9	59.4
Cadmium	5.49	6.66
Carbaryl	201	245
Chlordane	0.00251	0.00304
Chlorpyrifos	0.00362	0.00439
Chromium (trivalent)	N/A	N/A
Chromium (hexavalent)	31.1	37.8
Copper	2.58	3.13
Copper (oyster waters)	N/A	N/A
Cyanide (free)	1.84	2.23
4,4'-DDT	0.000627	0.000762
Demeton	0.0627	0.0762
Diazinon	0.269	0.327
Dicofol [Kelthane]	N/A	N/A
Dieldrin	0.00125	0.00152
Diuron	N/A	N/A
Endosulfan I (*alpha*)	0.00564	0.00685
Endosulfan II (*beta*)	0.00564	0.00685
Endosulfan sulfate	0.00564	0.00685
Endrin	0.00125	0.00152
Guthion [Azinphos Methyl]	0.00627	0.00762
Heptachlor	0.00251	0.00304
Hexachlorocyclohexane (*gamma*) [Lindane]	0.0526	0.0639
Lead	8.87	10.7
Malathion	0.00627	0.00762
Mercury	0.690	0.838
Methoxychlor	0.0188	0.0228
Mirex	0.000627	0.000762
Nickel	8.22	9.98
Nonylphenol	1.06	1.29
Parathion (ethyl)	N/A	N/A
Pentachlorophenol	4.97	6.03
Phenanthrene	2.53	3.07
Polychlorinated Biphenyls [PCBs]	0.0188	0.0228
Selenium	85.3	103
Silver	1.56	1.90
Toxaphene	0.000125	0.000152
Tributyltin [TBT]	0.00464	0.00564
2,4,5 Trichlorophenol	7.53	9.14
Zinc	53.5	65.0

Human Health *Parameter*	*70% of Daily Avg. (µg/L)*	*85% of Daily Avg. (µg/L)*
Acrylonitrile	110	133
Aldrin	0.0000109	0.0000133
Anthracene	1260	1530
Antimony	1024	1244
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	555	675
Benzidine	0.102	0.124
Benzo(*a*)anthracene	0.0239	0.0290
Benzo(*a*)pyrene	0.00239	0.00290
Bis(chloromethyl)ether	0.262	0.318
Bis(2-chloroethyl)ether	40.9	49.7
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.22	8.77
Bromodichloromethane [Dichlorobromomethane]	263	319
Bromoform [Tribromomethane]	1014	1231
Cadmium	N/A	N/A
Carbon Tetrachloride	44.0	53.4
Chlordane	0.00239	0.00290
Chlorobenzene	2619	3180
Chlorodibromomethane [Dibromochloromethane]	175	212
Chloroform [Trichloromethane]	7365	8944
Chromium (hexavalent)	480	583
Chrysene	2.41	2.92
Cresols [Methylphenols]	8900	10808
Cyanide (free)	N/A	N/A
4,4'-DDD	0.00191	0.00232
4,4'-DDE	0.000124	0.000151
4,4'-DDT	0.000382	0.000464
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	452	549
1,2-Dibromoethane [Ethylene Dibromide]	4.05	4.92
m-Dichlorobenzene [1,3-Dichlorobenzene]	569	691
o-Dichlorobenzene [1,2-Dichlorobenzene]	3157	3833
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	2.14	2.60
1,2-Dichloroethane	348	422
1,1-Dichloroethylene [1,1-Dichloroethene]	52742	64044
Dichloromethane [Methylene Chloride]	12759	15493
1,2-Dichloropropane	247	300
1,3-Dichloropropene [1,3-Dichloropropylene]	113	138
Dicofol [Kelthane]	0.287	0.348
Dieldrin	0.0000191	0.0000232
2,4-Dimethylphenol	8072	9802
Di-*n*-Butyl Phthalate	88.4	107
Dioxins/Furans [TCDD Equivalents]	7.62E-08	9.26E-08
Endrin	0.0191	0.0232
Epichlorohydrin	1926	2339
Ethylbenzene	1786	2169
Ethylene Glycol	16077096	19522188
Fluoride	N/A	N/A
Heptachlor	0.0000956	0.000116
Heptachlor Epoxide	0.000277	0.000336

Human Health ***Parameter***	***70% of Daily Avg. (µg/L)***	***85% of Daily Avg. (µg/L)***
Hexachlorobenzene	0.000650	0.000790
Hexachlorobutadiene	0.210	0.255
Hexachlorocyclohexane (*alpha*)	0.00803	0.00976
Hexachlorocyclohexane (*beta*)	0.248	0.302
Hexachlorocyclohexane (*gamma*) [Lindane]	0.326	0.396
Hexachlorocyclopentadiene	11.1	13.4
Hexachloroethane	2.22	2.70
Hexachlorophene	2.77	3.36
4,4'-Isopropylidenediphenol [Bisphenol A]	15294	18571
Lead	9.77	11.8
Mercury	0.0239	0.0290
Methoxychlor	2.87	3.48
Methyl Ethyl Ketone	949314	1152738
Methyl *tert*-butyl ether [MTBE]	10030	12180
Nickel	1090	1324
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	1792	2176
N-Nitrosodiethylamine	2.00	2.44
N-Nitroso-di-*n*-Butylamine	4.01	4.88
Pentachlorobenzene	0.339	0.412
Pentachlorophenol	0.277	0.336
Polychlorinated Biphenyls [PCBs]	0.000612	0.000743
Pyridine	906	1100
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.229	0.278
1,1,2,2-Tetrachloroethane	25.2	30.6
Tetrachloroethylene [Tetrachloroethylene]	267	325
Thallium	0.220	0.267
Toluene	N/A	N/A
Toxaphene	0.0105	0.0127
2,4,5-TP [Silvex]	353	428
1,1,1-Trichloroethane	750603	911446
1,1,2-Trichloroethane	158	192
Trichloroethylene [Trichloroethene]	68.8	83.5
2,4,5-Trichlorophenol	1786	2169
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	15.7	19.1

TPDES PERMIT NO.
WQ0001026000
[For TCEQ office use only -
EPA I.D. No. TX0006378]

This major amendment supersedes and replaces TPDES Permit No. WQ0001026000, issued on July 18, 2014.

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

NRG Texas Power LLC

whose mailing address is

910 Louisiana Street, 7th Floor
Houston, Texas 77002

is authorized to treat and discharge wastes from S.R. Bertron Electric Generating Station, (a non-operational natural gas-fired steam-electric power-generation facility) (SIC 4911)

located at 2012 Miller Cut Off Road, approximately two miles northeast of the intersection of State Highway 225 and State Highway 134, and approximately a mile and a half north of the intersection of State Highway 225 and Miller Cut Off Road in the City of LaPorte, Harris County, Texas 77571

via Outfall 001 directly to San Jacinto Bay in Segment No. 2427 of the Bays and Estuaries; and via Outfalls 002, 003, and 004 directly to Houston Ship Channel/San Jacinto River Tidal in Segment No. 1005 of the San Jacinto 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

1. During the period beginning upon date of issuance and lasting through date facility reactivation[*1], the permittee is authorized to discharge stormwater commingled with previously monitored effluents (stormwater commingled with *de minimis* quantities of legacy low volume waste sources from internal Outfall 51A and treated domestic wastewater from internal Outfall 601) subject to the following effluent limitations:

   Volume: Intermittent and flow-variable basis.

Effluent Characteristics	**Discharge Limitations**			**Minimum Self-Monitoring Requirements**	
	Daily Average	**Daily Maximum**	**Single Grab**	**Report Daily Average and Daily Maximum**	
	mg/L	**mg/L**	**mg/L**	**Measurement Frequency**	**Sample Type**
Flow, million gallons per day (MGD).	Report (MGD)	Report (MGD)	N/A	1/day [*2]	Estimate
Total Organic Carbon	N/A	75	75	1/week [*2]	Grab
Oil and Grease	N/A	15	15	1/week [*2]	Grab

   [*1] See Other Requirement No. 13.
   [*2] When discharge occurs.

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

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: Outfall 001, where stormwater commingled with previously monitored effluents are discharged from the canal prior to San Jacinto Bay.

1. During the period beginning upon date of issuance and lasting through date of facility reactivation[*1], the permittee is authorized to discharge stormwater commingled with *de minimis* quantities of legacy low volume waste sources [*2] subject to the following effluent limitations:

   Volume: Intermittent and flow variable basis.

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

[*1] See Other Requirement No. 13.
[*2] See Other Requirements No. 4.
[*3] When discharge occurs.

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

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 51A, where wastewater is discharged from the former treatment facilities, prior to entering the discharge canal.

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

   Volume: Intermittent and flow-variable basis.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/L	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/day *1	Estimate
Biochemical Oxygen Demand (5-day)	20	45	45	1/quarter *1	Grab
Total Suspended Solids	20	45	45	1/quarter *1	Grab
Enterococci	35 *2	104 *2	104 *2	1/week *1	Grab

*1 When discharge occurs.
*2 Units are in colony forming units (CFU) or most probable number (MPN)/100 mls.

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, when discharge occurs.

3. The effluent shall be chlorinated sufficiently to maintain at least at 1.0 mg/L chlorine residual after a twenty-minute detention time and shall be monitored 1/quarter, when discharge occurs.

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

5. Effluent monitoring samples shall be taken at the following location: at Outfall 601, where treated domestic wastewater is discharged from the domestic wastewater treatment plant, prior to mixing with any other waste stream.

1. During the period beginning upon date of issuance and lasting through date facility reactivation [*1], the permittee is authorized to discharge stormwater commingled with *de minimis* quantities of legacy metal cleaning waste sources [*2] and legacy low volume waste sources [*2] subject to the following effluent limitations:

   Volume: Intermittent and flow-variable basis.

Effluent Characteristics	**Discharge Limitations**			**Minimum Self-Monitoring Requirements**	
	Daily Average	**Daily Maximum**	**Single Grab**	**Report Daily Average and Daily Maximum**	
	mg/L	**mg/L**	**mg/L**	**Measurement Frequency**	**Sample Type**
Flow	Report (MGD)	Report (MGD)	N/A	1/day [*3]	Estimate
Total Organic Carbon	N/A	75	75	1/week [*3]	Grab
Oil and Grease	N/A	15	15	1/week [*3]	Grab
Iron, total	1.0	1.0	1.0	1/week [*4]	Grab
Copper, total	0.5	1.0	1.0	1/week [*4]	Grab

   [*1] See Other Requirement No. 13.
   [*2] See Other Requirement No. 4.
   [*3] When discharge occurs.
   [*4] When discharge occurs of legacy metal cleaning wastes occurs.

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

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 locations: at Outfall 002, the exit of the ditch after the discharges from idle internal Outfalls 101, 201, and 301 commingle prior to discharge to the idle cooling water intake system.

1. During the period beginning upon date of issuance and lasting through date facility reactivation [*1], the permittee is authorized to discharge stormwater commingled with *de minimis* quantities of legacy low volume waste sources [*2] subject to the following effluent limitations:

   Volume: Intermittent and flow-variable basis.

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

   [*1] See Other Requirement No. 13.
   [*2] See Other Requirement No. 4.
   [*3] When discharge occurs.

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

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 locations:

   Outfall 003 the exit of the ditch after the discharge from idle internal Outfall 401 prior to discharge to the idle cooling water intake system; and

   Outfall 004 the exit of the idle cooling tower basin (idle internal Outfall 51B) prior to discharge to the idle cooling water intake system.

1. During the period beginning upon date of facility reactivation[*1] and lasting through date of expiration, the permittee is authorized to discharge once through cooling water[*2], stormwater commingled with previously monitored effluents (stormwater commingled with *de minimis* quantities of legacy low volume waste sources from internal Outfalls 201, 51A, and 51B; and treated domestic wastewater from internal Outfall 601) subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 740.2 MGD. The daily maximum flow shall not exceed 740.2 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	740.2 MGD		740.2 MGD		N/A	Continuous [*4]	Record [*4]
Temperature [*2, *3]	108 ˚F		110 ˚F		N/A	Continuous	Record
Total Residual Chlorine [*2]	N/A		412	0.2	0.2	1/week [*5]	Grab
Free Available Chlorine [*2]	103	0.2	257	0.5	0.5	1/week [*5]	Grab

[*1] See Other Requirement 13.
[*2] See Other Requirements Nos. 4 and 9.
[*3] See Other Requirement No. 14
[*4] Flows may be calculated based on pump performance curve data.
[*5] Samples shall be representative of periods of chlorination.

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: Outfall 001, where once through cooling water and PMEs are discharged from the canal prior to San Jacinto Bay.

1. During the period beginning upon date of facility reactivation[*1] and lasting through date of expiration, the permittee is authorized to discharge stormwater and low volume waste sources [primarily boiler blowdown via Outfall 101; demineralizer treatment wastewater via Outfall 201, and house recirculating wastewater via Outfall 401][*2] subject to the following effluent limitations:

   Volume: Intermittent and flow variable basis.

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

   [*1] See Other Requirement No. 13.
   [*2] See Other Requirements No. 4.
   [*3] When discharging.

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, when discharge occurs.

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 locations:

   At Outfall 101, where low volume waste sources are discharged from the treatment facility prior to mixing with any other waste streams.

   At Outfall 201, where low volume waste sources are discharged downstream of the filter units and prior to mixing with any other waste streams.

   At Outfall 401, where low volume waste sources are discharged from the cooling tower basin and prior to mixing with any other waste streams.

1. During the period beginning upon date of facility reactivation[*1] and lasting through date of expiration, the permittee is authorized to discharge metal cleaning wastes[*2] commingled with stormwater subject to the following effluent limitations:

   Volume: Intermittent and flow variable basis.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/L	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/day [*3]	Estimate
Total Suspended Solids	30	100	100	1/week [*3]	Grab
Oil and Grease	15	20	20	1/week [*3]	Grab
Iron, total	1.0	1.0	1.0	1/week [*4]	Grab
Copper, total	0.5	1.0	1.0	1/week [*4]	Grab

[*1] See Other Requirement No. 13.
[*2] See Other Requirements No. 4.
[*3] When discharge occurs.
[*4] When discharge of metal cleaning wastes occurs. Monitoring is only required when the discharge of metal cleaning wastes occurs. No monitoring is required when stormwater only (i.e., no metal cleaning wastes) is discharged via the Outfall 301 monitoring point.

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, when discharge occurs.

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: Outfall 301, where metal cleaning wastes are discharged (immediately downstream of the filter units) prior to mixing with any other waste stream.

1. During the period beginning upon the date of facility reactivation[*1] and lasting through the date of expiration, the permittee is authorized to discharge stormwater and low volume waste sources [primarily floor drainage][*2] on an intermittent and flow variable basis, subject to the following effluent limitations:

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

[*1] See Other Requirement No. 13.
[*2] See Other Requirements No. 4.
[*3] When discharging.

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, when discharge occurs.

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 locations:

   At Outfall 51A, where low volume waste sources are discharged from the treatment facilities, prior to entering the discharge canal.

   At Outfall 51B, where low volume waste sources are discharged from the treatment facilities, prior to entering the cooling water intake forebay.

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 149) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

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

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

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

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

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

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

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

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

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

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

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

i. volume of waste and date(s) generated from treatment process;
ii. volume of waste disposed of on-site or shipped off-site;
iii. date(s) of disposal;

iv. identity of hauler or transporter;
v. location of disposal site; and
vi. method of final disposal.

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

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

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OTHER REQUIREMENTS

1. The Executive Director has reviewed this action for consistency with the goals and policies of the Texas Coastal Management Program (CMP) in accordance with the regulations of the General Land Office (GLO) and has determined that the action is consistent with the applicable CMP goals and policies.

2. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 12, 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 12 and the Enforcement Division (MC 224):

   Copper (Total)

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

METALS AND CYANIDE	MAL mg/L
Copper (Total)	0.010
Iron (Total)	1.0

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

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

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

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

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

4. DEFINITIONS

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

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

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

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

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

Simultaneous multi-unit chlorination is permitted.

C. The term *free available chlorine* 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.

Free available chlorine (FAC) may not 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 chlorine at any one time unless the permittee can demonstrate to the permitting authority that the units in a particular location cannot operate at or below this level of chlorination.

D. 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.

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

E. 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.

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

G. The term "average concentration" as it relates to chlorine discharge means the average of analyses made over a single period of chlorine release which does not exceed two hours.

H. The term "blowdown" means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practices.

5. POND REQUIREMENTS

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 discharge 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. 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 C1 through C3 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 C1 through C3 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).

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 C1 – C3 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), Compliance Monitoring Section (MC-224), and TCEQ 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 unauthorized discharge, then the repair must be documented and certified by a Texas licensed professional engineer. Within 60 days after a repair is completed, liner certification must be provided to the TCEQ Water Quality Assessment Team (MC-150), Compliance Monitoring Section (MC-224), and TCEQ 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.

6. The permittee shall notify the TCEQ Remediation Division (Environmental Cleanup MC-127) in writing, at least 90 days prior to discontinuing use of any surface impoundment, pit, or basin authorized by this permit. The permittee shall, 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.

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

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, a monthly effluent report shall be submitted each month, to the location(s) specified on the reporting form or the instruction sheet, by the 25th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be reported on the approved TPDES self-report form, Discharge Monitoring Report (DMR) Form EPA No. 3320-1, signed and certified as required by Monitoring and Reporting Requirements No. 10.

8. For pollutants which are monitored annually, effluent reports shall be submitted in September of each year. For pollutants which are monitored twice per year, the first effluent report shall be submitted six months after the date of permit issuance and subsequent reports every six-months thereafter. For pollutants which are monitored four times per year, the first effluent report shall be submitted three months after the date of permit issuance and subsequent reports every three months thereafter.

9. COOLING WATER INTAKE STRUCTURE REQUIREMENTS (CWIS): 316(b) of the CWA

The facility is currently in non-operational status and is not currently using water for cooling purposes.

A. Application Requirements

The permittee shall submit applicable requirements established at 40 CFR § 122.21(r)(1)(ii) to the TCEQ Industrial Permits Team (MC 148) and Region 12 Office at least 180 days prior to the planned commencement of cooling water withdrawals.

The TCEQ may review required application materials submitted outside of a permit action (renewal or amendment) and provide a written response regarding a best technology available (BTA) determination. If the executive director does not determine that the CWIS meets BTA, the response will either request additional materials needed to satisfy application requirements or explain why the proposed CWIS does not satisfy BTA requirements.

The permittee is not authorized to commence utilization of the CWIS for cooling water withdrawals or the discharge of once-through cooling water until application requirements established at 40 CFR § 122.21(r)(1)(ii) have been submitted to the TCEQ and the permittee has received written approval from the TCEQ that the CWIS configuration meets BTA standards for Impingement Mortality and Entrainment (IM&E). If it is determined that the CWIS configuration does not meet BTA standards for IM&E, the permit may be reopened to incorporate additional requirements.

Upon receipt of written approval from the TCEQ regarding a formal BTA determination, the permittee shall adhere to the requirements of 40 CFR § 125.96 when the CWIS is in operation.

Alternatives to the procedures described at 40 CFR § 125.96 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.

B. Record-Keeping Requirements

Records (e.g. electronic logs, data acquisition system records, operating procedures, operator logs, etc.) documenting all monitoring activities required by 40 CFR § 125.96 and all submissions to the TCEQ regarding the CWIS, shall be kept on site until the subsequent permit is issued and made available to TCEQ personnel upon request.

C. Changes in the Cooling Water Intake Structure

Following receipt of a formal BTA determination from the TCEQ, the facility must notify the TCEQ Industrial Permits Team (MC 148) and Region 12 Office in writing at least 30 days prior to any changes or modifications of the design or operation and maintenance 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 BTA standards for IM&E, the permit may be reopened to incorporate additional requirements.

10. The chronic aquatic life mixing zone for Outfall 001 is defined as a volume within a radius of 80 feet from the point of discharge. Chronic toxic criteria apply at the edge of the chronic aquatic life mixing zone.

11. The permittee is authorized to use effluent from internal Outfall 101, (stormwater and low volume wastes, primarily boiler blowdown), internal Outfall 201 (stormwater and low volume wastes, primarily demineralizer treatment wastewater), internal Outfalls 401 (stormwater and low volume waste, primarily house recirculating water), and internal Outfalls 51A and 51 B (stormwater and low volume wastes, primarily floor drainage) within the S. R. Bertron Electric Generating Station Plant for auxiliary cooling tower makeup water and fire protection system water. Effluent limitations must be met and monitoring and reporting requirements must be performed as required on page 2f of the permit even when the effluent is being reused. The permittee shall maintain an operating log which records the volume of industrial reclaimed water routed each day to storage tanks and the volume of industrial reclaimed water used each day for

    A. cooling tower makeup water and
    B. fire protection system water.

    The operating log must be readily available for inspection by authorized representatives of the TCEQ for a minimum period of five years.

12. The permittee shall develop and submit to the TCEQ, within one year after Outfall 001 has resumed the discharge of once-through cooling water (final phase requirements), a plan to characterize the thermal plume in the receiving water through either the use of a model, mass balance, or via collected or existing in-stream temperature data. The permittee would then be required to implement the plan following its approval by the TCEQ.

    The permittee is hereby placed on notice that the Executive Director of the TCEQ will be initiating changes to evaluation procedures and/or rulemaking that may affect thermal requirements for this facility.

13. Reporting requirements according to 30 TAC Sections 319.1-319.12 and any additional effluent reporting requirements contained in the permit for the final phase of Outfalls 001, 101, 201, 301, 401, 51A, and 51B are suspended from the effective date of the permit until submittal of notification of phase changes for Outfalls 001, 201, 51A, and 51B, and notification of activation of Outfalls 101, 301, and 401. The permittee shall provide written notice to the TCEQ Region 12 Office and the Applications Review and Processing Team (MC-148) of the Water Quality Division at least forty-five (45) days prior to anticipated phase changes for Outfalls 001, 201, 51A, and 51B, and activation of Outfalls 101, 301, and 401, on Notification of Completion Form 20007.

14. <u>EFFLUENT TESTING REQUIREMENTS</u>:

    Wastewater discharged via Outfall 001 shall be sampled and analyzed for those parameters listed in Attachment A of this permit for a minimum of four (4) separate sampling events which are a minimum of one (1) week apart.

    A. <u>Interim Phase Effluent Testing Requirements</u>

        Wastewater discharged via Outfalls 001, 002, 003, and 004 shall be sampled and analyzed, individually and separately, for those parameters listed in Attachment A of this permit for a minimum of four (4) separate sampling events which are a minimum of one (1) week apart.

B. Final Phase Effluent Testing Requirements

Wastewater discharged via Outfall 001 shall be sampled and analyzed for those parameters listed in Attachment A of this permit for a minimum of four (4) separate sampling events which are a minimum of one (1) week apart.

Analytical testing shall be completed and submitted to the TCEQ, Wastewater Permitting Section (MC-148), Industrial Permits Team, within sixty (60) days following the last sampling event for the respective outfalls. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations and monitoring requirements.

Attachment A

Table A – Conventional and Non-conventional

Outfall No.: ☐C ☐G	**Effluent Concentration (mg/L)**					
Pollutant	**Samp. 1**	**Samp. 2**	**Samp. 3**	**Samp. 4**	**Avg**	
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						
Fluoride						
Total Alkalinity (as $CaCO_3$)						
Temperature (°F)						
pH (Standard Units)						

Table B – Metals

Pollutant	**Effluent Concentration (µg/L)**					**MAL (µg/L)**
	Samp. 1	**Samp. 2**	**Samp. 3**	**Samp. 4**	**Avg**	
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
Nickel, Total						2
Selenium, Total						5
Silver, Total						0.5
Thallium, Total						0.5
Zinc, Total						5.0

Table C (Part 1 of 2) – Toxic Pollutants with Water Quality Criteria

Outfall No.: ☐C ☐G **Pollutant**	**Samp. 1 (µg/L)**	**Samp. 2 (µg/L)**	**Samp. 3 (µg/L)**	**Samp. 4 (µg/L)**	**Avg. (µg/L)**	**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						—
Fluoride						500
Hexachlorobenzene						5
Hexachlorobutadiene						10
Hexachlorocyclopentadiene						10
Hexachloroethane						20
4,4′-Isopropylidenediphenol [bisphenol A]						—
Methyl Ethyl Ketone						50

Table C (Part 2 of 2) – Toxic Pollutants with Water Quality Criteria

Outfall No.: ☐C ☐G **Pollutant**	**Samp. 1 (µg/L)**	**Samp. 2 (µg/L)**	**Samp. 3 (µg/L)**	**Samp. 4 (µg/L)** [3]	**Avg. (µg/L)**	**MAL (µg/L)**
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) [1]						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

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 D– Other Pollutants

Outfall No. ☐C ☐G / Pollutant	Believed Present	Believed Absent	Average Concentration (mg/L)	Maximum Concentration (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

Table E – Volatile Compounds

Outfall No. ☐Composite ☐Grab	Average (µg/L)	Maximum (µg/L)	No. of Samples	MAL (µg/L)
Pollutant				
Acrolein				50
Acrylonitrile				50
Benzene				10
Bromoform				10
Carbon tetrachloride				2
Chlorobenzene				10
Chlorodibromomethane				10
Chloroethane				50
2-Chloroethylvinyl ether				10
Chloroform				10
Dichlorobromomethane [Bromodichloromethane]				10
1,1-Dichloroethane				10
1,2-Dichloroethane				10
1,1-Dichloroethylene [1,1-Dichloroethene]				10
1,2-Dichloropropane				10
1,3-Dichloropropylene [1,3-Dichloropropene]				10
Ethylbenzene				10
Methyl bromide [Bromomethane]				50
Methyl chloride [Chloromethane]				50
Methylene chloride [Dichloromethane]				20
1,1,2,2-Tetrachloroethane				10
Tetrachloroethylene [Tetrachloroethene]				10
Toluene				10
1,2-*trans*-dichloroethylene [1,2-*trans*-dichloroethene]				10
1,1,1-Trichloroethane				10
1,1,2-Trichloroethane				10
Trichloroethylene [Trichloroethene]				10
Vinyl chloride				10

Table F – Acid Compounds

Outfall No. ☐**Composite** ☐**Grab** / **Pollutant**	**Average (µg/L)**	**Maximum (µg/L)**	**No. of Samples**	**MAL (µg/L)**
2-Chlorophenol				10
2,4-Dichlorophenol				10
2,4-Dimethylphenol				10
4,6-Dinitro-*o*-cresol				50
2,4-Dinitrophenol				50
2-Nitrophenol				20
4-Nitrophenol				50
p-Chloro-*m*-cresol				10
Pentachlorophenol				5
Phenol				10
2,4,6-Trichlorophenol				10

CHRONIC BIOMONITORING REQUIREMENTS: MARINE

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 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 below and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," third edition (EPA-821-R-02-014) or its most recent update:

1) Chronic static renewal 7-day survival and growth test using the mysid shrimp (*Mysidopsis bahia*) (Method 1007.0). A minimum of eight replicates with five organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

2) Chronic static renewal 7-day larval survival and growth test using the inland silverside (*Menidia beryllina*) (Method 1006.0). 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 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.

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 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 fails to meet any of the following criteria:

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

2) a control mean dry weight of surviving mysid shrimp of 0.20 mg or greater;

3) a control mean dry weight for surviving unpreserved inland silverside of 0.50 mg or greater and 0.43 mg or greater for surviving preserved inland silverside.

4) a control coefficient of variation percent (CV%) between replicates of 40 or less in the growth and survival tests;

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

6) a percent minimum significant difference of 37 or less for mysid shrimp growth; and

7) a percent minimum significant difference of 28 or less for inland silverside growth.

b. Statistical Interpretation

1) For the mysid shrimp and the inland silverside 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..

2) 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.

3) 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.

4) 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.

5) 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 2.

6) Pursuant to the responsibility assigned to the permittee in Part 2.b.2), 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 2 will be used when making a determination of test acceptability.

7) 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 receiving water collected as close to the point of discharge as possible but unaffected by the discharge.

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

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

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

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

3) The synthetic dilution water shall consist of standard, reconstituted seawater. Upon approval, the permittee may substitute other dilution water with chemical and physical characteristics similar to that of the receiving water.

d. Samples and Composites

1) The permittee shall collect a minimum of three composite samples from Outfall 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 of this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted 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 mysid shrimp, Parameter TLP3E, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

2) For the mysid shrimp, Parameter TOP3E, report the NOEC for survival.

3) For the mysid shrimp, Parameter TXP3E, report the LOEC for survival.

4) For the mysid shrimp, Parameter TWP3E, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."

5) For the mysid shrimp, Parameter TPP3E, report the NOEC for growth.

6) For the mysid shrimp, Parameter TYP3E, report the LOEC for growth.

7) For the inland silverside, Parameter TLP6B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

8) For the inland silverside, Parameter TOP6B, report the NOEC for survival.

9) For the inland silverside, Parameter TXP6B, report the LOEC for survival.

10) For the inland silverside, Parameter TWP6B, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."

11) For the inland silverside, Parameter TPP6B, report the NOEC for growth.

12) For the inland silverside, Parameter TYP6B, 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 at the critical dilution when compared to the growth 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 analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of causes 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 “Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures” (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled “Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity” (EPA/600/R-92/080) and “Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for

Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

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

MYSID SHRIMP SURVIVAL AND GROWTH

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

MYSID SHRIMP SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers								Mean Percent Survival			CV%*
	A	B	C	D	E	F	G	H	24h	48h	7 day	
0%												
32%												
42%												
56%												
75%												
100%												

* Coefficient of Variation = standard deviation x 100/mean

DATA TABLE FOR GROWTH OF MYSID SHRIMP

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	32%	42%	56%	75%	100%
A						
B						
C						
D						
E						

TABLE 1 (SHEET 2 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

DATA TABLE FOR GROWTH OF MYSID SHRIMP (Continued)

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	32%	42%	56%	75%	100%
F						
G						
H						
Mean Dry Weight						
CV%*						
PMSD						

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 survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

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 dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to non-lethal effects?

   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

TABLE 1 (SHEET 3 OF 4)

INLAND SILVERSIDE MINNOW LARVAL SURVIVAL AND GROWTH TEST

		Date Time		Date Time
Dates and Times Composites Collected	No. 1	FROM: _____	TO:	_____
	No. 2	FROM: _____	TO:	_____
	No. 3	FROM: _____	TO:	_____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

INLAND SILVERSIDE SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0%									
32%									
42%									
56%									
75%									
100%									

* Coefficient of Variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)

INLAND SILVERSIDE LARVAL SURVIVAL AND GROWTH TEST

INLAND SILVERSIDE GROWTH

Percent Effluent	Average Dry Weight in replicate chambers					Mean Dry Weight (mg)	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

Weights are for: ____ preserved larvae, or ____ unpreserved larvae

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 survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

   CRITICAL DILUTION (100%): _____ YES _____ NO

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 dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to non-lethal effects?

   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: MARINE

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 mysid shrimp (*Mysidopsis bahia*). 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 inland silverside (*Menidia beryllina*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, then repeat, an invalid test during the same reporting period. The repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above. 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. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in Part 2.b., the control and dilution water shall consist of standard, synthetic, reconstituted seawater.

d. This permit may be amended to require a WET limit, a best management practice, a chemical-specific limit, additional toxicity testing, and 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, reconstituted seawater.

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 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 composite sample. The sample 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 of this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

a. The permittee shall prepare a full report of the results of all tests conducted 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, 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 mysid shrimp, Parameter TIE3E, 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 a “1.”

2) For the inland silverside, Parameter TIE6B, 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 a “1.”

d. Enter the following codes for retests only:

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

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

4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 24 hours.

a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These additional effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.

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

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a 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 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 "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, 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 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 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 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 Part 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, the permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

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

MYSID SHRIMP 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)

INLAND SILVERSIDE 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