TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

August 20, 2025

VIA ELECTRONIC FILING

Ms. Laurie Gharis, Chief Clerk
Office of the Chief Clerk
TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Post Office Box 13087, MC-105
Austin, Texas 78711-3087

Re: Executive Director's Backup Documents filed for Consideration of Hearing Requests at Agenda; Application by Golden Triangle Polymers Company, LLC for TCEQ Permit No. WQ0005432000; TCEQ Docket No. 2025-1049-IWD

Dear Ms. Gharis:

Enclosed are copies of the following documents for inclusion in the background material for this permit application. If you have any questions or comments, please do not hesitate to contact me.

- Statement of Basis and Executive Director's Preliminary Decision
- Draft Permit
- Compliance History Report

Respectfully submitted,

Fernando Salazar Martinez, Staff Attorney
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
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STATEMENT OF BASIS/TECHNICAL SUMMARY AND
EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

DESCRIPTION OF APPLICATION

Applicant:	Golden Triangle Polymers Company LLC; Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005432000 (EPA I.D. No. TX0144690)
Regulated activity:	Industrial wastewater permit
Type of application:	New permit
Request:	New permit
Authority:	Federal Clean Water Act (CWA) §402; Texas Water Code (TWC) §26.027; 30 Texas Administrative Code (TAC) Chapter 305, Subchapters C-F, and Chapters 307 and 319; commission policies; and Environmental Protection Agency (EPA) guidelines

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 TAC §305.127(1)(C)(i).

REASON FOR PROJECT PROPOSED

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for a new permit.

PROJECT DESCRIPTION AND LOCATION

The applicant proposes to operate Golden Triangle Polymers Plant, an integrated polymers production facility consisting of multiple independent petrochemical units including an ethane cracker and two high density polyethylene units. The ethane cracker produces ethylene from ethane feedstock while the polyethylene units produce polyethylene pellets from ethylene feedstock. Railcar loading of polyethylene pellets will occur onsite for transport of pellets to customers.

The facility polyethylene units and ethane cracker unit are designed to be commissioned and operated in the following phases:

> Phase 1: The first (initial) phase will only generate flows from the commissioning of the polyethylene units and associated utilities, utility wastewater, and stormwater. Utility wastewater includes but is not limited to non-contact cooling water, cooling tower blowdown, boiler blowdown, steam condensate, air compressor condensate, air conditioner condensate, firewater, passivation wastewater, hydrostatic test water, water treatment wastes and system flush. Stormwater includes stormwater associated with construction activities and allowable Multi-Sector General Permit (MSGP) non-stormwater discharges.
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> Phase 2: The second (interim) phase will generate flows from the operations of the polyethylene units and operations of associated utilities including utility wastewater as defined in the Permit and stormwater. Additionally in Phase 2, passivation wastewater and system flush flows from commissioning of the ethane cracker unit and associated utilities, utility wastewater as defined by the Permit, and stormwater will be generated. Utility wastewater includes but is not limited to non-contact cooling water, cooling tower blowdown, boiler

blowdown, steam condensate, air compressor condensate, air conditioner condensate, firewater, passivation wastewater, hydrostatic test water, water treatment wastes and system flush. Stormwater includes first flush stormwater from process areas, stormwater associated with industrial activity, stormwater associated with construction activities, and allowable Multi-Sector General Permit (MSGP) non-stormwater discharges.

Phase 3: The third (final) phase will generate flows from the operations of the polyethylene units, operations of the ethane cracker, operations of associated utilities, and from stormwater. Utility wastewater includes but is not limited to non-contact cooling water, cooling tower blowdown, boiler blowdown, steam condensate, air compressor condensate, air conditioner condensate, firewater, passivation wastewater, hydrostatic test water, water treatment wastes and system flush. Stormwater includes first flush stormwater from process areas, stormwater associated with industrial activity, and allowable Multi-Sector General Permit (MSGP) non-stormwater discharges.

A narrative description of the wastewater treatment system is provided in Appendix A.

The facility is located at 850 Foreman Road, southwest of the City of Orange, Orange County, Texas 77630.

Discharge Route and Designated Uses
The effluent is discharged directly to the Sabine River Tidal in Segment No. 0501 of the Sabine River Basin. The designated uses for Segment No. 0501 are primary contact recreation and high aquatic life use. The effluent limits in the draft permit will maintain and protect the existing instream uses. All determinations are preliminary and subject to additional review and revisions.

Antidegradation Review
In accordance with 30 Texas Administrative Code §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 Sabine River Tidal, which has been identified as having high aquatic life uses. 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) biological opinion on the State of Texas authorization of the Texas Pollutant Discharge Elimination System (TPDES; September 14, 1998; October 21, 1998 update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

Impaired Water Bodies
Segment No. 0501 is currently listed on the State's inventory of impaired and threatened waters, the 2022 Clean Water Act Section 303(d) list. The listings are for elevated bacteria levels in water (recreation use) from the confluence of Sabine Lake upstream to the confluence of Little Cypress Bayou (AUs 0501_01 and 0501_02); and for polychlorinated biphenyls [PCBs] in edible tissue from

the confluence of Sabine Lake upstream to Morgans Bluff in Orange County (AUs 0501_01, 0501_02, and 0501_03). The issuance of this permit is not anticipated to cause any additional adverse impact to the receiving waters with respect to the listed impairments.

Domestic wastewater generated at the facility is the only identified potential source for bacteria from the facility activities. The draft permit does not authorize the discharge of domestic wastewater via Outfall 001. Domestic wastewater generated at the facility will be routed to a third party, Orange County WCID #2, that is authorized to receive, treat, and discharge treated domestic wastewater via TPDES Permit No. WQ0010240001.

None of the activities proposed to be conducted at the facility have been identified as potential sources for PCBs. Additionally, the draft permit includes an effluent retest requirement (Other Requirement No. 13) to obtain actual effluent quantitative data for many parameters (including PCBs) after discharge from each production phases (Phases 2 and 3) commence. That data will be reviewed to confirm there are no detectable sources of PCBs present in the wastewater.

Completed Total Maximum Daily Loads (TMDLs)
There are no completed TMDLs for Segment No. 0501.

Dissolved Oxygen
The following determinations were made and summarized in the interoffice memorandum (IOM) from the Water Quality Assessment Team dated February 14, 2025.

The Phase 1 flow phase is not expected to have a significant impact on dissolved oxygen levels in the receiving waters. Only Phase 2 (2.65 MGD) and Phase 3 (5.15 MGD) flow phases are expected to discharge wastewater with significant levels of oxygen-demanding substances. A dissolved oxygen modeling analysis of the discharge was conducted using an uncalibrated QUAL-TX model for the Phase 2 (2.65 MGD) and Phase 3 (5.15 MGD) flow phases.

Based on model results, effluent limits of 264 pounds per day (lbs/day) for five-day biochemical oxygen demand (BOD_5) for the Phase 2 (2.65 MGD) flow phase and 528 lbs/day BOD_5 for the Phase 3 (5.15 MGD) flow phase are predicted to be adequate to maintain dissolved oxygen levels above the criterion stipulated by the Standards Implementation Team for the Sabine River Tidal (4.0 mg/L).

Coefficients and kinetics used in the model are a combination of site-specific and standardized default values. The results of this evaluation can be reexamined upon receipt of information that conflicts with the assumptions employed in this analysis.

SUMMARY OF EFFLUENT DATA

Self-reporting data is not available because the facility has not commenced facility operations and has not discharged.

DRAFT PERMIT CONDITIONS

The draft permit authorizes the discharge of utility wastewater and stormwater, on an intermittent and flow-variable basis via Outfall 001 (Phase 1); process wastewater, utility wastewater, and stormwater at a daily average flow not to exceed 2,650,000 gallons per day via Outfall 001 (Phase 2); and process wastewater, utility wastewater, and stormwater at a daily average flow not to exceed 5,150,000 gallons per day via Outfall 001 (Phase 3). The draft permit includes a specific definition for utility wastewater which includes, but is not limited to non-contact cooling water, cooling tower blowdown, boiler blowdown, steam condensate, air compressor condensate, air conditioner

condensate, firewater, passivation wastewater, hydrostatic test water, water treatment wastes and system flush. Stormwater includes stormwater associated with construction activities and allowable Multi-Sector General Permit (MSGP) non-stormwater discharges. Water treatment wastes, hydrostatic test water, passivation wastewater, and system flush water are also classified as utility wastewaters in the draft permit.

Effluent limitations are established in the draft permit as summarized in Appendix E:

OUTFALL LOCATION

Outfall	Latitude	Longitude
001	30.063007 N	93.720125 W

Technology-Based Effluent Limitations
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. Technology-based effluent limitation guidelines (ELGs) from 40 CFR Part 414 apply to the discharge of process wastewater from this facility. Development of technology-based effluent limitations is presented in Appendix A.

Water Quality-Based Effluent Limitations
Calculations of water quality-based effluent limitations for the protection of aquatic life and human health are presented in Appendix B. Aquatic life criteria established in Table 1 and human health criteria established in Table 2 of 30 TAC Chapter 307 are incorporated into the calculations, as are recommendations in the Water Quality Assessment Team's memorandum dated February 28, 2025. TCEQ practice for determining significant potential is to compare the reported analytical data from the facility against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting are required when analytical data reported in the application exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

The application included effluent data from a similar facility, however, the wastewater sources regulated in the draft permit are not operational at this time so there is no actual effluent data from the facility to conduct water quality screening for a reasonable potential assessment. The draft permit includes a testing requirement of the effluent (Other Requirement Provision No. 13) so actual data can be collected after discharge commences and a reasonable potential evaluation can be concluded at that time.

Calculated technology-based effluent limitations are compared to calculated water quality-based effluent limitations in Appendix D, to determine if technology-based effluent limitations are protective of water quality or if water quality-based effluent limitations need to be included in the draft permit, in addition to the required technology-based effluent limitations, to protect water quality. Based on this comparison, it was determined that water quality-based effluent limitations for benzo(a)anthracene, benzo(a)pyrene, and hexachlorobenzene will be required for the production phases (Phases 2 and 3) of Outfall 001, in addition to the required technology-based effluent limitations for these parameters at internal Outfall 101 of the same phases.

The draft permit includes self-expiring monitoring/reporting requirements for temperature for the production phases (Phases 2 and 3) of Outfall 001 to gather sufficient data so the need for temperature limitations can be evaluated at the next permit renewal action.

Total Dissolved Solids (TDS), Chloride, and Sulfate Screening
Segment No. 0501, which receives the discharge 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.

pH Screening
The draft permit includes pH limits of 6.0 – 9.0 SU at Outfall 001, which discharges directly into Sabine River Tidal, Segment No. 0501. Screening was performed to ensure that these existing pH limits would not cause a violation of the 6.0 – 8.5 SU pH criteria for Sabine River Tidal (see Appendix C). The effluent limits of 6.0 – 9.0 SU are adequate to ensure that the discharge will not violate the pH criteria in Sabine River Tidal.

316(b) Cooling Water Intake Structures
The facility obtains water from Sabine River Authority Gulf Coast, a public water system (PWS No. TX1810193), for cooling purposes. The use of water obtained from a public water system for cooling purposes does not constitute the use of a cooling water intake structure; therefore, the facility is not subject to Section 316(b) of the CWA or 40 CFR Part 125, Subpart J.

Other Requirement No. 5 has been included in the draft permit and it requires the permittee to notify the TCEQ of any changes in the method by which cooling water is obtained. Upon receipt of such notification, the TCEQ may reopen the permit to include additional terms and conditions as necessary.

Whole Effluent Toxicity Testing (Biomonitoring)
The following determinations were made and summarized in the interoffice memorandum (IOM) from the Water Quality Assessment Team dated July 19, 2024.

An RP 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 (3) 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.

This is a new facility, therefore, there is no Whole Effluent Toxicity (WET) testing history. With no WET testing history, and therefore zero (0) failures, a determination of no RP was made.

Marine chronic and 24-hour acute testing are recommended for Outfall 001. For both tests, the mysid shrimp (*Americamysis bahia*) and the inland silverside (*Menidia beryllina*) are recommended as test species. A chronic testing frequency of once per quarter for both test species and a dilution series of 4%, 5%, 7%, 9%, and 12% with a critical dilution of 9% are recommended. WET limits are not required and both test species may be eligible for the testing frequency reduction after one (1) year of quarterly testing. WET testing requirements are only applicable for Phases 2 and 3. For 24-hour acute a testing frequency of once per six (6) months is recommended for both species.

SUMMARY OF CHANGES FROM APPLICATION

The draft permit includes effluent testing requirements in Other Requirement No. 13 for all phases of Outfall 001, and not just the final phase as anticipated by the applicant.

SUMMARY OF CHANGES FROM EXISTING PERMIT

This application is for a new TPDES permit for a new facility, there is no existing permit for this facility.

BASIS FOR DRAFT PERMIT

The following items were considered in developing the draft permit:

1. Application received on June 29, 2023, and additional information received on February 25, 2025.
2. TCEQ Rules.
3. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective March 1, 2018, as approved by EPA Region 6.
4. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective March 6, 2014, as approved by EPA Region 6, for portions of the 2018 standards not approved by EPA Region 6.
5. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective July 22, 2010, as approved by EPA Region 6, for portions of the 2014 standards not approved by EPA Region 6.
6. *Texas Surface Water Quality Standards* – 30 TAC §§307.1-307.10, effective August 17, 2000, and Appendix E, effective February 27, 2002, for portions of the 2010 standards not approved by EPA Region 6.
7. *Procedures to Implement the Texas Surface Water Quality Standards* (IPs), Texas Commission on Environmental Quality, June 2010, as approved by EPA Region 6.
8. *Procedures to Implement the Texas Surface Water Quality Standards*, Texas Commission on Environmental Quality, January 2003, for portions of the 2010 IPs not approved by EPA Region 6.
9. Memos from the Standards Implementation Team and Water Quality Assessment Team of the Water Quality Assessment Section of the TCEQ.
10. *Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits*, TCEQ Document No. 98-001.000-OWR-WQ, May 1998.
11. EPA Effluent Guidelines: 40 CFR Part 414 Suparts D, F, and I (NSPS). A new source determination was performed, and the discharge of process wastewater is a new source as defined at 40 CFR §122.2.
12. Consistency with the Coastal Management Plan: 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.
13. 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).
14. 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).
15. 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).

16. 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).
17. 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)
18. 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).
19. General Guidance – Industrial Permits: Uncontaminated Stormwater Runoff, EPA, January 1997.

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 to the Chief Clerk, along with the Executive Director's preliminary decision contained in the technical summary or fact sheet. 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 hearing.

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.

Michael Sunderlin
Michael Sunderlin

April 17, 2025
Date

Appendix A
Calculated Technology-Based Effluent Limits

Domestic wastewater generated at the facility will be collected and conveyed offsite via a lift station to the nearby Water Control and Improvement District No. 2 plant for treatment and discharge under TPDES Permit No. WQ0010240001.

Spent caustic wastewaters and stormwater from spent caustic facility areas are collected and routed to the Wet Air Oxidation (WAO) Treatment Unit prior to being commingled with other wastewaters and routed to the Benzene Wastewater Induced Gas Flotation Vessel where oils and solids are removed. Wastewater is then routed to the Benzene Stripper Package for further benzene removal before being routed to the biological treatment system.

The biological wastewater treatment system includes Moving Bed Bioreactors (MBBRs), Activated Sludge Units (ASUs), and wastewater clarifiers. The MBBR Tanks remove easily biodegradable organics and handle fluctuations in influent wastewater strength, with the downstream ASUs providing removal of remaining organics, benzene, and phenols. After bulk biomass removal in the clarifiers, effluent is pumped through continuous backwashing sand filters for polishing prior to discharge into the check basin.

Wastewater from the equalization tanks is pumped to the Moving Bed Bioreactor (MBBR) Splitter Box where chemical treatment may occur on an as-needed basis. Flow from the MBBR Splitter Box is directed to one (1) of the two (2) wastewater treatment trains – typical flow regime will split incoming flow between the two identical treatment trains. The treatment system is composed of redundant MBBR/Activated Sludge Unit (ASU) trains. Effluent from the MBBR Tanks is conveyed to the ASUs to provide biologic treatment. Return Activated Sludge (RAS) will be provided upstream of the ASUs. Wastewater is then directed to one (1) of two (2) wastewater clarifier tanks for solids settling, then conveyed by gravity to the to the Clarifier Effluent Tank for solids removal by RAS pumps.

The clarifier effluent from both wastewater clarifier tanks gravity flows into the Clarifier Effluent Tank modulating flow into the continuous backwash Sand Filters. Operators have the ability to redirect off-spec clarifier effluent back to the equalization tanks or the First Flush Pond for re-processing through the biological treatment system.

The effluent from the sand filters is directed to the Check Basin, an in-ground concrete structure to commingle treated wastewater effluent with additional flows of utility wastewaters that did not require biological treatment.

The Check Basin contains three (3) final discharge pumps. Online monitoring of flow, pH, and temperature can be conducted at the Check Basin prior to conveying the combined discharge to the outfall via pipeline.

Settled solids from the clarifiers are removed from the system and transferred to the aerated Sludge Holding Tank. Sludge is periodically pumped from the holding tank to the centrifuge dewatering system. Polymer may be fed to the solids dewatering process for sludge conditioning. Solids from the wastewater and water treatment centrifuges, ultrafiltration waste streams, and Sand Filter backwash are directed to the Wastewater Dewatering Sump, an in-ground concrete structure, for storage prior to processing. Dewatered solids will be disposed offsite.

Blowdown and contact wastewater from the cutting, cooling, and washing of polyethylene pellets are collected and routed to a roll-off box with a filter liner to remove stray pellets and particulate before

wastewaters are routed to the Pellet Wastewater Filters to further remove solids or pellets before the wastewaters are routed to the equalization tanks for biological treatment.

Combined wastewaters in the Check Basin can be routed to the First Flush Pond and retreated through the biological system based on the discretion of the facility operators.

Pellet area stormwater generated in the polyethylene units and pellet loadout areas within the storage battery are routed to the Pellet Separator Sump where flow velocities decrease to allow pellets to float and be skimmed from the surface prior to routing the stormwater through an underflow weir to the Stormwater Diversion Box. Skimmed stormwater flows from the Pellet Separator Sump are conveyed to a filter fabric lined roll-off dumpster.

Stormwater flows from the Inside Storage Battery Limit (ISBL) area are routed to the Stormwater Diversion Box and conveyed to the First Flush Pond which is sized to receive the first flush. The First Flush Pond includes a First Flush Pond Wet Well that is equipped with screens. First Flush Stormwater is then pumped to equalization tanks for biological treatment in the wastewater treatment system.

Once the first flush capacity in the First Flush Pond is reached, the system routes the remainder of the stormwater (post-first flush) from ISBL areas through an underflow and overflow weir to the Outside Battery Limit (OSBL) Pond prior to discharge under TPDES Permit No. WQ0005288000.

The draft permit is set up into three (3) operational phases. Phase 1 is identified in the application as the commissioning phase of the polyethylene units and facility utility systems with no facility production. Phase 2 is identified in the application as the operational phase of the polyethylene production units and the commissioning phase of the ethane cracker unit. Phase 3 is identified as the operational phase of the polyethylene production units and the operational phase of the ethane cracker unit.

The final discharge is via Outfall 001 which consists of a submerged single-port diffuser, located approximately 85 feet from the right (western) shoreline of the Sabine River Tidal with an orientation 45° perpendicular to the ambient river flow. The port has a diameter of 12 inches (0.3048 m) and is oriented horizontally to the water surface.

The applicant received an authorization to construct the wastewater treatment/management facilities from the Commission on September 12, 2023, and then commenced construction of wastewater treatment/management facilities. New Source Performance Standards for ELGs (Effluent Limit Guidelines) in 40 CFR Part 414 were promulgated on November 5, 1987 [52 FR 42568] and amended on September 11, 1992 [57 FR 41843]. Based on the comparison of the promulgation of the ELGs to the date the authorization to construct was issued, the facility is a new source.

All effluent limitations are expressed in one of the following units of measure:

°F	degrees Fahrenheit
lbs/day	pounds per day
MGD	million gallons per day
mg/L	milligrams per liter
su	standard units

Mass effluent limitations/allocations are calculated as follows:

[concentration criteria (mg/L)] x [flow (MGD)] x [8.345] = [mass limitation/allocation (lbs/day)]

I. PHASE 1

This phase is effective upon date of permit issuance and lasting through the date of activation of the polyethylene production units. There are no applicable ELGs, all effluent limitations and monitoring requirements are based on best professional judgement (BPJ). This phase consists of Outfall 001 only.

The effluent limitations for chemical oxygen demand (COD) and pH are based on the standard BPJ limitations assigned for stormwater discharges and are consistent with limitations established in other TPDES permits for similar wastewaters consisting of stormwater commingled with intermittent discharges of utility wastewaters. The daily maximum effluent limitation for oil and grease (O&G) was derived from the quality criteria for low-volume wastes found in 40 CFR Part 423, which is considered a waste similar to utility wastewaters. Monitoring/reporting requirements for total suspended solids are also based on BPJ. Monitoring/reporting requirements for flow are based on 40 CFR 122.44(i)(1)(ii).

II. PHASE 2

As documented in Other Requirement No. 3 in the draft permit, this phase is effective upon the date of activation of the polyethylene production units and lasts through the date of activation of the ethane cracker unit. ELGs for the production of organic chemicals, plastics, and synthetic fibers under 40 CFR Part 414 Subparts D and I apply to the discharge of process wastewater (including process area stormwater) from the polyethylene production units. Additional limitations/allocations are developed for non-process wastewater by BPJ.

A. Internal Outfall 101

1. Process Wastewater – Conventional Pollutants

Effluent limitations are calculated for biochemical oxygen demand (5-day) and total suspended solids based on the criteria in 40 CFR 414.44(a) and the process wastewater source flow of 0.37 MGD, which is inclusive of process wastewater and process area stormwater.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
BOD_5	24	64	0.37	74.10	197.61
TSS	40	130	0.37	123.51	401.39

2. Stormwater Associated w/ Industrial Activity – Conventional Pollutants

Allocations were calculated using the sum of the flows for the contributing non-categorical stormwater sources and concentration criteria based on BPJ. The BPJ criteria for BOD_5 are based on the expected quality levels for stormwater. The BPJ criteria for TSS are based on the benchmark values for TSS in the Multi-Sector General Permit for Sector AD instead of Sector C due to process related stormwater being allocated with process wastewaters.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
BOD_5	10	10	0.60	50.07	50.07
TSS	100	100	0.60	500.70	500.70

3. Summations – Conventional Pollutants

The calculated allocations for the contributing sources are summed to derive mass-based effluent limitations for the discharge via Outfall 001 during the final phase.

Parameter	Contributing Source	Daily Avg lbs/day	Daily Max lbs/day
BOD_5	Process Wastewater	74.10	197.61
	Stormwater	50.07	50.07
	Total	124.17 ~124	247.68 ~248
TSS	Process Wastewater	123.51	401.39
	Stormwater	500.70	500.70
	Total	624.21 ~624	902.09 ~902

4. Process Wastewater – Toxic Pollutants

Best Available Technology (BAT) Effluent Limitations for the Organic Chemicals, Plastics and Synthetic Fibers Point Source Category - 40 CFR 414.91 (Subpart I)

Total Flow from Outfall	0.97 MGD
Process Wastewater Flow	0.37 MGD
Metal Bearing Wastewater Flow	0 MGD
Cyanide Bearing Wastewater Flow	0 MGD

Parameter	Daily Avg (ug/l)	Daily Max (ug/l)		Daily Avg (lb/day)	Daily Max (lb/day)
Chromium	1110	2770		n/a	n/a
Zinc	1050	2610		n/a	n/a
Copper	1450	3380		n/a	n/a
Lead	320	690		n/a	n/a
Nickel	1690	3980		n/a	n/a
Cyanide	420	1200		n/a	n/a
Acenaphthene	22	59		0.07	0.18
Acenaphthylene	22	59		0.07	0.18
Acrylonitrile	96	242		0.30	0.75
Anthracene	22	59		0.07	0.18
Benzene	37	136		0.11	0.42
Benzo(a)anthracene	22	59		0.07	0.18
Benzo(a)pyrene	23	61		0.07	0.19
3,4-Benzofluoranthene	23	61		0.07	0.19
Benzo(k)fluoranthene	22	59		0.07	0.18
Bis(2-ethylhexyl)phthalate	103	279		0.32	0.86
Carbon Tetrachloride	18	38		0.06	0.12
Chlorobenzene	15	28		0.05	0.09
Chloroethane	104	268		0.32	0.83
Chloroform	21	46		0.06	0.14
2-Chlorophenol	31	98		0.10	0.30
Chrysene	22	59		0.07	0.18

Parameter	Daily Avg (ug/l)	Daily Max (ug/l)		Daily Avg (lb/day)	Daily Max (lb/day)
1,2-Dichlorobenzene	77	163		0.24	0.50
1,3-Dichlorobenzene	31	44		0.10	0.14
1,4-Dichlorobenzene	15	28		0.05	0.09
1,1-Dichloroethane	22	59		0.07	0.18
1,2-Dichloroethane	68	211		0.21	0.65
1,1-Dichloroethylene	16	25		0.05	0.08
1,2-trans Dichloroethylene	21	54		0.06	0.17
2,4-Dichlorophenol	39	112		0.12	0.35
1,2-Dichloropropane	153	230		0.47	0.71
1,3-Dichloropropylene	29	44		0.09	0.14
Diethyl phthalate	81	203		0.25	0.63
2,4-Dimethylphenol	18	36		0.06	0.11
Dimethyl phthalate	19	47		0.06	0.15
Di-n-butyl phthalate	27	57		0.08	0.18
4,6-Dinitro-o-cresol	78	277		0.24	0.86
2,4-Dinitrophenol	71	123		0.22	0.38
2,4-Dinitrotoluene	113	285		0.35	0.88
2,6-Dinitrotoluene	255	641		0.79	1.98
Ethylbenzene	32	108		0.10	0.33
Fluoranthene	25	68		0.08	0.21
Fluorene	22	59		0.07	0.18
Hexachlorobenzene	15	28		0.05	0.09
Hexachlorobutadiene	20	49		0.06	0.15
Hexachloroethane	21	54		0.06	0.17
Methyl Chloride	86	190		0.27	0.59
Methylene Chloride	40	89		0.12	0.27
Naphthalene	22	59		0.07	0.18
Nitrobenzene	27	68		0.08	0.21
2-Nitrophenol	41	69		0.13	0.21
4-Nitrophenol	72	124		0.22	0.38
Phenanthrene	22	59		0.07	0.18
Phenol	15	26		0.05	0.08
Pyrene	25	67		0.08	0.21
Tetrachloroethylene	22	56		0.07	0.17
Toluene	26	80		0.08	0.25
1,2,4-Trichlorobenzene	68	140		0.21	0.43
1,1,1-Trichloroethane	21	54		0.06	0.17
1,1,2-Trichloroethane	21	54		0.06	0.17
Trichloroethylene	21	54		0.06	0.17
Vinyl Chloride	104	268		0.32	0.83

B. Outfall 001

1. Process Wastewater Non-ELG Allocations – Conventional Pollutants

The process wastewater limitations calculated above for Outfall 101 (see II.A.1. above) are used for the process wastewater allocations at final Outfall 001. Additional allocations for oil & grease are calculated as follows based on BPJ.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
Oil & Grease	15	20	0.37	46.31	61.75

2. Utility Wastewater Allocations – Conventional Pollutants

Allocations were calculated using the sum of the flows for the contributing wastestreams that are categorized as utility wastewaters and concentration criteria based on BPJ. The BPJ criteria for BOD_5 are based on the expected quality levels of this category of wastewaters. The BPJ criteria for TSS and oil & grease are derived from the quality criteria for low-volume wastes found in 40 CFR Part 423. The quality and character of low-volume wastes is very similar to those for utility wastewaters.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
BOD_5	10	20	1.68	140.20	280.39
TSS	30	100	1.68	420.59	1401.96
Oil & Grease	15	20	1.68	210.29	280.39

3. Stormwater Associated w/ Industrial Activity Additional Allocations – Conventional Pollutants

Allocations were calculated using the sum of the flows for the contributing stormwater sources and concentration criteria based on BPJ. The BPJ criteria for oil and grease are based on the expected quality levels for stormwater. Although the contributing source is previously monitored at internal Outfall 101, allocations are only applied at the point of final discharge via Outfall 001.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
Oil & Grease	15	15	0.60	75.10	75.10

4. Summations – Conventional Pollutants

The calculated allocations for the contributing sources are summed to derive mass-based effluent limitations for the discharge via Outfall 001 during the final phase.

Parameter	Contributing Source	Daily Avg lbs/day	Daily Max lbs/day
Biochemical Oxygen Demand 5-day	Outfall 101 PME	124.17	247.68
	Utility Wastewater	140.20	280.39
	Total	264.37 ~264	528.07 ~528
Total Suspended Solids	Outfall 101 PME	624.21	902.09
	Utility Wastewater	420.59	1401.96
	Total	1,044.80 ~1,045	2,304.05 ~2,304

Parameter	Contributing Source	Daily Avg lbs/day	Daily Max lbs/day
Oil & Grease	Process Wastewater	46.31	61.75
	Utility Wastewater	210.29	280.39
	Stormwater	75.10	75.10
	Total	331.70 ~332	417.24 ~417

5. Chloroform

The applicant requested additional allocations for chloroform for specific utility wastewater sources. Based on the fact that ELG sources for chloroform are regulated at internal Outfall 101 prior to commingling with the utility wastewater sources for chloroform identified in the application, utility wastewater allocations for chloroform calculated here will be added to the limitations imposed at internal Outfall 101 to calculate the effluent limitations for chloroform imposed at Outfall 001.

The BPJ criteria used for chloroform for the utility wastewaters is derived from 40 CFR Part 414.101. The flow of 1.68 MGD is the summation of the contributing sources identified in the application.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
Chloroform	0.111	0.325	1.68	1.56	4.56

The summation of the two sources (process wastewater from internal Outfall 101 and utility wastewater) is provided below.

Parameter	Contributing Source	Daily Avg lbs/day	Daily Max lbs/day
Chloroform	Process Wastewater	0.06	0.14
	Utility Wastewater	1.56	4.56
	Total	1.62	4.70

III. PHASE 3

This phase is effective upon the date of activation of the ethane cracker and lasts through date of permit expiration. ELGs for the production of organic chemicals, plastics, and synthetic fibers under 40 CFR Part 414 Subparts D, F, and I apply to the discharge of process wastewater (including process area stormwater) from the polyethylene production units and the ethane cracker. Additional limitations/allocations are developed for non-process wastewater by BPJ.

A. Internal Outfall 101

1. Process Wastewater – Conventional Pollutants

The application identifies 50% production from the polyethylene units that are subject to 40 CFR Part 414 Subpart D and 50% production of ethylene from the ethane cracker subject to 40 CFR Part 414 Subpart F. A review of 40 CFR Part 414 confirms that polyethylene production is subject to 40 CFR Part 414 Subpart D, and ethylene production from the ethane cracker is subject to 40 CFR Part 414 Subpart F as stated in the application. Concentration criteria for biochemical oxygen demand (5-day) and total

suspended solids are calculated by prorating the percent production of the two contributing ELGs [40 CFR 414.44(a) and 40 CFR 414.64(b)].

OCPSF Subcategory	% Production
Subpart D Thermoplastic Resins - 40 CFR 414.44(b)	50 %
Subpart F Commodity Organic - 40 CFR 414.64(b))	50 %
TOTAL	100 %

BOD_5-Avg	Sub-D	(24 mg/L) * (0.50)	=	12.0
	Sub-F	(30 mg/L) * (0.50)	=	15.0
			TOTAL	27.0

BOD_5-Max	Sub-D	(64 mg/L) * (0.50)	=	32.0
	Sub-F	(80 mg/L) * (0.50)	=	40.0
			TOTAL	72.0

TSS-Avg	Sub-D	(40 mg/L) * (0.50)	=	20.0
	Sub-F	(46 mg/l) * (0.50)	=	23.0
			TOTAL	43.0

TSS-Max	Sub-D	(130 mg/L) * (0.50)	=	65.0
	Sub-F	(149 mg/L) * (0.50)	=	74.5
			TOTAL	139.5

Effluent limitations are calculated for BOD_5 and TSS based on the combined criteria above and the process wastewater source flow of 0.70 MGD.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
BOD_5	27	72	0.70	157.72	420.59
TSS	43.0	139.5	0.70	251.18	814.89

2. Stormwater Associated w/ Industrial Activity – Conventional Pollutants

Allocations were calculated using the sum of the flows for the contributing non-categorical stormwater sources and concentration criteria based on BPJ. The BPJ criteria for BOD5 are based on the expected quality levels for stormwater. The BPJ criteria for TSS are based on the benchmark values for TSS in the Multi-Sector General Permit for Sector AD instead of Sector C due to process related stormwater being allocated with process wastewaters.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
BOD_5	10	10	0.60	50.07	50.07
TSS	100	100	0.60	500.70	500.70

3. Summations – Conventional Pollutants

The calculated allocations for the contributing sources are summed to derive mass-based effluent limitations for the discharge via Outfall 101 during the final phase.

Parameter	Contributing Source	Daily Avg lbs/day	Daily Max lbs/day
BOD_5	Process Wastewater	157.72	420.59
	Stormwater	50.07	50.07
	Total	207.79 ~208	470.66 ~471
TSS	Process Wastewater	251.18	814.89
	Stormwater	500.70	500.70
	Total	751.88 ~752	1,315.59 ~1316

4. Process Wastewater – Toxic Pollutants

BAT Effluent Limitations for the Organic Chemicals, Plastics and Synthetic Fibers Point Source Category - 40 CFR 414.91 (Subpart I)

Total Flow from Outfall	1.30 MGD
Process Wastewater Flow	0.70 MGD
Metal Bearing Wastewater Flow	0 MGD
Cyanide Bearing Wastewater Flow	0 MGD

Parameter	Daily Avg (ug/l)	Daily Max (ug/l)		Daily Avg (lb/day)	Daily Max (lb/day)
Chromium	1110	2770		n/a	n/a
Copper	1450	3380		n/a	n/a
Lead	320	690		n/a	n/a
Nickel	1690	3980		n/a	n/a
Zinc	1050	2610		n/a	n/a
Cyanide	420	1200		n/a	n/a
Acenaphthene	22	59		0.13	0.34
Acenaphthylene	22	59		0.13	0.34
Acrylonitrile	96	242		0.56	1.41
Anthracene	22	59		0.13	0.34
Benzene	37	136		0.22	0.79
Benzo(a)anthracene	22	59		0.13	0.34
Benzo(a)pyrene	23	61		0.13	0.36
3,4-Benzofluoranthene	23	61		0.13	0.36
Benzo(k)fluoranthene	22	59		0.13	0.34
Bis(2-ethylhexyl)phthalate	103	279		0.60	1.63
Carbon Tetrachloride	18	38		0.11	0.22
Chlorobenzene	15	28		0.09	0.16
Chloroethane	104	268		0.61	1.57
Chloroform	21	46		0.12	0.27
2-Chlorophenol	31	98		0.18	0.57
Chrysene	22	59		0.13	0.34
1,2-Dichlorobenzene	77	163		0.45	0.95
1,3-Dichlorobenzene	31	44		0.18	0.26
1,4-Dichlorobenzene	15	28		0.09	0.16
1,1-Dichloroethane	22	59		0.13	0.34

Parameter	Daily Avg (ug/l)	Daily Max (ug/l)		Daily Avg (lb/day)	Daily Max (lb/day)
1,2-Dichloroethane	68	211		0.40	1.23
1,1-Dichloroethylene	16	25		0.09	0.15
1,2-trans Dichloroethylene	21	54		0.12	0.32
2,4-Dichlorophenol	39	112		0.23	0.65
1,2-Dichloropropane	153	230		0.89	1.34
1,3-Dichloropropylene	29	44		0.17	0.26
Diethyl phthalate	81	203		0.47	1.19
2,4-Dimethylphenol	18	36		0.11	0.21
Dimethyl phthalate	19	47		0.11	0.27
Di-n-butyl phthalate	27	57		0.16	0.33
4,6-Dinitro-o-cresol	78	277		0.46	1.62
2,4-Dinitrophenol	71	123		0.41	0.72
2,4-Dinitrotoluene	113	285		0.66	1.66
2,6-Dinitrotoluene	255	641		1.49	3.74
Ethylbenzene	32	108		0.19	0.63
Fluoranthene	25	68		0.15	0.40
Fluorene	22	59		0.13	0.34
Hexachlorobenzene	15	28		0.09	0.16
Hexachlorobutadiene	20	49		0.12	0.29
Hexachloroethane	21	54		0.12	0.32
Methyl Chloride	86	190		0.50	1.11
Methylene Chloride	40	89		0.23	0.52
Naphthalene	22	59		0.13	0.34
Nitrobenzene	27	68		0.16	0.40
2-Nitrophenol	41	69		0.24	0.40
4-Nitrophenol	72	124		0.42	0.72
Phenanthrene	22	59		0.13	0.34
Phenol	15	26		0.09	0.15
Pyrene	25	67		0.15	0.39
Tetrachloroethylene	22	56		0.13	0.33
Toluene	26	80		0.15	0.47
1,2,4-Trichlorobenzene	68	140		0.40	0.82
1,1,1-Trichloroethane	21	54		0.12	0.32
1,1,2-Trichloroethane	21	54		0.12	0.32
Trichloroethylene	21	54		0.12	0.32
Vinyl Chloride	104	268		0.61	1.57

B. Outfall 001

1. Process Wastewater Allocations – Conventional Pollutants

The process wastewater limitations for BOD_5 and TSS calculated above for internal Outfall 101 (see III.A.1. above) are used for the process wastewater allocations at final Outfall 001. Additional allocations for oil and grease are calculated as follows based on BPJ.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
Oil & Grease	15	20	0.70	87.62	116.83

2. Utility Wastewater Allocations – Conventional Pollutants

Allocations were calculated using the sum of the flows for the contributing wastestreams that are categorized as utility wastewaters and concentration criteria based on BPJ. The BPJ criteria for BOD5 are based on the expected quality levels of this category of wastewaters. The BPJ criteria for TSS and oil & grease are derived from the quality criteria for low-volume wastes found in 40 CFR Part 423. The quality and character of low-volume wastes is very similar to those for utility wastewaters.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
BOD_5	10	20	3.84	320.49	640.90
TSS	30	100	3.84	961.34	3204.48
Oil & Grease	15	20	3.84	480.67	640.90

3. Stormwater Associated w/ Industrial Activity – Conventional Pollutants

Allocations were calculated using the sum of the flows for the contributing stormwater sources and concentration criteria based on BPJ. The BPJ criteria for oil and grease are based on the expected quality levels for stormwater. Although the contributing source is previously monitored at internal Outfall 101, allocations are only applied at the point of final discharge via Outfall 001.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
Oil & Grease	15	15	0.60	75.10	75.10

4. Summations – Conventional Pollutants

The calculated allocations for the contributing sources are summed to derive mass-based effluent limitations for the discharge via Outfall 001 during the final phase.

Parameter	Contributing Source	Daily Avg lbs/day	Daily Max lbs/day
BOD_5	Process Wastewater	207.79	470.66
	Utility Wastewater	320.49	640.90
	Total	528.28 ~528	1,111.56 ~1,112
TSS	Process Wastewater	751.88	1,315.59
	Utility Wastewater	961.34	3204.48
	Total	1,713.22 ~1,713	4,520.07 ~4,520
Oil & Grease	Process Wastewater	87.62	116.83
	Utility Wastewater	480.67	640.90
	Stormwater	75.10	75.10
	Total	643.39 ~643	832.83 ~833

5. Chloroform

The applicant requested additional allocations for chloroform for specific utility wastewater sources. Based on the fact that ELG sources for chloroform are regulated at internal Outfall 101 prior to commingling with the utility wastewater sources for chloroform identified in the application, utility wastewater allocations for chloroform calculated here will be added to the limitations imposed at internal Outfall 101 to calculate the effluent limitations for chloroform imposed at Outfall 001.

The BPJ criteria used for chloroform for the utility wastewaters is derived from 40 CFR Part 414.101. The flow of 3.84MGD is the summation of the contributing sources identified in the application.

Pollutant	Dly Avg mg/L	Dly Max mg/L	Flow (MGD)	Dly Avg lbs/day	Dly Max lbs/day
Chloroform	0.111	0.325	3.84	3.56	10.41

The summation of the two (2) sources (process wastewater from internal Outfall 101 and utility wastewater) is provided below.

Parameter	Contributing Source	Daily Avg lbs/day	Daily Max lbs/day
Chloroform	Process Wastewater	0.12	0.27
	Utility Wastewater	3.56	10.41
	Total	3.68	1o.68 ~10.7

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:	Golden Triangle Polymers Company LLC
TPDES Permit No:	WQ0005432000
Outfall No:	001 (all phases)
Prepared by:	Michael Sunderlin
Date:	February 28, 2025

DISCHARGE INFORMATION

Receiving Waterbody:	Sabine River Tidal
Segment No:	0501
TSS (mg/L):	7
Effluent Flow for Aquatic Life (MGD)	5.15
% Effluent for Chronic Aquatic Life (Mixing Zone):	9.3
% Effluent for Acute Aquatic Life (ZID):	18.1
Oyster Waters?	**no**
Effluent Flow for Human Health (MGD):	5.15
% Effluent for Human Health:	8.4

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	17439	0.891		1.00	Assumed
Lead	6.06	-0.85	219617	0.394		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	171644	0.454		1.00	Assumed
Zinc	5.36	-0.52	83282	0.632		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	7.18	N/A	2.30	N/A	3.37	7.14
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	149	78	823	839	263	512	387	819
Cadmium	40.0	8.75	221	94.1	70.7	57.4	84.3	178
Carbaryl	613	N/A	3387	N/A	1084	N/A	1593	3370
Chlordane	0.09	0.004	0.497	0.0430	0.159	0.0262	0.0385	0.0815
Chlorpyrifos	0.011	0.006	0.0608	0.0645	0.0194	0.0394	0.0285	0.0604
Chromium (trivalent)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (hexavalent)	1090	49.6	6022	533	1927	325	478	1011
Copper	13.5	3.6	83.7	43.4	26.8	26.5	38.9	82.4
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	30.9	60.2	9.90	36.7	14.5	30.7
4,4'-DDT	0.13	0.001	0.718	0.0108	0.230	0.00656	0.00964	0.0203
Demeton	N/A	0.1	N/A	1.08	N/A	0.656	0.964	2.03
Diazinon	0.819	0.819	4.52	8.81	1.45	5.37	2.12	4.50
Dicofol [Kelthane]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	0.71	0.002	3.92	0.0215	1.26	0.0131	0.0192	0.0407
Diuron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan I (*alpha*)	0.034	0.009	0.188	0.0968	0.0601	0.0590	0.0867	0.183
Endosulfan II (*beta*)	0.034	0.009	0.188	0.0968	0.0601	0.0590	0.0867	0.183
Endosulfan sulfate	0.034	0.009	0.188	0.0968	0.0601	0.0590	0.0867	0.183
Endrin	0.037	0.002	0.204	0.0215	0.0654	0.0131	0.0192	0.0407
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.108	N/A	0.0656	0.0964	0.203
Heptachlor	0.053	0.004	0.293	0.0430	0.0937	0.0262	0.0385	0.0815
Hexachlorocyclohexane (*gamma*) [Lindane]	0.16	N/A	0.884	N/A	0.283	N/A	0.415	0.879
Lead	133	5.3	1864	145	597	88.2	129	274
Malathion	N/A	0.01	N/A	0.108	N/A	0.0656	0.0964	0.203
Mercury	2.1	1.1	11.6	11.8	3.71	7.22	5.45	11.5
Methoxychlor	N/A	0.03	N/A	0.323	N/A	0.197	0.289	0.611
Mirex	N/A	0.001	N/A	0.0108	N/A	0.00656	0.00964	0.0203
Nickel	118	13.1	652	141	209	85.9	126	267
Nonylphenol	7	1.7	38.7	18.3	12.4	11.2	16.3	34.6
Parathion (ethyl)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	15.1	9.6	83.4	103	26.7	63.0	39.2	83.0
Phenanthrene	7.7	4.6	42.5	49.5	13.6	30.2	20.0	42.3
Polychlorinated Biphenyls [PCBs]	10	0.03	55.2	0.323	17.7	0.197	0.289	0.611
Selenium	564	136	3116	1462	997	892	1311	2774
Silver	2	N/A	24.3	N/A	7.78	N/A	11.4	24.2
Toxaphene	0.21	0.0002	1.16	0.00215	0.371	0.00131	0.00192	0.00407
Tributyltin [TBT]	0.24	0.0074	1.33	0.0796	0.424	0.0485	0.0713	0.150
2,4,5 Trichlorophenol	259	12	1431	129	458	78.7	115	244
Zinc	92.7	84.2	811	1433	259	874	381	806

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	1369	1273	1871	3959
Aldrin	1.147E-05	0.000137	0.000127	0.000186	0.000394
Anthracene	1317	15679	14581	21434	45347
Antimony	1071	12750	11858	17430	36876
Arsenic	N/A	N/A	N/A	N/A	N/A
Barium	N/A	N/A	N/A	N/A	N/A
Benzene	581	6917	6433	9455	20005
Benzidine	0.107	1.27	1.18	1.74	3.68
Benzo(*a*)anthracene	0.025	0.298	0.277	0.406	0.860
Benzo(*a*)pyrene	0.0025	0.0298	0.0277	0.0406	0.0860
Bis(chloromethyl)ether	0.2745	3.27	3.04	4.46	9.45
Bis(2-chloroethyl)ether	42.83	510	474	697	1474
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.55	89.9	83.6	122	259
Bromodichloromethane [Dichlorobromomethane]	275	3274	3045	4475	9468
Bromoform [Tribromomethane]	1060	12619	11736	17251	36498
Cadmium	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	46	548	509	748	1583
Chlordane	0.0025	0.0298	0.0277	0.0406	0.0860
Chlorobenzene	2737	32583	30303	44544	94240
Chlorodibromomethane [Dibromochloromethane]	183	2179	2026	2978	6301
Chloroform [Trichloromethane]	7697	91631	85217	125268	265024
Chromium (hexavalent)	502	5976	5558	8170	17284
Chrysene	2.52	30.0	27.9	41.0	86.7
Cresols [Methylphenols]	9301	110726	102975	151373	320253
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.0238	0.0221	0.0325	0.0688
4,4'-DDE	0.00013	0.00155	0.00144	0.00211	0.00447
4,4'-DDT	0.0004	0.00476	0.00443	0.00651	0.0137
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	473	5631	5237	7698	16286
1,2-Dibromoethane [Ethylene Dibromide]	4.24	50.5	46.9	69.0	145
m-Dichlorobenzene [1,3-Dichlorobenzene]	595	7083	6588	9683	20487
o-Dichlorobenzene [1,2-Dichlorobenzene]	3299	39274	36525	53691	113591
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	2.24	26.7	24.8	36.4	77.1
1,2-Dichloroethane	364	4333	4030	5924	12533
1,1-Dichloroethylene [1,1-Dichloroethene]	55114	656119	610191	896980	1897693
Dichloromethane [Methylene Chloride]	13333	158726	147615	216994	459083
1,2-Dichloropropane	259	3083	2868	4215	8917
1,3-Dichloropropene [1,3-Dichloropropylene]	119	1417	1318	1936	4097
Dicofol [Kelthane]	0.30	3.57	3.32	4.88	10.3
Dieldrin	2.0E-05	0.000238	0.000221	0.000325	0.000688
2,4-Dimethylphenol	8436	100429	93399	137295	290469
Di-*n*-Butyl Phthalate	92.4	1100	1023	1503	3181
Dioxins/Furans [TCDD Equivalents]	7.97E-08	9.49E-07	8.82E-07	0.0000013	0.0000027
Endrin	0.02	0.238	0.221	0.325	0.688
Epichlorohydrin	2013	23964	22287	32761	69311
Ethylbenzene	1867	22226	20670	30385	64284
Ethylene Glycol	1.68E+07	200000000	186000000	273420000	578460000

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	0.00119	0.00111	0.00162	0.00344
Heptachlor Epoxide	0.00029	0.00345	0.00321	0.00471	0.00998
Hexachlorobenzene	0.00068	0.00810	0.00753	0.0110	0.0234
Hexachlorobutadiene	0.22	2.62	2.44	3.58	7.57
Hexachlorocyclohexane (*alpha*)	0.0084	0.1000	0.0930	0.136	0.289
Hexachlorocyclohexane (*beta*)	0.26	3.10	2.88	4.23	8.95
Hexachlorocyclohexane (*gamma*) [Lindane]	0.341	4.06	3.78	5.54	11.7
Hexachlorocyclopentadiene	11.6	138	128	188	399
Hexachloroethane	2.33	27.7	25.8	37.9	80.2
Hexachlorophene	2.90	34.5	32.1	47.1	99.8
4,4'-Isopropylidenediphenol [Bisphenol A]	15982	190262	176944	260107	550294
Lead	3.83	116	108	158	334
Mercury	0.0250	0.298	0.277	0.406	0.860
Methoxychlor	3.0	35.7	33.2	48.8	103
Methyl Ethyl Ketone	9.92E+05	11809524	10982857	16144800	34156685
Methyl *tert*-butyl ether [MTBE]	10482	124786	116051	170594	360917
Nickel	1140	13571	12621	18553	39252
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	1873	22298	20737	30483	64491
N-Nitrosodiethylamine	2.1	25.0	23.3	34.1	72.3
N-Nitroso-di-*n*-Butylamine	4.2	50.0	46.5	68.3	144
Pentachlorobenzene	0.355	4.23	3.93	5.77	12.2
Pentachlorophenol	0.29	3.45	3.21	4.71	9.98
Polychlorinated Biphenyls [PCBs]	6.4E-04	0.00762	0.00709	0.0104	0.0220
Pyridine	947	11274	10485	15412	32607
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.24	2.86	2.66	3.90	8.26
1,1,2,2-Tetrachloroethane	26.35	314	292	428	907
Tetrachloroethylene [Tetrachloroethylene]	280	3333	3100	4557	9641
Thallium	0.23	2.74	2.55	3.74	7.91
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.131	0.122	0.179	0.378
2,4,5-TP [Silvex]	369	4393	4085	6005	12705
1,1,1-Trichloroethane	784354	9337548	8683919	12765361	27006988
1,1,2-Trichloroethane	166	1976	1838	2701	5715
Trichloroethylene [Trichloroethene]	71.9	856	796	1170	2475
2,4,5-Trichlorophenol	1867	22226	20670	30385	64284
TTHM [Sum of Total Trihalomethanes]	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	16.5	196	183	268	568

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

Aquatic Life	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Acrolein	N/A	N/A
Aldrin	2.36	2.87
Aluminum	N/A	N/A
Arsenic	271	329
Cadmium	59.0	71.7
Carbaryl	1115	1354
Chlordane	0.0269	0.0327
Chlorpyrifos	0.0200	0.0242
Chromium (trivalent)	N/A	N/A
Chromium (hexavalent)	334	406
Copper	27.2	33.1
Copper (oyster waters)	N/A	N/A
Cyanide (free)	10.1	12.3
4,4'-DDT	0.00674	0.00819
Demeton	0.674	0.819
Diazinon	1.48	1.80
Dicofol [Kelthane]	N/A	N/A
Dieldrin	0.0134	0.0163
Diuron	N/A	N/A
Endosulfan I (*alpha*)	0.0607	0.0737
Endosulfan II (*beta*)	0.0607	0.0737
Endosulfan sulfate	0.0607	0.0737
Endrin	0.0134	0.0163
Guthion [Azinphos Methyl]	0.0674	0.0819
Heptachlor	0.0269	0.0327
Hexachlorocyclohexane (*gamma*) [Lindane]	0.291	0.353
Lead	90.7	110
Malathion	0.0674	0.0819
Mercury	3.82	4.63
Methoxychlor	0.202	0.245
Mirex	0.00674	0.00819
Nickel	88.4	107
Nonylphenol	11.4	13.9
Parathion (ethyl)	N/A	N/A
Pentachlorophenol	27.4	33.3
Phenanthrene	14.0	17.0
Polychlorinated Biphenyls [PCBs]	0.202	0.245
Selenium	917	1114
Silver	8.01	9.72
Toxaphene	0.00134	0.00163
Tributyltin [TBT]	0.0499	0.0606
2,4,5 Trichlorophenol	80.9	98.3
Zinc	266	324

Human Health ***Parameter***	***70% of Daily Avg. (µg/L)***	***85% of Daily Avg. (µg/L)***
Acrylonitrile	1310	1590
Aldrin	0.000130	0.000158
Anthracene	15003	18219
Antimony	12201	14815
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	6619	8037
Benzidine	1.21	1.48
Benzo(*a*)anthracene	0.284	0.345
Benzo(*a*)pyrene	0.0284	0.0345
Bis(chloromethyl)ether	3.12	3.79
Bis(2-chloroethyl)ether	487	592
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	86.0	104
Bromodichloromethane [Dichlorobromomethane]	3132	3804
Bromoform [Tribromomethane]	12076	14663
Cadmium	N/A	N/A
Carbon Tetrachloride	524	636
Chlordane	0.0284	0.0345
Chlorobenzene	31181	37862
Chlorodibromomethane [Dibromochloromethane]	2084	2531
Chloroform [Trichloromethane]	87688	106478
Chromium (hexavalent)	5719	6944
Chrysene	28.7	34.8
Cresols [Methylphenols]	105961	128667
Cyanide (free)	N/A	N/A
4,4'-DDD	0.0227	0.0276
4,4'-DDE	0.00148	0.00179
4,4'-DDT	0.00455	0.00553
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	5388	6543
1,2-Dibromoethane [Ethylene Dibromide]	48.3	58.6
m-Dichlorobenzene [1,3-Dichlorobenzene]	6778	8231
o-Dichlorobenzene [1,2-Dichlorobenzene]	37583	45637
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	25.5	30.9
1,2-Dichloroethane	4146	5035
1,1-Dichloroethylene [1,1-Dichloroethene]	627886	762433
Dichloromethane [Methylene Chloride]	151896	184445
1,2-Dichloropropane	2950	3582
1,3-Dichloropropene [1,3-Dichloropropylene]	1355	1646
Dicofol [Kelthane]	3.41	4.15
Dieldrin	0.000227	0.000276
2,4-Dimethylphenol	96107	116701
Di-*n*-Butyl Phthalate	1052	1278
Dioxins/Furans [TCDD Equivalents]	9.07E-07	0.0000011
Endrin	0.227	0.276
Epichlorohydrin	22933	27847
Ethylbenzene	21269	25827
Ethylene Glycol	191394000	232407000
Fluoride	N/A	N/A

Human Health ***Parameter***	***70% of Daily Avg. (µg/L)***	***85% of Daily Avg. (µg/L)***
Heptachlor	0.00113	0.00138
Heptachlor Epoxide	0.00330	0.00401
Hexachlorobenzene	0.00774	0.00940
Hexachlorobutadiene	2.50	3.04
Hexachlorocyclohexane (*alpha*)	0.0956	0.116
Hexachlorocyclohexane (*beta*)	2.96	3.59
Hexachlorocyclohexane (*gamma*) [Lindane]	3.88	4.71
Hexachlorocyclopentadiene	132	160
Hexachloroethane	26.5	32.2
Hexachlorophene	33.0	40.1
4,4'-Isopropylidenediphenol [Bisphenol A]	182074	221090
Lead	110	134
Mercury	0.284	0.345
Methoxychlor	34.1	41.5
Methyl Ethyl Ketone	11301360	13723080
Methyl *tert*-butyl ether [MTBE]	119416	145005
Nickel	12987	15770
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	21338	25910
N-Nitrosodiethylamine	23.9	29.0
N-Nitroso-di-*n*-Butylamine	47.8	58.1
Pentachlorobenzene	4.04	4.91
Pentachlorophenol	3.30	4.01
Polychlorinated Biphenyls [PCBs]	0.00729	0.00885
Pyridine	10788	13100
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	2.73	3.32
1,1,2,2-Tetrachloroethane	300	364
Tetrachloroethylene [Tetrachloroethylene]	3189	3873
Thallium	2.62	3.18
Toluene	N/A	N/A
Toxaphene	0.125	0.152
2,4,5-TP [Silvex]	4203	5104
1,1,1-Trichloroethane	8935752	10850557
1,1,2-Trichloroethane	1891	2296
Trichloroethylene [Trichloroethene]	819	994
2,4,5-Trichlorophenol	21269	25827
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	187	228

Mass Effluent Limitations – Phase 2

Mass effluent limitations are calculated as follows:

[concentration criteria (µg/L)/1000] x [2.65 MGD)] x [8.345] = [mass limitation (lbs/day)]

POLLUTANT	Dly Avg µg/L	Dly Max µg/L		Dly Avg lbs/day	Dly Max lbs/day
Acrylonitrile	1871	3959		41.4	87.6
Anthracene	21434	45347		474	1003
Benzene	9455	20005		209	442
Benzo(a)anthracene	0.406	0.86		0.0090	0.0190
Benzo(a)pyrene	0.0406	0.086		0.00090	0.00190
Bis(2-ethylhexyl)phthalate	122	259		2.70	5.73
Carbon Tetrachloride	748	1583		16.5	35.0
Chlorobenzene	44544	94240		985	2084
Chloroform	125268	265024		2770	5861
Chrysene	41	86.7		0.907	1.92
m-Dichlorobenzene	9683	20487		214	453
o-Dichlorobenzene	53691	113591		1187	2512
1,2-Dichloroethane	5924	12533		131	277
1,1-Dichloroethylene	896980	1897693		19836	41966
1,2-Dichloropropane	4215	8917		93.2	197
1,3-Dichloropropene (1,3- Dichloropropylene)	1936	4097		42.8	90.6
2,4-Dimethylphenol	137295	290469		3036	6424
Di-n-Butyl Phthalate	1503	3181		33.2	70.3
Ethylbenzene	30385	64284		672	1422
Hexachlorobenzene	0.011	0.0234		0.00024	0.00052
Hexachlorobutadiene	3.58	7.57		0.079	0.167
Hexachloroethane	37.9	80.2		0.84	1.77
Nitrobenzene	30483	64491		674	1426
Phenanthrene	20	42.3		0.442	0.935
Tetrachloroethylene	4557	9641		101	213
1,1,1-Trichloroethane	12765361	27006988		282296	597239
1,1,2-Trichloroethane	2701	5715		59.7	126
Trichloroethylene	1170	2475		25.9	54.7
Vinyl Chloride	268	568		5.93	12.6

Mass Effluent Limitations – Phase 3

Mass effluent limitations/allocations are calculated as follows:

[concentration criteria (µg/L)/1000] x [5.15 MGD)] x [8.345] = [mass limitation (lbs/day)]

POLLUTANT	Dly Avg µg/L	Dly Max µg/L		Dly Avg lbs/day	Dly Max lbs/day
Acrylonitrile	1871	3959		80.4	170
Anthracene	21434	45347		921	1949
Benzene	9455	20005		406	860
Benzo(a)anthracene	0.406	0.86		0.0174	0.0370
Benzo(a)pyrene	0.0406	0.086		0.00174	0.00370
Bis(2-ethylhexyl)phthalate	122	259		5.24	11.1
Carbon Tetrachloride	748	1583		32.1	68.0
Chlorobenzene	44544	94240		1914	4050
Chloroform	125268	265024		5384	11390
Chrysene	41	86.7		1.76	3.73
m-Dichlorobenzene	9683	20487		416	880
o-Dichlorobenzene	53691	113591		2307	4882
1,2-Dichloroethane	5924	12533		255	539
1,1-Dichloroethylene	896980	1897693		38549	81557
1,2-Dichloropropane	4215	8917		181	383
1,3-Dichloropropene (1,3- Dichloropropylene)	1936	4097		83.2	176
2,4-Dimethylphenol	137295	290469		5900	12483
Di-n-Butyl Phthalate	1503	3181		64.6	137
Ethylbenzene	30385	64284		1306	2763
Hexachlorobenzene	0.011	0.0234		0.00047	0.00101
Hexachlorobutadiene	3.58	7.57		0.154	0.325
Hexachloroethane	37.9	80.2		1.63	3.45
Nitrobenzene	30483	64491		1310	2772
Phenanthrene	20	42.3		0.860	1.82
Tetrachloroethylene	4557	9641		196	414
1,1,1-Trichloroethane	12765361	27006988		548614	1160673
1,1,2-Trichloroethane	2701	5715		116	246
Trichloroethylene	1170	2475		50.3	106
Vinyl Chloride	268	568		11.5	24.4

Appendix C
pH Screening
Outfall 001

Calculation of pH of a mixture in seawater.
Based on the CO2SYS program (Lewis and Wallace, 1998)
http://cdiac.esd.ornl.gov/oceans/co2rprt.html

INPUT

1. MIXING ZONE BOUNDARY CHARACTERISTICS

Dilution factor at mixing zone boundary	10.75 [A]	10.75 [A]
Depth at plume trapping level (m)	2.00 [B]	2.00 [B]

2. BACKGROUND RECEIVING WATER CHARACTERISTICS

Temperature (deg C):	20.00 [C]	25.00 [C]
pH:	6.70 [D]	6.70 [D]
Salinity (psu):	10.00 [E]	20.00 [E]
Total alkalinity (meq/L)	1.00 [F]	10.00 [F]

3. EFFLUENT CHARACTERISTICS

Temperature (deg C):	20.00 [G]	30.00 [G]
pH:	6.00 [H]	9.00 [H]
Salinity (psu)	1.00 [I]	2.00 [I]
Total alkalinity (meq/L):	0.40 [J]	4.00 [J]

OUTPUT

CONDITIONS AT THE MIXING ZONE BOUNDARY

Temperature (deg C):	20.80	20.00
Salinity (psu)	4.68	4.76
Density (kg/m^3)	1001.60	1001.83
Alkalinity (mmol/kg-SW):	0.55	0.83
Total Inorganic Carbon (mmol/kg-SW):	0.70	0.89
pH at Mixing Zone Boundary:	6.62	7.19

Notes:
To convert from units of mgCaCO3/L to meq/L divide by 50.044 g/meq
PSU refers to the Practical Salinity Scale (PSS) and is approximately equivalent to parts per thousand (ppt)

Notes on Data Sources

A Calculated from chronic effluent % at edge of mixing zone given in critical conditions memo. Inverse of effluent fraction (1/0.08 = 12.5).
B Default value. Range of depths tested.
C Range of temperatures tested (5 to 35 degrees C).
D Ambient pH for Segment No. 0501 from 2010 IPs.
E Range of salinities tested (2 to 30 psu).
F Calculated from 15th percentile hardness from 2010 IPs for Segment No. 0501 (28 mg/L CaCO3).
G Range of temperatures tested (5 to 35 degrees C).
H Proposed permit limit. Sequentially modified until predicted pH met segment criteria (6.0 to 8.5).
I Minimum salinity assumed because discharge is freshwater. However, values up to 5 ppt tested.
J For high pH scenario, calculated and tested a range of values. For low pH scenarios, used default of 20 mg/L CaCO3 = 0.40 meq/L

FINAL DETERMINATION

Effluent pH limitations [6.0 su (min) & 9.0 su (max)] meet segment criteria at the edge of the mixing zone.

Appendix D
Comparison of Effluent Limits

The following tables are a comparison of technology based effluent limitations calculated/assessed in the draft permit (Tech Based) and calculated/assessed water quality-based effluent limitations (WQ Based).

For final Outfall 001 (Phases 2 and 3) comparisons are performed as follows:

- The technology-based effluent limits used for comparisons at final Outfall 001 are the technology-based effluent limitations from internal Outfall 101 of the respective phase.
- The WQ-based mass limits for Outfall 001 are compared to technology-based mass limits from the respective phase of internal Outfall 101. This comparison is listed at the respective internal outfall comparison table. Any comparison that results in more stringent water quality-based limitations being included at the final outfall (Outfall 001) will also be documented in the respective Outfall 001 comparison table. Exceptions noted with an asterisk "*"next to the parameter name are direct comparisons of the WQ-based and the technology-based effluent limitations for the final outfall (Outfall 001).
- If the WQ-based mass limits are more stringent than the technology-based mass limits, then the WQ-based concentration limits are included in the draft permit at Outfall 001 in addition to the required technology-based effluent limitations at Outfall 101 of the respective phase.
- If the WQ based mass-equivalent limits are less stringent than the technology-based mass limits, then WQ-based limits are not required to be included in the draft permit at the final outfall based on this comparison.

OUTFALL 001 (Phase 1)

Parameter	WQ Based		Tech Based	
	Dly Avg lbs/day	Dly Max lbs/day	Dly Avg lbs/day	Dly Max lbs/day
Flow	----	----	Report (MGD)	Report (MGD)
Chemical Oxygen Demand	----	----	N/A	200 mg/L
Total Suspended Solids [1]	----	----	N/A	Report mg/L
Oil and Grease	----	----	N/A	20 mg/L
pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU

[1] When discharge of utility wastewater, passivation wastewater, or system flush water occurs.

OUTFALL 001 (Phase 2)

Parameter	WQ Based		Tech Based	
	Dly Avg lbs/day	Dly Max lbs/day	Dly Avg lbs/day	Dly Max lbs/day
Flow	----	----	2.65 MGD	3.15 MGD
Biochemical Oxygen Demand 5-day	264	n/a	264	528
Total Suspended Solids	----	----	1,045	2,304
Oil and Grease	----	----	332	417
Temperature	Report ^{o}F	Report ^{o}F	----	----

OUTFALL 001 (Phase 2) continued

Parameter	WQ Based		Tech Based	
	Dly Avg lbs/day	Dly Max lbs/day	Dly Avg lbs/day	Dly Max lbs/day
Chloroform *	2770	5861	1.62	4.70
Benzo(a)anthracene	0.0090	0.0190	0.07	0.18
Benzo(a)pyrene	0.00090	0.00190	0.07	0.19
Hexachlorobenzene	0.00024	0.00052	0.05	0.09
pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU

OUTFALL 101 (Phase 2)

Parameter	WQ Based		Tech Based	
	Dly Avg lbs/day	Dly Max lbs/day	Dly Avg lbs/day	Dly Max lbs/day
Flow	----	----	0.97 MGD	0.99 MGD
Biochemical Oxygen Demand 5-day	----	----	124	248
Total Suspended Solids	----	----	624	902
Acenaphthene	----	----	0.07	0.18
Acenaphthylene	----	----	0.07	0.18
Acrylonitrile	41.4	87.6	0.30	0.75
Anthracene	474	1003	0.07	0.18
Benzene	209	442	0.11	0.42
Benzo(a)anthracene	0.0090	0.0190	0.07	0.18
Benzo(a)pyrene	0.00090	0.00190	0.07	0.19
3,4-Benzofluoranthene	----	----	0.07	0.19
Benzo(k)fluoranthene	----	----	0.07	0.18
Bis(2-ethylhexyl)phthalate	2.70	5.73	0.32	0.86
Carbon Tetrachloride	16.5	35.0	0.06	0.12
Chlorobenzene	985	2084	0.05	0.09
Chloroethane	----	----	0.32	0.83
Chloroform	2770	5861	0.06	0.14
2-Chlorophenol	----	----	0.10	0.30
Chrysene	0.907	1.92	0.07	0.18
1,2-Dichlorobenzene	1187	2512	0.24	0.50
1,3-Dichlorobenzene	214	453	0.10	0.14
1,4-Dichlorobenzene	----	----	0.05	0.09
1,1-Dichloroethane	----	----	0.07	0.18
1,2-Dichloroethane	131	277	0.21	0.65
1,1-Dichloroethylene	19836	41966	0.05	0.08
1,2-trans Dichloroethylene	----	----	0.06	0.17
2,4-Dichlorophenol	----	----	0.12	0.35
1,2-Dichloropropane	93.2	197	0.47	0.71
1,3-Dichloropropylene	42.8	90.6	0.09	0.14
Diethyl phthalate	----	----	0.25	0.63
2,4-Dimethylphenol	3036	6424	0.06	0.11
Dimethyl phthalate	----	----	0.06	0.15
Di-n-butyl phthalate	33.2	70.3	0.08	0.18
4,6-Dinitro-o-cresol	----	----	0.24	0.86

OUTFALL 101 (Phase 2) continued

Parameter	WQ Based		Tech Based	
	Dly Avg lbs/day	Dly Max lbs/day	Dly Avg lbs/day	Dly Max lbs/day
2,4-Dinitrophenol	----	----	0.22	0.38
2,4-Dinitrotoluene	----	----	0.35	0.88
2,6-Dinitrotoluene	----	----	0.79	1.98
Ethylbenzene	672	1422	0.10	0.33
Fluoranthene	----	----	0.08	0.21
Fluorene	----	----	0.07	0.18
Hexachlorobenzene	0.00024	0.00052	0.05	0.09
Hexachlorobutadiene	0.079	0.167	0.06	0.15
Hexachloroethane	0.84	1.77	0.06	0.17
Methyl Chloride	----	----	0.27	0.59
Methylene Chloride	----	----	0.12	0.27
Naphthalene	----	----	0.07	0.18
Nitrobenzene	674	1426	0.08	0.21
2-Nitrophenol	----	----	0.13	0.21
4-Nitrophenol	----	----	0.22	0.38
Phenanthrene	0.442	0.935	0.07	0.18
Phenol	----	----	0.05	0.08
Pyrene	----	----	0.08	0.21
Tetrachloroethylene	101	213	0.07	0.17
Toluene	----	----	0.08	0.25
1,2,4-Trichlorobenzene	----	----	0.21	0.43
1,1,1-Trichloroethane	282296	597239	0.06	0.17
1,1,2-Trichloroethane	59.7	126	0.06	0.17
Trichloroethylene	25.9	54.7	0.06	0.17
Vinyl Chloride	5.93	12.6	0.32	0.83
pH	6.0 SU (min)	9.0 SU	N/A	N/A

OUTFALL 001 (Phase 3)

Parameter	WQ Based		Tech Based	
	Dly Avg lbs/day	Dly Max lbs/day	Dly Avg lbs/day	Dly Max lbs/day
Flow	----	----	5.15 MGD	5.81 MGD
Biochemical Oxygen Demand 5-day	528	----	528	1,112
Total Suspended Solids	----	----	1,713	4,520
Oil and Grease	----	----	643	833
Temperature	Report °F	Report °F	----	----
Chloroform *	5384	11390	3.68	10.7
Benzo(a)anthracene	0.0174	0.0370	0.13	0.34
Benzo(a)pyrene	0.00174	0.00370	0.13	0.36
Hexachlorobenzene	0.00047	0.00101	0.09	0.16
pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU

OUTFALL 101 (Phase 3)

Parameter	WQ Based		Tech Based	
	Dly Avg lbs/day	Dly Max lbs/day	Dly Avg lbs/day	Dly Max lbs/day
Flow	----	----	1.30 MGD	1.49 MGD
Biochemical Oxygen Demand 5-day	----	----	208	471
Total Suspended Solids	----	----	752	1,316
Acenaphthene	----	----	0.13	0.34
Acenaphthylene	----	----	0.13	0.34
Acrylonitrile	80.4	170	0.56	1.41
Anthracene	921	1949	0.13	0.34
Benzene	406	860	0.22	0.79
Benzo(a)anthracene	0.0174	0.0370	0.13	0.34
Benzo(a)pyrene	0.00174	0.00370	0.13	0.36
3,4-Benzofluoranthene	----	----	0.13	0.36
Benzo(k)fluoranthene	----	----	0.13	0.34
Bis(2-ethylhexyl)phthalate	5.24	11.1	0.60	1.63
Carbon Tetrachloride	32.1	68.0	0.11	0.22
Chlorobenzene	1914	4050	0.09	0.16
Chloroethane	----	----	0.61	1.57
Chloroform	5384	11390	0.12	0.27
2-Chlorophenol	----	----	0.18	0.57
Chrysene	1.76	3.73	0.13	0.34
1,2-Dichlorobenzene	2307	4882	0.45	0.95
1,3-Dichlorobenzene	416	880	0.18	0.26
1,4-Dichlorobenzene	----	----	0.09	0.16
1,1-Dichloroethane	----	----	0.13	0.34
1,2-Dichloroethane	255	539	0.40	1.23
1,1-Dichloroethylene	38549	81557	0.09	0.15
1,2-trans Dichloroethylene	----	----	0.12	0.32
2,4-Dichlorophenol	----	----	0.23	0.65
1,2-Dichloropropane	181	383	0.89	1.34
1,3-Dichloropropylene	83.2	176	0.17	0.26
Diethyl phthalate	----	----	0.47	1.19
2,4-Dimethylphenol	5900	12483	0.11	0.21
Dimethyl phthalate	----	----	0.11	0.27
Di-n-butyl phthalate	64.6	137	0.16	0.33
4,6-Dinitro-o-cresol	----	----	0.46	1.62
2,4-Dinitrophenol	----	----	0.41	0.72
2,4-Dinitrotoluene	----	----	0.66	1.66
2,6-Dinitrotoluene	----	----	1.49	3.74
Ethylbenzene	1306	2763	0.19	0.63
Fluoranthene	----	----	0.15	0.40
Fluorene	----	----	0.13	0.34
Hexachlorobenzene	0.00047	0.00101	0.09	0.16
Hexachloroethane	0.154	0.325	0.12	0.32
Hexachlorobutadiene	1.63	3.45	0.12	0.29
Methyl Chloride	----	----	0.50	1.11

OUTFALL 001 (Phase 3 continued)

Parameter	WQ Based		Tech Based	
	Dly Avg lbs/day	Dly Max lbs/day	Dly Avg lbs/day	Dly Max lbs/day
Methylene Chloride	----	----	0.23	0.52
Naphthalene	----	----	0.13	0.34
Nitrobenzene	1310	2772	0.16	0.40
2-Nitrophenol	----	----	0.24	0.40
4-Nitrophenol	----	----	0.42	0.72
Phenanthrene	0.860	1.82	0.13	0.34
Phenol	----	----	0.09	0.15
Pyrene	----	----	0.15	0.39
Tetrachloroethylene	196	414	0.13	0.33
Toluene	----	----	0.15	0.47
1,2,4-Trichlorobenzene	----	----	0.40	0.82
1,1,1-Trichloroethane	548614	1160673	0.12	0.32
1,1,2-Trichloroethane	116	246	0.12	0.32
Trichloroethylene	50.3	106	0.12	0.32
Vinyl Chloride	11.5	24.4	0.61	1.57
pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU

Appendix E
Summary of Effluent Limitations

Outfall/Phase	Pollutant	Daily Average lbs/day	Daily Maximum lbs/day
001 – Phase 1	Flow	Report (MGD)	Report (MGD)
	Chemical Oxygen Demand	N/A	200 mg/L
	Total Suspended Solids	N/A	Report mg/L
	Oil and Grease	N/A	20 mg/L
	pH	6.0 SU (min)	9.0 SU
001 – Phase 2	Flow	2.65 MGD	3.15 MGD
	Biochemical Oxygen Demand 5-day	264	528
	Total Suspended Solids	1,045	2,304
	Oil and Grease	332	417
	Temperature [1]	Report ^{o}F	Report ^{o}F
	Chloroform	1.62	4.70
	Benzo(a)anthracene	0.0090	0.0190
	Benzo(a)pyrene	0.00090	0.00190
	Hexachlorobenzene	0.00024	0.00052
	pH	6.0 SU (min)	9.0 SU
101 – Phase 2	Flow	0.97 MGD	0.99 MGD
	Biochemical Oxygen Demand (5-day)	124	248
	Total Suspended Solids	624	902
	Acenaphthene	0.07	0.18
	Acenaphthylene	0.07	0.18
	Acrylonitrile	0.30	0.75
	Anthracene	0.07	0.18
	Benzene	0.11	0.42
	Benzo(a)anthracene	0.07	0.18
	Benzo(a)pyrene	0.07	0.19
	3,4-Benzofluoranthene	0.07	0.19
	Benzo(k)fluoranthene	0.07	0.18
	Bis(2-ethylhexyl)phthalate	0.32	0.86
	Carbon Tetrachloride	0.06	0.12
	Chlorobenzene	0.05	0.09
	Chloroethane	0.32	0.83
	Chloroform	0.06	0.14
	2-Chlorophenol	0.10	0.30
	Chrysene	0.07	0.18
	1,2-Dichlorobenzene	0.24	0.50
	1,3-Dichlorobenzene	0.10	0.14
	1,4-Dichlorobenzene	0.05	0.09
	1,1-Dichloroethane	0.07	0.18
	1,2-Dichloroethane	0.21	0.65
	1,1-Dichloroethylene	0.05	0.08
	1,2-trans Dichloroethylene	0.06	0.17

Outfall/Phase	Pollutant	Daily Average lbs/day	Daily Maximum lbs/day
101 – Phase 2	2,4-Dichlorophenol	0.12	0.35
	1,2-Dichloropropane	0.47	0.71
	1,3-Dichloropropylene	0.09	0.14
	Diethyl phthalate	0.25	0.63
	2,4-Dimethylphenol	0.06	0.11
	Dimethyl phthalate	0.06	0.15
	Di-n-butyl phthalate	0.08	0.18
	4,6-Dinitro-o-cresol	0.24	0.86
	2,4-Dinitrophenol	0.22	0.38
	2,4-Dinitrotoluene	0.35	0.88
	2,6-Dinitrotoluene	0.79	1.98
	Ethylbenzene	0.10	0.33
	Fluoranthene	0.08	0.21
	Fluorene	0.07	0.18
	Hexachlorobenzene	0.05	0.09
	Hexachloroethane	0.06	0.17
	Hexachlorobutadiene	0.06	0.15
	Methyl Chloride	0.27	0.59
	Methylene Chloride	0.12	0.27
	Naphthalene	0.07	0.18
	Nitrobenzene	0.08	0.21
	2-Nitrophenol	0.13	0.21
	4-Nitrophenol	0.22	0.38
	Phenanthrene	0.07	0.18
	Phenol	0.05	0.08
	Pyrene	0.08	0.21
	Tetrachloroethylene	0.07	0.17
	Toluene	0.08	0.25
	1,2,4-Trichlorobenzene	0.21	0.43
	1,1,1-Trichloroethane	0.06	0.17
	1,1,2-Trichloroethane	0.06	0.17
	Trichloroethylene	0.06	0.17
	Vinyl Chloride	0.32	0.83
	pH	6.0 SU (min)	9.0 SU
001 – Phase 3	Flow	5.15 MGD	5.81 MGD
	Biochemical Oxygen Demand 5-day	528	1,112
	Total Suspended Solids	1,713	4,520
	Oil and Grease	643	833
	Temperature [1]	Report °F	Report °F
	Chloroform	3.68	10.7
	Benzo(a)anthracene	0.0174	0.0370
	Benzo(a)pyrene	0.00174	0.00370
	Hexachlorobenzene	0.00047	0.00101
	pH	6.0 SU (min)	9.0 SU

Outfall/Phase	Pollutant	Daily Average lbs/day	Daily Maximum lbs/day
101 – Phase 3	Flow	1.30 MGD	1.49 MGD
	Biochemical Oxygen Demand (5-day)	208	471
	Total Suspended Solids	752	1,316
	Acenaphthene	0.13	0.34
	Acenaphthylene	0.13	0.34
	Acrylonitrile	0.56	1.41
	Anthracene	0.13	0.34
	Benzene	0.22	0.79
	Benzo(a)anthracene	0.13	0.34
	Benzo(a)pyrene	0.13	0.36
	3,4-Benzofluoranthene	0.13	0.36
	Benzo(k)fluoranthene	0.13	0.34
	Bis(2-ethylhexyl)phthalate	0.60	1.63
	Carbon Tetrachloride	0.11	0.22
	Chlorobenzene	0.09	0.16
	Chloroethane	0.61	1.57
	Chloroform	0.12	0.27
	2-Chlorophenol	0.18	0.57
	Chrysene	0.13	0.34
	1,2-Dichlorobenzene	0.45	0.95
	1,3-Dichlorobenzene	0.18	0.26
	1,4-Dichlorobenzene	0.09	0.16
	1,1-Dichloroethane	0.13	0.34
	1,2-Dichloroethane	0.40	1.23
	1,1-Dichloroethylene	0.09	0.15
	1,2-trans Dichloroethylene	0.12	0.32
	2,4-Dichlorophenol	0.23	0.65
	1,2-Dichloropropane	0.89	1.34
	1,3-Dichloropropylene	0.17	0.26
	Diethyl phthalate	0.47	1.19
	2,4-Dimethylphenol	0.11	0.21
	Dimethyl phthalate	0.11	0.27
	Di-n-butyl phthalate	0.16	0.33
	4,6-Dinitro-o-cresol	0.46	1.62
	2,4-Dinitrophenol	0.41	0.72
	2,4-Dinitrotoluene	0.66	1.66
	2,6-Dinitrotoluene	1.49	3.74
	Ethylbenzene	0.19	0.63
	Fluoranthene	0.15	0.40
	Fluorene	0.13	0.34
	Hexachlorobenzene	0.09	0.16
	Hexachloroethane	0.12	0.32
	Hexachlorobutadiene	0.12	0.29
	Methyl Chloride	0.50	1.11
	Methylene Chloride	0.23	0.52
	Naphthalene	0.13	0.34

Outfall/Phase	Pollutant	Daily Average lbs/day	Daily Maximum lbs/day
101 – Phase 3	Nitrobenzene	0.16	0.40
	2-Nitrophenol	0.24	0.40
	4-Nitrophenol	0.42	0.72
	Phenanthrene	0.13	0.34
	Phenol	0.09	0.15
	Pyrene	0.15	0.39
	Tetrachloroethylene	0.13	0.33
	Toluene	0.15	0.47
	1,2,4-Trichlorobenzene	0.40	0.82
	1,1,1-Trichloroethane	0.12	0.32
	1,1,2-Trichloroethane	0.12	0.32
	Trichloroethylene	0.12	0.32
	Vinyl Chloride	0.61	1.57
	pH	6.0 SU (min)	9.0 SU

[1] Effective beginning upon date of permit issuance and lasting for a period of 58 months.

TPDES PERMIT NO.
WQ0005432000
[For TCEQ office use only -
EPA I.D. No. TX0144690]

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 414

Golden Triangle Polymers Company LLC

whose mailing address is

P.O. Box 1471
Orange, Texas 77631

is authorized to treat and discharge wastes from Golden Triangle Polymers Plant, an integrated polymers production facility (SIC 2821, 2869, & 4226)

located at 850 Foreman Road, southwest of the City of Orange, Orange County, Texas 77630

directly to the Sabine River Tidal in Segment No. 0501 of the Sabine River Basin

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

This permit shall expire at midnight, five (5) years from the date of permit issuance.

ISSUED DATE:

_____
For the Commission

1. During the period beginning upon the date of permit issuance and lasting through the date of activation of the polyethylene production units [1], the permittee is authorized to discharge utility wastewater [2] and stormwater [3] subject to the following effluent limitations:

   Volume: Intermittent and Flow-Variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/Day [4]	Estimate
Chemical Oxygen Demand	N/A	200	200	1/Week [4]	Grab
Total Suspended Solids	N/A	Report	N/A	1/Week [4]	Grab
Oil and Grease	N/A	20	20	1/Week [4]	Grab

   [1] See Other Requirement No. 3 for notification requirements for phase changes.
   [2] See Other Requirements Nos. 4.B.; 4.F.; and 4.G.
   [3] See Other Requirement No. 4.E.
   [4] When discharge occurs.

2. The pH must not be less than 6.0 standard units nor greater than 9.0 standard units and must be monitored once per day, by grab sample, when discharge occurs.

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

4. Effluent monitoring samples must be taken at the following location: at the sampling point for Outfall 001, which is downstream of the outlet of the check basin and located at a port on the discharge pipe. The physical location of Outfall 001 is a submerged diffuser in the Sabine River.

1. During the period beginning upon the date of start-up of the polyethylene production units [1] and lasting through the start-up of the ethane cracker [1], the permittee is authorized to discharge process wastewater [2] (previously monitored via internal Outfall 101), utility wastewater [3], and stormwater [4] (including previously monitored via internal Outfall 101) subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 2.65 million gallons per day (MGD). The daily maximum flow shall not exceed 3.15 MGD.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	2.65 MGD	3.15 MGD	N/A	Continuous	Meter
Biochemical Oxygen Demand 5-day	264	528	45	1/Week	Composite
Total Suspended Solids	1,045	2,304	120	1/Week	Composite
Oil and Grease	332	417	20	1/Week	Grab
Temperature [5]	Report °F	Report °F	N/A	1/Week	Instantaneous
Chloroform	1.62	4.70	0.30	1/Week	Composite
Benzo(a)anthracene	0.0090	0.0190	0.005	1/Year	Composite
Benzo(a)pyrene	0.00090	0.00190	0.005	1/Year	Composite
Hexachlorobenzene	0.00024	0.00052	0.005	1/Year	Composite

[1] See Other Requirement No. 3 for notification requirements for phase changes.
[2] See Other Requirement No. 4.A.
[3] See Other Requirements Nos. 4.B.; 4.F.; and 4.G.
[4] Includes process area stormwater and first-flush stormwater associated with industrial activities previously monitored via internal Outfall 101; post first-flush stormwater associated with industrial activities not previously monitored; and stormwater associated with construction activities. See Other Requirement No. 4.E.
[5] Effective beginning upon date of outfall-phase activation and lasting until 58 months after date of permit issuance.

2. The pH must not be less than 6.0 standard units nor greater than 9.0 standard units and must be monitored once per day by grab sample.

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

4. Effluent monitoring samples must be taken at the following location: at the sampling point for Outfall 001, which is downstream of the outlet of the check basin and located at a port on the discharge pipe. The physical location of Outfall 001 is a submerged diffuser in the Sabine River.

1. During the period beginning upon the date of start-up of the polyethylene production units [1] and lasting through the start-up of the ethane cracker [1], the permittee is authorized to discharge process wastewater [2] and stormwater associated with industrial activity [3] subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 0.97 million gallons per day (MGD). The daily maximum flow shall not exceed 0.99 MGD.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	0.97 MGD	0.99 MGD	N/A	Continuous	Meter
Biochemical Oxygen Demand (5-day)	124	248	45	1/Week	Composite
Total Suspended Solids	624	902	222	1/Week	Composite
Acenaphthene	0.07	0.18	0.09	1/Year	Composite
Acenaphthylene	0.07	0.18	0.09	1/Year	Composite
Acrylonitrile	0.30	0.75	0.36	1/Year	Composite
Anthracene	0.07	0.18	0.09	1/Year	Composite
Benzene	0.11	0.42	0.20	1/Year	Composite
Benzo(a)anthracene	0.07	0.18	0.09	1/Year	Composite
Benzo(a)pyrene	0.07	0.19	0.09	1/Year	Composite
3,4-Benzofluoranthene	0.07	0.19	0.09	1/Year	Composite
Benzo(k)fluoranthene	0.07	0.18	0.09	1/Year	Composite
Bis(2-ethylhexyl)phthalate	0.32	0.86	0.42	1/Year	Composite
Carbon Tetrachloride	0.06	0.12	0.06	1/Year	Composite
Chlorobenzene	0.05	0.09	0.04	1/Year	Composite
Chloroethane	0.32	0.83	0.40	1/Year	Composite
Chloroform	0.06	0.14	0.07	1/Year	Composite
2-Chlorophenol	0.10	0.30	0.15	1/Year	Composite
Chrysene	0.07	0.18	0.09	1/Year	Composite
1,2-Dichlorobenzene	0.24	0.50	0.24	1/Year	Composite
1,3-Dichlorobenzene	0.10	0.14	0.07	1/Year	Composite
1,4-Dichlorobenzene	0.05	0.09	0.04	1/Year	Composite
1,1-Dichloroethane	0.07	0.18	0.09	1/Year	Composite
1,2-Dichloroethane	0.21	0.65	0.32	1/Year	Composite
1,1-Dichloroethylene	0.05	0.08	0.04	1/Year	Composite

1. CONTINUED.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
1,2-trans Dichloroethylene	0.06	0.17	0.08	1/Year	Composite
2,4-Dichlorophenol	0.12	0.35	0.17	1/Year	Composite
1,2-Dichloropropane	0.47	0.71	0.35	1/Year	Composite
1,3-Dichloropropylene	0.09	0.14	0.07	1/Year	Composite
Diethyl phthalate	0.25	0.63	0.30	1/Year	Composite
2,4-Dimethylphenol	0.06	0.11	0.05	1/Year	Composite
Dimethyl phthalate	0.06	0.15	0.07	1/Year	Composite
Di-n-butyl phthalate	0.08	0.18	0.09	1/Year	Composite
4,6-Dinitro-o-cresol	0.24	0.86	0.42	1/Year	Composite
2,4-Dinitrophenol	0.22	0.38	0.18	1/Year	Composite
2,4-Dinitrotoluene	0.35	0.88	0.43	1/Year	Composite
2,6-Dinitrotoluene	0.79	1.98	0.96	1/Year	Composite
Ethylbenzene	0.10	0.33	0.16	1/Year	Composite
Fluoranthene	0.08	0.21	0.10	1/Year	Composite
Fluorene	0.07	0.18	0.09	1/Year	Composite
Hexachlorobenzene	0.05	0.09	0.04	1/Year	Composite
Hexachloroethane	0.06	0.17	0.08	1/Year	Composite
Hexachlorobutadiene	0.06	0.15	0.07	1/Year	Composite
Methyl Chloride	0.27	0.59	0.29	1/Year	Composite
Methylene Chloride	0.12	0.27	0.13	1/Year	Composite
Naphthalene	0.07	0.18	0.09	1/Year	Composite
Nitrobenzene	0.08	0.21	0.10	1/Year	Composite
2-Nitrophenol	0.13	0.21	0.10	1/Year	Composite
4-Nitrophenol	0.22	0.38	0.19	1/Year	Composite
Phenanthrene	0.07	0.18	0.09	1/Year	Composite
Phenol	0.05	0.08	0.04	1/Year	Composite
Pyrene	0.08	0.21	0.10	1/Year	Composite

1. CONTINUED.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Tetrachloroethylene	0.07	0.17	0.08	1/Year	Composite
Toluene	0.08	0.25	0.12	1/Year	Composite
1,2,4-Trichlorobenzene	0.21	0.43	0.21	1/Year	Composite
1,1,1-Trichloroethane	0.06	0.17	0.08	1/Year	Composite
1,1,2-Trichloroethane	0.06	0.17	0.08	1/Year	Composite
Trichloroethylene	0.06	0.17	0.08	1/Year	Composite
Vinyl Chloride	0.32	0.83	0.40	1/Year	Composite

[1] See Other Requirement No. 3 for notification requirements for phase changes.
[2] See Other Requirement No. 4.A.
[3] Includes process area stormwater and first-flush stormwater associated with industrial activities. See Other Requirement No. 4.E.

2. The pH must not be less than 6.0 standard units nor greater than 9.0 standard units and must be monitored once per month by grab sample.

3. Effluent monitoring samples must be taken at the following locations: at the Outfall 101 sampling point located at the wastewater treatment facility downstream of the sand filter and prior to the check basin.

1. During the period beginning upon the date of activation of the ethane cracker [1] and lasting through the date of permit expiration, the permittee is authorized to discharge process wastewater [2] (previously monitored via internal Outfall 101), utility wastewater [3], and stormwater [4] (including previously monitored via internal Outfall 101) subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 5.15 million gallons per day (MGD). The daily maximum flow shall not exceed 5.81 MGD.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	5.15 MGD	5.81 MGD	N/A	Continuous	Meter
Biochemical Oxygen Demand (5-day)	528	1,112	45	1/Week	Composite
Total Suspended Solids	1,713	4,520	120	1/Week	Composite
Oil and Grease	643	833	20	1/Week	Grab
Temperature [5]	Report °F	Report °F	N/A	1/Week	Instantaneous
Chloroform	3.68	10.7	0.30	1/Week	Composite
Benzo(a)anthracene	0.0174	0.0370	0.005	1/Year	Composite
Benzo(a)pyrene	0.00174	0.00370	0.005	1/Year	Composite
Hexachlorobenzene	0.00047	0.00101	0.005	1/Year	Composite

[1] See Other Requirement No. 3 for notification requirements for phase changes.
[2] See Other Requirement No. 4.A.
[3] See Other Requirements Nos. 4.B.; 4.F.; and 4.G.
[4] Includes process area stormwater and first-flush stormwater associated with industrial activities previously monitored via internal Outfall 101 and post first-flush stormwater associated with industrial activities not previously monitored. See Other Requirement No. 4.E.
[5] Effective beginning upon date of outfall-phase activation and lasting until 58 months after date of permit issuance.

2. The pH must not be less than 6.0 standard units nor greater than 9.0 standard units and must be monitored once per day by grab sample.

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

4. Effluent monitoring samples must be taken at the following location: at the sampling point for Outfall 001, which is downstream of the outlet of the check basin and located at a port on the discharge pipe. The physical location of Outfall 001 is a submerged diffuser in the Sabine River.

1. During the period beginning upon the date of activation of the ethane cracker [1] and lasting through the date of permit expiration, the permittee is authorized to discharge process wastewater [2] and stormwater associated with industrial activity [3] subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 1.30 million gallons per day (MGD). The daily maximum flow shall not exceed 1.49 MGD.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	1.30 MGD	1.49 MGD	N/A	Continuous	Meter
Biochemical Oxygen Demand (5-day)	208	471	50	1/Week	Composite
Total Suspended Solids	752	1,316	222	1/Week	Composite
Acenaphthene	0.13	0.34	0.05	1/Year	Composite
Acenaphthylene	0.13	0.34	0.05	1/Year	Composite
Acrylonitrile	0.56	1.41	0.21	1/Year	Composite
Anthracene	0.13	0.34	0.05	1/Year	Composite
Benzene	0.22	0.79	0.12	1/Year	Composite
Benzo(a)anthracene	0.13	0.34	0.05	1/Year	Composite
Benzo(a)pyrene	0.13	0.36	0.05	1/Year	Composite
3,4-Benzofluoranthene	0.13	0.36	0.05	1/Year	Composite
Benzo(k)fluoranthene	0.13	0.34	0.05	1/Year	Composite
Bis(2-ethylhexyl)phthalate	0.60	1.63	0.24	1/Year	Composite
Carbon Tetrachloride	0.11	0.22	0.03	1/Year	Composite
Chlorobenzene	0.09	0.16	0.02	1/Year	Composite
Chloroethane	0.61	1.57	0.23	1/Year	Composite
Chloroform	0.12	0.27	0.04	1/Year	Composite
2-Chlorophenol	0.18	0.57	0.08	1/Year	Composite
Chrysene	0.13	0.34	0.05	1/Year	Composite
1,2-Dichlorobenzene	0.45	0.95	0.14	1/Year	Composite
1,3-Dichlorobenzene	0.18	0.26	0.04	1/Year	Composite
1,4-Dichlorobenzene	0.09	0.16	0.02	1/Year	Composite
1,1-Dichloroethane	0.13	0.34	0.05	1/Year	Composite
1,2-Dichloroethane	0.40	1.23	0.18	1/Year	Composite
1,1-Dichloroethylene	0.09	0.15	0.02	1/Year	Composite

1. CONTINUED.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
1,2-trans Dichloroethylene	0.12	0.32	0.05	1/Year	Composite
2,4-Dichlorophenol	0.23	0.65	0.10	1/Year	Composite
1,2-Dichloropropane	0.89	1.34	0.20	1/Year	Composite
1,3-Dichloropropylene	0.17	0.26	0.04	1/Year	Composite
Diethyl phthalate	0.47	1.19	0.17	1/Year	Composite
2,4-Dimethylphenol	0.11	0.21	0.03	1/Year	Composite
Dimethyl phthalate	0.11	0.27	0.04	1/Year	Composite
Di-n-butyl phthalate	0.16	0.33	0.05	1/Year	Composite
4,6-Dinitro-o-cresol	0.46	1.62	0.24	1/Year	Composite
2,4-Dinitrophenol	0.41	0.72	0.11	1/Year	Composite
2,4-Dinitrotoluene	0.66	1.66	0.24	1/Year	Composite
2,6-Dinitrotoluene	1.49	3.74	0.55	1/Year	Composite
Ethylbenzene	0.19	0.63	0.09	1/Year	Composite
Fluoranthene	0.15	0.40	0.06	1/Year	Composite
Fluorene	0.13	0.34	0.05	1/Year	Composite
Hexachlorobenzene	0.09	0.16	0.02	1/Year	Composite
Hexachloroethane	0.12	0.32	0.05	1/Year	Composite
Hexachlorobutadiene	0.12	0.29	0.04	1/Year	Composite
Methyl Chloride	0.50	1.11	0.16	1/Year	Composite
Methylene Chloride	0.23	0.52	0.08	1/Year	Composite
Naphthalene	0.13	0.34	0.05	1/Year	Composite
Nitrobenzene	0.16	0.40	0.06	1/Year	Composite
2-Nitrophenol	0.24	0.40	0.06	1/Year	Composite
4-Nitrophenol	0.42	0.72	0.11	1/Year	Composite
Phenanthrene	0.13	0.34	0.05	1/Year	Composite
Phenol	0.09	0.15	0.02	1/Year	Composite
Pyrene	0.15	0.39	0.06	1/Year	Composite

1. CONTINUED.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Tetrachloroethylene	0.13	0.33	0.05	1/Year	Composite
Toluene	0.15	0.47	0.07	1/Year	Composite
1,2,4-Trichlorobenzene	0.40	0.82	0.12	1/Year	Composite
1,1,1-Trichloroethane	0.12	0.32	0.05	1/Year	Composite
1,1,2-Trichloroethane	0.12	0.32	0.05	1/Year	Composite
Trichloroethylene	0.12	0.32	0.05	1/Year	Composite
Vinyl Chloride	0.61	1.57	0.23	1/Year	Composite

[1] See Other Requirement No. 3 for notification requirements for phase changes.
[2] See Other Requirement No. 4.A.
[3] Includes process area stormwater and first-flush stormwater associated with industrial activities. See Other Requirement No. 4.E.

2. The pH must not be less than 6.0 standard units nor greater than 9.0 standard units and must be monitored once per month by grab sample.

3. Effluent monitoring samples must be taken at the following locations: at the Outfall 101 sampling point located at the wastewater treatment facility downstream of the sand filter and prior to the check basin.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

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

1. Flow Measurements

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

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

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

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

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

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

2. Concentration Measurements

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

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

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

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

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

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

mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day.

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

e. Bacteria concentration (Fecal coliform, *E. coli*, or Enterococci) – the number of colonies of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the nth root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substitute value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.

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

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

3. Sample Type

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

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

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

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

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

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

   Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Enforcement Division (MC 224), by the 20th day of the following month for each discharge that is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

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

2. Test Procedures

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

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

3. Records of Results

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

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

   c. Records of monitoring activities shall include the following:

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

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

4. Additional Monitoring by Permittee

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

5. Calibration of Instruments

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

6. Compliance Schedule Reports

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

7. Noncompliance Notification

   a. In accordance with 30 TAC §305.125(9) any noncompliance that may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Report of such information shall be provided orally or by facsimile transmission (FAX) to the regional office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the regional office and the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective September 1, 2020, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

   b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
      i. unauthorized discharges as defined in Permit Condition 2(g).
      ii. any unanticipated bypass that exceeds any effluent limitation in the permit.
      iii. violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.

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

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

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

9. Changes in Discharges of Toxic Substances

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

   a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) that is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
      i. one hundred micrograms per liter (100 µg/L);
      ii. two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      iii. five (5) times the maximum concentration value reported for that pollutant in the permit application; or
      iv. the level established by the TCEQ.

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

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

10. Signatories to Reports

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

11. All POTWs must provide adequate notice to the Executive Director of the following:

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

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

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

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

PERMIT CONDITIONS

1. General

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

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

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

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

2. Compliance

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

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

revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.

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

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

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

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

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

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

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

3. Inspections and Entry

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

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

4. Permit Amendment or Renewal

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

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

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

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

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

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

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

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

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

5. Permit Transfer

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

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

6. Relationship to Hazardous Waste Activities

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

7. Relationship to Water Rights

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

8. Property Rights

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

9. Permit Enforceability

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

10. Relationship to Permit Application

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

11. Notice of Bankruptcy.

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

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

    b. This notification must indicate:

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

OPERATIONAL REQUIREMENTS

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

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

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

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

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

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

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

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

7. Documentation

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

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

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

      If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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OTHER REQUIREMENTS

1. The Executive Director 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 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 10 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 10 and Compliance Monitoring Team (MC 224):

Pollutant	MAL (mg/L)
Acenaphthene	0.010
Acenaphthylene	0.010
Acrylonitrile	0.050
Anthracene	0.010
Benzene	0.010
Benzo(*a*)anthracene	0.005
3,4-Benzofluoranthene (Benzo(*b*)fluoranthene)	0.010
Benzo(*k*)fluoranthene	0.005
Benzo(*a*)pyrene	0.005
Bis(2-Ethylhexyl) Phthalate	0.010
Carbon Tetrachloride	0.002
Chlorobenzene	0.010
Chloroethane	0.050
Chloroform	0.010
2-Chlorophenol	0.010
Chrysene	0.005
Di-n-Butyl Phthalate	0.010
1,2-Dichlorobenzene	0.010
1,3-Dichlorobenzene	0.010
1,4-Dichlorobenzene	0.010
1,1-Dichloroethane	0.010
1,2-Dichloroethane	0.010
1,1-Dichloroethylene	0.010
1,2-trans-Dichloroethylene	0.010
2,4-Dichlorophenol	0.010
1,2-Dichloropropane	0.010
1,3-Dichloropropylene	0.010
Diethyl Phthalate	0.010
2,4-Dimethylphenol	0.010
Dimethyl Phthalate	0.010
4,6-Dinitro-o-Cresol	0.050
2,4-Dinitrophenol	0.050
2,4-Dinitrotoluene	0.010
2,6-Dinitrotoluene	0.010
Ethylbenzene	0.010
Fluoranthene	0.010
Fluorene	0.010
Hexachlorobenzene	0.005
Hexachlorobutadiene	0.010
Hexachloroethane	0.020

Pollutant	MAL (mg/L)
Methylene Chloride	0.020
Methyl Chloride	0.050
Naphthalene	0.010
Nitrobenzene	0.010
2-Nitrophenol	0.020
4-Nitrophenol	0.050
Phenanthrene	0.010
Phenol	0.010
Pyrene	0.010
Tetrachloroethylene	0.010
Toluene	0.010
1,2,4-Trichlorobenzene	0.010
1,1,1-Trichloroethane	0.010
1,1,2-Trichloroethane	0.010
Trichloroethylene	0.010
Vinyl Chloride	0.010

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

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

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

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

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

3. PHASE ACTIVATION NOTIFICATION REQUIREMENTS

Reporting requirements according to 30 TAC §§ 319.1-319.12 and any additional effluent reporting requirements contained in the permit for Phases 2 and 3 are suspended from the effective date of the permit until plant startup or discharge, whichever occurs first, from the facility described by this permit. The permittee shall provide written notice to the TCEQ Region 10 Office, Applications Review and Processing Team (MC 148) of the Water Quality Division, and Compliance Monitoring Team (MC 224) at least forty-five (45) days prior to activation of Phases 2 and 3, on Notification of Completion Form 20007.

4. DEFINITIONS:

   A. Process Wastewater – as defined in 40 CFR §401.11(q), the term process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product.

   B. Utility Wastewater – the term utility wastewater includes, but is not limited to, non-contact cooling water, cooling tower blowdown, boiler blowdown, steam condensate, air compressor condensate, air conditioner condensate, and fire water. Water treatment wastes, hydrostatic test water, passivation wastewater, and system flush water are also classified as utility wastewaters.

   C. Water Treatment Wastes - the term water treatment wastes includes, but is not limited to, cold lime water treatment wastes, demineralizer backwash, filter backwash, ion exchange water treatment system wastes, membrane regeneration wastes, and reverse osmosis reject water.

   D. Hydrostatic Test Water – the term hydrostatic test water includes water used for conducting a hydrostatic test on any of the following types of vessels: 1) new vessels; 2) existing vessels that contain or previously contained or transferred raw or potable water; and/or 3) existing vessels that previously contained only elemental gases (hydrogen, oxygen, nitrogen, etc.). Water from a hydrostatic test conducted on any other type of vessel is considered process wastewater and must be handled accordingly.

   E. Stormwater – the term stormwater includes the following: stormwater [as defined at 40 CFR §122.26(b)(13)]; stormwater discharge associated with industrial activity [as defined at 40 CFR §122.26(b)(14)]; and stormwater from construction activities. See Other Requirement No. 8 for additional requirements regarding industrial area stormwater and allowable non-stormwater discharges. See Other Requirement No. 9 for additional requirements regarding construction stormwater.

   F. Passivation Wastewater – the term passivation wastewater means wastewater from the initial treatment of metal surfaces to create a protective, corrosion-resistant layer on metal surfaces to prevent and/or reduce corrosion.

   G. System Flush Water – the term system flush water means water resulting from the flushing of the system.

5. COOLING WATER INTAKE STRUCTURE REQUIREMENTS

   The permittee shall provide written notification to the TCEQ Industrial Permits Team (MC 148) and Region 10 Office of any changes in the method by which the facility obtains water for cooling purposes. This notification must be submitted 30 days prior to any such change and must include a description of the planned changes. The TCEQ may, upon review of the notification, reopen the permit to include additional terms and conditions as necessary.

6. MIXING ZONE DEFINITIONS & DIFFUSER REQUIREMENTS – OUTFALL 001

   The following requirements and determinations are applicable to all phases of Outfall 001.

   The permittee shall maintain the diffuser at Outfall 001 to achieve a maximum dilution of 18.1 percent effluent at the edge of the zone of initial dilution (ZID). The ZID is defined as a volume within a radius of 50 feet from the point of discharge.

The permittee shall maintain the diffuser at Outfall 001 to achieve a maximum dilution of 9.3 percent effluent at the edge of the chronic aquatic life mixing zone. The chronic aquatic life mixing zone is defined as a volume within a radius of 200 feet from the point of discharge.

The permittee shall maintain the diffuser at Outfall 001 to achieve a maximum dilution of 8.4 percent effluent at the edge of the human health mixing zone. The human health mixing zone is defined as a volume within a radius of 400 feet from the point of discharge.

7. This permit does not authorize the discharge of domestic wastewater. All domestic wastewater must be disposed of in an approved manner, such as routing to an approved on-site septic tank and drainfield system or to an authorized third party for treatment and disposal.

8. MULTI-SECTOR GENERAL PERMIT ALLOWABLE NON-STORMWATER DISCHARGES

   A. discharges from emergency firefighting activities, uncontaminated fire hydrant flushings, and prevention actions taken to control other dangerous high-heat conditions such as smoldering and emergency cooling of equipment (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated, and discharges are not expected to adversely affect aquatic life);

   B. potable water sources, including overrun of clarified water produced for commissioning purposes (excluding discharges of hyper chlorinated water, unless the water is first dechlorinated, and discharge are not expected to adversely affect aquatic life);

   C. lawn watering and similar irrigation drainage, provided that all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;

   D. water from the routine external washing of buildings, conducted without the use of detergents or other chemicals;

   E. water from the routine washing of pavement conducted without the use of detergents or other chemicals and where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed);

   F. uncontaminated air conditioner condensate, compressor condensate, and steam condensate, and condensate from the outside storage of refrigerated gases or liquids;

   G. water from foundation or footing drains where flows are not contaminated with pollutants (e.g., process materials, solvents, and other pollutants);

   H. uncontaminated water used for dust suppression;

   I. springs and other uncontaminated ground water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents;

   J. incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility but excluding intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

9. STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES

Stormwater discharges from construction activities and construction support activities, and allowable non-stormwater discharges described in section A. (1)-(8) below are authorized for discharge under this TPDES individual permit via all phases for Outfalls 101 and 001.

A. Allowable non-stormwater discharges authorized for discharge are limited to the following, unless specific waste streams are identified on Pages 2, 2a, 2b, 2e, and 2f of this permit:

(1) discharges from emergency fire-fighting activities (emergency fire-fighting activities do not include washing of trucks, run-off water from training activities, test water from fire suppression systems, or similar activities);

(2) uncontaminated fire hydrant flushings (excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life), which include flushings from systems that utilize potable water, surface water, or groundwater that does not contain additional pollutants (uncontaminated fire hydrant flushings do not include systems utilizing reclaimed wastewater as a source water);

(3) water from the routine external washing of vehicles, the external portion of buildings or structures, and pavement, where solvents, detergents, and soaps are not used, where spills or leaks of toxic or hazardous materials have not occurred (unless spilled materials have been removed; and if local state, or federal regulations are applicable, the materials are removed according to those regulations), and where the purpose is to remove mud, dirt, or dust;

(4) uncontaminated water used to control dust;

(5) potable water sources, including waterline flushings, but excluding discharges of hyperchlorinated water, unless the water is first dechlorinated and discharges are not expected to adversely affect aquatic life;

(6) uncontaminated air conditioning condensate;

(7) uncontaminated ground water or spring water, including foundation or footing drains where flows are not contaminated with industrial materials such as solvents; and

(8) lawn watering and similar irrigation drainage.

B. The permittee must implement and comply with the permit conditions and requirements outlined in the current TPDES Stormwater Construction General Permit, TXR150000, effective on March 5, 2023, that are applicable for the type of operator and size of soil disturbing construction activities and construction support activities except as detailed in paragraphs (D) and (F) below. The permittee must identify and document the conditions and requirements established in TXR150000 that are applicable to its construction activities, including the development and implementation of a stormwater pollution prevention plan (SWP3) and best management practices (BMPs). The SWP3 must include justification documenting which conditions and requirements in TXR150000 are applicable to the permittee's construction activities and construction support activities.

C. The SWP3 and any other applicable records required by TXR150000 must be kept current, maintained onsite, and made readily available to TCEQ, federal, state, or local government representatives upon request.

D. Since stormwater discharges from construction activities and construction support activities and allowable non-stormwater discharges are authorized under this TPDES individual permit, there is no requirement for the permittee to obtain separate authorization(s) under TXR150000 by filing of a Notice of Intent (NOI) for construction activities and construction support activities performed within the permitted facility.

E. If authorization(s) under TXR150000 for stormwater discharges from construction activities and construction support activities and allowable non-stormwater discharges at Outfalls 001 and/or 101 exists, then the permittee must terminate coverage under TXR150000 for

respective outfalls (Outfalls 001 and/or 101) upon issuance of this TPDES individual permit and notification of anticipated discharge under Other Requirement No. 3.

F. *Final Stabilization.* Because stormwater discharges from construction and construction support activities are covered under this TPDES individual permit, the permittee does not need to submit a Notice of Termination (NOT) after final stabilization has been completed. Instead, the permittee must document in the SWP3 the dates when soil disturbing construction activities are completed, and the final stabilization conditions and requirements established in TXR150000 have been achieved on any portion of the permitted facility.

G. Should the permittee decide to alternatively obtain coverage to discharge under TXR150000, the permittee must file an application for a minor amendment of this TPDES individual permit to remove the authorization to discharge stormwater from construction activities and construction support activities, and allowable non-stormwater discharges. Once this individual permit is modified and issued, it is the responsibility of the permittee to obtain coverage under the TXR150000 for any construction activities within the permitted facility.

The permittee is placed on notice that authorization to continue discharging stormwater from construction activities and construction support activities, and allowable non-stormwater discharges under this TPDES individual permit, this provision (Other Requirement No. 8) will be updated at the time of the next permitting action for this TPDES individual permit to require the permittee to comply with any new or revised conditions and requirements established within the current reissued and updated TXR150000.

10. The permittee must develop and implement a Stormwater Pollution Prevention Plan (SWP3) to ensure that areas of the facility that can contribute plastic pollutants to stormwater discharges (e.g. areas around containers holding plastic materials, plastic storage areas, loading docks where plastics are present, and outdoor areas where plastic materials may be present) are maintained in a clean and orderly manner. Good housekeeping measures must include measures to prevent exposure of plastics and other plastic pre-production materials to precipitation or runoff prior to their use in further processing or disposal. Plastic materials required to be addressed as stormwater pollutants at a minimum include the following: virgin and recycled plastic resin pellets, powders, flakes, powdered additives, regrind, scrap, waste, and recycling material with the potential to discharge or migrate off-site. Facilities that handle pre-production plastic must implement best management practices (BMPs) to eliminate discharges of plastic in stormwater through the implementation of control measures such as the following, where determined feasible (list not exclusive): minimizing spills, cleaning up spills promptly and thoroughly, sweeping and/or vacuuming thoroughly, and pellet capturing.

11. 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 discharges of wastewater into or adjacent to water in the state. The permittee shall maintain copies of all liner construction and testing documents at the

facility or in a reasonably accessible location and make the information available to the executive director upon request.

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

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

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

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

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

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

The certification must be provided to the TCEQ Water Quality Assessment Team (MC 150), Industrial Permits Team (MC 148), and regional office. A copy of the liner certification and construction details (i.e., as-built drawings, construction QA/QC documentation, and post

construction testing) must be kept on-site or in a reasonably accessible location (in either hardcopy or digital format) until the pond is closed.

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

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

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

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

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

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

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

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

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

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

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

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

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

12. TPDES PERMIT NO. WQ0005288000

TPDES Permit No. WQ0005288000 receives post-first flush stormwater as described below:

Stormwater flows from the Inside Storage Battery Limit (ISBL) area are routed to the Stormwater Diversion Box, which is sized to receive the first flush, then routed to the First Flush Pond. The First Flush Pond includes a First Flush Pond Wet Well that is equipped with screens. Stormwater is then pumped to equalization tanks for biological treatment in the wastewater treatment system.

Once the first flush capacity in the First Flush Pond is reached, the system routes the remainder of the stormwater (post-first flush) through an underflow and overflow weir to the Outside Storage Battery Limit (OSBL) Pond prior to discharge under TPDES Permit No. WQ0005288000.

The routing of any other wastewaters generated at this facility to be discharged via TPDES Permit No. WQ0005288000 is not authorized by this permit.

13. EFFLUENT TESTING REQUIREMENTS

Wastewater discharged via all phases of Outfall 001 must be sampled and analyzed as directed below. For Phase 1 Tables 1, 2, and 4 of Attachment A of this permit are required. For Phases 2 and 3 all tables (Tables 1, 2, 3, 4, 5, 6, 7, and 8) of Attachment A of this permit are required. Required sample collection must be completed within sixty (60) days of initial discharge of the respective phase.

Results of the analytical testing must be submitted within sixty (60) days of completing the sample collection per this requirement for the respective phase to the TCEQ Industrial Permits Team (MC 148) and Region 10 Office. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations, monitoring requirements, or both.

Tables 1-3: Analysis is required for all pollutants in Tables 1, 2, and 3. Wastewater must be sampled and analyzed for those parameters listed in Tables 1, 2, and 3 for a minimum of four (4) sampling events that are each at least one week apart.

Table 4: For all pollutants listed in Table 4, the permittee shall indicate whether each pollutant is believed to be present or absent in the discharge. Sampling and analysis must be conducted for each pollutant believed present for a minimum of one (1) sampling event.

Tables 5-8: Analysis is required for all pollutants in Tables 5, 6, 7, and 8. Wastewater must be sampled and analyzed for those parameters listed in Table 1 for a minimum of four (4) sampling events that are each at least one week apart.

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

Attachment A

Table 1 – Conventionals and Non-conventionals

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

Table 2 – Metals

Pollutant	Effluent Concentration (µg/L) [1]					MAL [2] (µg/L)
	Samp.	Samp.	Samp.	Samp.	Average	
Aluminum, Total						2.5
Antimony, Total						5
Arsenic, Total						0.5
Barium, Total						3
Beryllium, Total						0.5
Cadmium, Total						1
Chromium, Total						3
Chromium, Hexavalent						3
Chromium, Trivalent						N/A
Copper, Total						2
Cyanide, Free						10
Lead, Total						0.5
Mercury, Total						0.005
Nickel, Total						2
Selenium, Total						5
Silver, Total						0.5
Thallium, Total						0.5
Zinc, Total						5.0

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

Table 3 – Toxic Pollutants with Water Quality Criteria

Outfall No.: ☐C ☐G Pollutant	Samp. 1 (µg/L) [3]	Samp. 2 (µg/L) [3]	Samp. 3 (µg/L) [3]	Samp. 4 (µg/L) [3]	Avg. (µg/L) [3]	MAL (µg/L)
Acrolein						0.7
Acrylonitrile						50
Anthracene						10
Benzene						10
Benzidine						50
Benzo(*a*)anthracene						5
Benzo(*a*)pyrene						5
Bis(2-chloroethyl)ether						10
Bis(2-ethylhexyl) phthalate						10
Bromodichloromethane						10
Bromoform						10
Carbon Tetrachloride						2
Chlorobenzene						10
Chlorodibromomethane						10
Chloroform						10
Chrysene						5
Cresols						10
1,2-Dibromoethane						10
m-Dichlorobenzene						10
o-Dichlorobenzene						10
p-Dichlorobenzene						10
3,3'-Dichlorobenzidine						5
1,2-Dichloroethane						10
1,1-Dichloroethylene						10
Dichloromethane						20
1,2-Dichloropropane						10
1,3-Dichloropropylene						10
2,4-Dimethylphenol						10
Di-*n*-Butyl Phthalate						10
Epichlorohydrin						1,000
Ethylbenzene						10
Ethylene Glycol						—
Fluoride						500
Hexachlorobenzene						5
Hexachlorobutadiene						10
Hexachlorocyclopentadiene						10
Hexachloroethane						20
4,4'-Isopropylidenediphenol [bisphenol A]						—

[3] Indicate units if different than µg/L.

Outfall No.: ☐C ☐G Pollutant	Samp. 1 (µg/L) [3]	Samp. 2 (µg/L) [3]	Samp. 3 (µg/L) [3]	Samp. 4 (µg/L) [3]	Avg. (µg/L) [3]	MAL (µg/L)
Methyl Ethyl Ketone						50
Methyl *tert*-butyl ether [MTBE]						—
Nitrobenzene						10
N-Nitrosodiethylamine						20
N-Nitroso-di-*n*-Butylamine						20
Nonylphenol						333
Pentachlorobenzene						20
Pentachlorophenol						5
Phenanthrene						10
Polychlorinated Biphenyls (PCBs) [4]						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

[4] 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 4

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

Table 5 – Volatile Compounds

Outfall No. ☐C ☐G Pollutant	Average (µg/L) [5]	Maximum (µg/L) [5]	No. of Samples	MAL (µg/L)
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

[5] Indicate units if different than µg/L.

Table 6 – Acid Compounds

Outfall No. ☐C ☐G	**Average (µg/L)** [6]	**Maximum (µg/L)** [6]	**No. of Samples**	**MAL (µg/L)**
Pollutant				
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

[6] Indicate units if different than µg/L.

Table 7 – Base/Neutral Compounds

Outfall No. ☐C ☐G Pollutant	Average (µg/L) [7]	Maximum (µg/L)[7]	No. of Samples	MAL (µg/L)
Acenaphthene				10
Acenaphthylene				10
Anthracene				10
Benzidine				50
Benzo(*a*)anthracene				5
Benzo(*a*)pyrene				5
3,4-Benzofluoranthene [Benzo(*b*)fluoranthene]				10
Benzo(*ghi*)perylene				20
Benzo(*k*)fluoranthene				5
Bis(2-chloroethoxy)methane				10
Bis(2-chloroethyl)ether				10
Bis(2-chloroisopropyl)ether				10
Bis(2-ethylhexyl) phthalate				10
4-Bromophenyl phenyl ether				10
Butylbenzyl phthalate				10
2-Chloronaphthalene				10
4-Chlorophenyl phenyl ether				10
Chrysene				5
Dibenzo(*a,h*)anthracene				5
1,2-Dichlorobenzene [*o*-Dichlorobenzene]				10
1,3-Dichlorobenzene [*m*-Dichlorobenzene]				10
1,4-Dichlorobenzene [*p*-Dichlorobenzene]				10
3,3'-Dichlorobenzidine				5
Diethyl phthalate				10
Dimethyl phthalate				10
Di-n-butyl phthalate				10
2,4-Dinitrotoluene				10
2,6-Dinitrotoluene				10
Di-*n*-octyl phthalate				10
1,2-Diphenylhydrazine (as Azobenzene)				20
Fluoranthene				10
Fluorene				10
Hexachlorobenzene				5
Hexachlorobutadiene				10
Hexachlorocyclopentadiene				10
Hexachloroethane				20
Indeno(1,2,3-*cd*)pyrene				5
Isophorone				10
Naphthalene				10

[7] Indicate units if different than µg/L.

Outfall No. ☐C ☐G **Pollutant**	**Average (µg/L)** [7]	**Maximum (µg/L)**[7]	**No. of Samples**	**MAL (µg/L)**
Nitrobenzene				10
N-Nitrosodimethylamine				50
N-Nitrosodi-*n*-propylamine				20
N-Nitrosodiphenylamine				20
Phenanthrene				10
Pyrene				10
1,2,4-Trichlorobenzene				10

Table 8 – Pesticides

Outfall No. ☐C ☐G **Pollutant**	**Average (µg/L)** [8]	**Maximum (µg/L)**[8]	**No. of Samples**	**MAL (µg/L)**
Aldrin				0.01
alpha-BHC [*alpha*-Hexachlorocyclohexane]				0.05
beta-BHC [*beta*-Hexachlorocyclohexane]				0.05
gamma-BHC [*gamma*-Hexachlorocyclohexane]				0.05
delta-BHC [*delta*-Hexachlorocyclohexane]				0.05
Chlordane				0.2
4,4'-DDT				0.02
4,4'-DDE				0.1
4,4'-DDD				0.1
Dieldrin				0.02
Endosulfan I (*alpha*)				0.01
Endosulfan II (*beta*)				0.02
Endosulfan sulfate				0.1
Endrin				0.02
Endrin aldehyde				0.1
Heptachlor				0.01
Heptachlor epoxide				0.01
PCB 1242				0.2
PCB 1254				0.2
PCB 1221				0.2
PCB 1232				0.2
PCB 1248				0.2
PCB 1260				0.2
PCB 1016				0.2
Toxaphene				0.3

[8] Indicate units if different than µg/L.

BIOMONITORING REQUIREMENTS

CHRONIC BIOMONITORING REQUIREMENTS: MARINE

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing and begin upon date of activation of Phase 2 (see Other Requirement No. 3).

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 (*Americamysis bahia*) (Method 1007.0). A minimum of eight (8) replicates with five (5) 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 (5) replicates with eight (8) 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 (5) effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 4%, 5%, 7%, 9%, and 12% effluent. The critical dilution, defined as 9% 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 (4) 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 (6) months for the invertebrate test species and once per year for the vertebrate test species.

2) If one (1) or more of the first four (4) 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 compared to the survival, reproduction, or growth of the test organism in the control (0% effluent).

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 Part 1.b. 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); and

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

a. The permittee shall prepare a full report of the results of all tests conducted 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 TLP6J, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

8) For the inland silverside, Parameter TOP6J, report the NOEC for survival.

9) For the inland silverside, Parameter TXP6J, report the LOEC for survival.

10) For the inland silverside, Parameter TWP6J, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."

11) For the inland silverside, Parameter TPP6J, report the NOEC for growth.

12) For the inland silverside, Parameter TYP6J, 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 two (2) additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two (2) retests shall be conducted monthly during the next two (2) consecutive months. The permittee shall not substitute either of the two (2) 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 (1) or both of the two (2) 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 (2) 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 (2) retests are performed due to a demonstration of significant sublethality, and one (1) or both of the two (2) retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two (2) retests as stipulated in Part 4.a.

d. If the two (2) 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 (2), no more than one (1) retest per month is required for a species.

5. Toxicity Reduction Evaluation

a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At a minimum, the TRE Action Plan shall include the following:

1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "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 which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.

e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.

f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are herein defined as proactive

efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond their 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 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.

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%												
4%												
5%												
7%												
9%												
12%												

* 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%	4%	5%	7%	9%	12%
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%	4%	5%	7%	9%	12%
F						
G						
H						
Mean Dry Weight (mg)						
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 (9%): _____ 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 (9%): _____ 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%									
4%									
5%									
7%									
9%									
12%									

* 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 milligrams in replicate chambers					Mean Dry Weight (mg)	CV%*
	A	B	C	D	E		
0%							
4%							
5%							
7%							
9%							
12%							
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 (9%): _____ 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 (9%): _____ 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 and begin upon date of activation of Phase 2 (see Other Requirement No. 3).

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 (6) 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 (*Americamysis bahia*). A minimum of five (5) replicates with eight (8) 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 (5) replicates with eight (8) 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.

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 (1) 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 TII6J, 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 two (2) additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once (1) per week for two (2) weeks. Five (5) 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 (1) or both of the two (2) 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

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To request a more accessible version of this report, please contact the TCEQ Help Desk at (512) 239-4357.

Compliance History Report

Compliance History Report for CN606046183, RN110935285, Rating Year 2024 which includes Compliance History (CH) components from September 1, 2019, through August 31, 2024.

Customer, Respondent, or Owner/Operator: CN606046183, Golden Triangle Polymers Company Llc **Classification:** SATISFACTORY **Rating:** 0.36

Regulated Entity: RN110935285, GOLDEN TRIANGLE POLYMERS PLANT **Classification:** SATISFACTORY **Rating:** 0.36

Complexity Points: 10 **Repeat Violator:** NO

CH Group: 05 - Chemical Manufacturing

Location: 850 FOREMAN RD ORANGE, TX 77630, ORANGE COUNTY

TCEQ Region: REGION 10 - BEAUMONT

ID Number(s):

AIR OPERATING PERMITS PERMIT 4640
AIR NEW SOURCE PERMITS PERMIT 155952
AIR NEW SOURCE PERMITS PERMIT PSDTX1556
AIR NEW SOURCE PERMITS PERMIT GHGPSDTX192
PETROLEUM STORAGE TANK REGISTRATION REGISTRATION 94155
STORMWATER PERMIT TXR1583KQ
STORMWATER PERMIT TXR1555KS
STORMWATER PERMIT TXR1567LP
WASTEWATER EPA ID TX0139840
WASTEWATER PERMIT WQ0005288000
WASTEWATER EPA ID TX0144690
WASTEWATER PERMIT WQ0005432000
INDUSTRIAL AND HAZARDOUS WASTE OTS REQUEST 43151
INDUSTRIAL AND HAZARDOUS WASTE EPA ID TXP490356207
TAX RELIEF ID NUMBER 27299
TAX RELIEF ID NUMBER 27294

Compliance History Period: September 01, 2019 to August 31, 2024 **Rating Year:** 2024 **Rating Date:** 09/01/2024

Date Compliance History Report Prepared: February 24, 2025

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

Component Period Selected: June 29, 2018 to February 21, 2025

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: MICHAEL SUNDERLIN **Phone:** (512) 239-4523

Site and Owner/Operator History:

1) Has the site been in existence and/or operation for the full five year compliance period? YES
2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:
N/A

B. Criminal convictions:
N/A

C. Chronic excessive emissions events:
N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):
N/A

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

A notice of violation represents a written allegation of a violation of a specific regulatory requirement from the commission to a regulated entity. A notice of violation is not a final enforcement action, nor proof that a violation has actually occurred.

N/A

F. Environmental audits:

N/A

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A