

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Office of Chief Clerk **DATE:** September 30, 2024

From: Kathy Humphreys
Staff Attorney
Environmental Law Division

Subject: Backup Documents Filed for Consideration of Hearing Requests at Agenda

Applicant: CORPUS CHRISTI POLYMERS LLC
Proposed Permit No.: WQ0005019000
Program: Water
Docket No.: TCEQ Docket No. 2024-1227-IWD

Enclosed please find a copy of the following documents for inclusion in the background material for this permit application:

- Draft permit
- Statement of Basis/Technical Summary and ED's preliminary decision
- Compliance History Report



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

TPDES PERMIT NO.
WQ0005019000
*[For TCEQ office use only -
EPA I.D. No. TX0134635]*

This renewal replaces TPDES Permit
No. WQ0005019000, issued on
February 28, 2019.

Corpus Christi Polymers LLC

whose mailing address is

7001 Joe Fulton International Trade Corridor
Corpus Christi, Texas 78409

is authorized to treat and discharge wastes from Corpus Christi Polymers Plant, plastic resins
manufacturing facility (SIC 2821)

located at 7001 Joe Fulton International Trade Corridor, in the City of Corpus Christi, Nueces County,
Texas 78409

directly to Corpus Christi Inner Harbor, thence to Corpus Christi Inner Harbor in Segment No. 2484 of
the Bays and Estuaries

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

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

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 001

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge reverse osmosis reject water, filter backwash, previously monitored effluents [process wastewater, utility wastewater ¹, fire system (testing and flushing) water, and stormwater ² from Internal Outfall 101; and treated domestic wastewater from Internal Outfall 201], fire system (testing and flushing) water, utility wastewaters¹, and stormwater³, subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 38.50 million gallons per day (MGD). The daily maximum flow shall not exceed 49.91 MGD

Effluent Characteristics	Discharge Limitations				Minimum Self-Monitoring Requirements		
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
	lbs/day	mg/L	lbs/day	mg/L	mg/L		
Flow	Report, MGD		Report, MGD		N/A	Continuous	Totalizer
Carbonaceous Biochemical oxygen demand (5-day) ⁴	N/A	Report	N/A	Report	N/A	1/week	Composite
Total Dissolved Solids (TDS)	N/A	Report	N/A	Report	N/A	1/week	Composite
Sulfate	N/A	Report	N/A	Report	N/A	1/week	Composite
Chloride	N/A	Report	N/A	Report	N/A	1/week	Composite
Salinity	N/A	Report, ppt	N/A	Report, ppt	N/A	1/week	Composite
Ammonia (as Nitrogen) ⁴	N/A	Report	N/A	Report	N/A	1/week	Composite
Hexachlorobenzene ⁵	N/A	0.103 µg/L	N/A	0.217 µg/L	0.005	1/year	Composite
Hexachlorobenzene ⁶	N/A	0.015 µg/L	N/A	0.033 µg/L	0.005	1/year	Composite

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day by grab sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location: at Outfall 001, located at a point after the commingling of all wastewaters and prior to discharging into the Port of Corpus Christ Inner Harbor, at the head of the Tule Turning Basin.

¹ See Other Requirement No. 10.

² Consists of only first-flush stormwater from the potentially process-contaminated areas of the PET and PTA plants. See Other Requirement No. 9.

³ Includes post-first flush stormwater from the potentially process-contaminated areas of the PET and PTA plants and stormwater from non-process areas of the facility. See Other Requirement No. 11.

⁴ Effective upon date of permit issuance and lasting until April 30, 2027.

⁵ Effective beginning upon the date of permit issuance and lasting for 2 years and 364 days.

⁶ Effective beginning 3 years after the date of permit issuance.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 101

1. During the period beginning upon the date of permit issuance and lasting through the date of permit expiration, the permittee is authorized to discharge process wastewater ¹, utility wastewater ², fire system (testing and flushing) water, and stormwater³ subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 1.25 million gallons per day (MGD). The daily maximum flow shall not exceed 1.5 MGD.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average lbs/day	Daily Maximum lbs/day	Single Grab mg/L	Report Daily Average and Measurement Frequency	Daily Maximum Sample Type
Flow	1.25 MGD	1.5 MGD	N/A	Continuous	Totalizer
Biochemical oxygen demand (5-day)	250	668	60	1/week	Composite
Total suspended solids	417	1356	120	1/week	Composite
Oil and grease	15 mg/L	20 mg/L	20	1/week	Grab
Acenaphthene	0.23	0.61	0.089	1/year	Composite
Acenaphthylene	0.23	0.61	0.089	1/year	Composite
Acrylonitrile	1.00	2.52	0.363	1/year	Composite
Anthracene	0.23	0.61	0.089	1/year	Composite
Benzene	0.39	1.41	0.204	1/year	Composite
Benzo(a)anthracene ⁴	0.23	0.61	0.089	1/year	Composite
Benzo(a)anthracene ⁵	0.183	0.386	0.035	1/year	Composite
Benzo(a)pyrene ⁴	0.24	0.64	0.092	1/year	Composite
Benzo(a)pyrene ⁵	0.018	0.039	0.005	1/year	Composite
3,4-Benzofluoranthene	0.24	0.64	0.092	1/year	Composite
Benzo(k)fluoranthene	0.23	0.61	0.089	1/year	Composite
Bis(2-ethylhexyl)phthalate	1.07	2.91	0.419	1/year	Composite
Carbon Tetrachloride	0.19	0.40	0.057	1/year	Composite
Chlorobenzene	0.16	0.29	0.042	1/year	Composite
Chloroethane	1.08	2.79	0.402	1/year	Composite
Chloroform	0.22	0.48	0.069	1/year	Composite
2-Chlorophenol	0.32	1.02	0.147	1/year	Composite

¹ See Other Requirement No. 8.

² See Other Requirement No. 10.

³ Consists of only first-flush stormwater from the potentially process-contaminated areas of the PET and PTA plants. See Other Requirement No. 9.

⁴ Effective beginning upon the date of permit issuance and lasting for 2 years and 364 days.

⁵ Effective beginning 3 years from the date of permit issuance and lasting through the date of permit expiration.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 101

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	lbs/day	mg/L	Measurement Frequency	Sample Type
Chrysene	0.23	0.61	0.089	1/year	Composite
1,2-Dichlorobenzene	0.80	1.70	0.245	1/year	Composite
1,3-Dichlorobenzene	0.32	0.46	0.066	1/year	Composite
1,4-Dichlorobenzene	0.16	0.29	0.042	1/year	Composite
1,1-Dichloroethane	0.23	0.61	0.089	1/year	Composite
1,2-Dichloroethane	0.71	2.20	0.317	1/year	Composite
1,1-Dichloroethylene	0.17	0.26	0.038	1/year	Composite
1,2-trans Dichloroethylene	0.22	0.56	0.081	1/year	Composite
2,4-Dichlorophenol	0.41	1.17	0.168	1/year	Composite
1,2-Dichloropropane	1.60	2.40	0.345	1/year	Composite
1,3-Dichloropropylene	0.30	0.46	0.066	1/year	Composite
Diethyl phthalate	0.84	2.12	0.305	1/year	Composite
2,4-Dimethylphenol	0.19	0.37	0.054	1/year	Composite
Dimethyl phthalate	0.20	0.49	0.071	1/year	Composite
Di- <i>n</i> -butyl phthalate	0.28	0.59	0.086	1/year	Composite
4,6-Dinitro- <i>o</i> -cresol	0.81	2.89	0.416	1/year	Composite
2,4-Dinitrophenol	0.74	1.28	0.185	1/year	Composite
2,4-Dinitrotoluene	1.18	2.97	0.428	1/year	Composite
2,6-Dinitrotoluene	2.67	6.69	0.962	1/year	Composite
Ethylbenzene	0.33	1.13	0.162	1/year	Composite
Fluoranthene	0.26	0.71	0.102	1/year	Composite
Fluorene	0.23	0.61	0.089	1/year	Composite
Hexachlorobenzene ¹	0.16	0.29	0.042	1/year	Composite
Hexachlorobenzene ²	0.005	0.011	0.005	1/year	Composite
Hexachloroethane	0.22	0.56	0.081	1/year	Composite
Hexachlorobutadiene	0.21	0.51	0.074	1/year	Composite
Methyl Chloride	0.90	1.98	0.285	1/year	Composite
Methylene Chloride	0.42	0.93	0.134	1/year	Composite
Naphthalene	0.23	0.61	0.089	1/year	Composite
Nitrobenzene	0.28	0.71	0.102	1/year	Composite

¹ Effective beginning upon the date of permit issuance and lasting for 2 years and 364 days.

² Effective beginning 3 years from the date of permit issuance and lasting through the date of permit expiration after the date of permit issuance.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 101

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	lbs/day	mg/L	Measurement Frequency	Sample Type
2-Nitrophenol	0.43	0.72	0.104	1/year	Composite
4-Nitrophenol	0.75	1.29	0.186	1/year	Composite
Phenanthrene	0.23	0.61	0.089	1/year	Composite
Phenol	0.16	0.27	0.039	1/year	Composite
Pyrene	0.26	0.70	0.101	1/year	Composite
Tetrachloroethylene	0.23	0.58	0.084	1/year	Composite
Toluene	0.27	0.83	0.120	1/year	Composite
1,2,4-Trichlorobenzene	0.71	1.46	0.210	1/year	Composite
1,1,1-Trichloroethane	0.22	0.56	0.081	1/year	Composite
1,1,2-Trichloroethane	0.22	0.56	0.081	1/year	Composite
Trichloroethylene	0.22	0.56	0.081	1/year	Composite
Vinyl Chloride	1.08	2.79	0.402	1/year	Composite

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day by grab sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location: At internal Outfall 101, located at the exit point for the process wastewater treatment system (Wastewater Treatment Plant 1) prior to commingling with other wastewaters.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 201

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

The daily average flow of effluent shall not exceed 0.020 million gallons per day (MGD). The daily maximum flow shall not exceed 0.080 MGD.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	0.020, MGD	0.080, MGD	N/A	Continuous	Totalizer
Biochemical oxygen demand (5-day)	20	45	65	1/week	Composite
Total suspended solids	20	45	65	1/week	Composite
Enterococci ¹	35	104	104	1/week	Grab

2. When chlorination is used as the method of disinfection, the effluent must contain chlorine residual of at least 1.0 mg/L and a maximum chlorine residual of 4.0 mg/L after a detention time of at least 20 minutes (based on peak flow) and must be monitored once per week by grab sample. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location: At Outfall 201, located at the exit point of the domestic wastewater treatment system (Wastewater Treatment Plant 2) prior to commingling with other wastewaters.

¹ Units are *colony forming units* (CFU) or *most probable number* (MPN) per 100 mls.

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 *n*th 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.

TCEQ Revision 05/2021

OTHER REQUIREMENTS

1. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 14 within 24 hours from the time the permittee becomes aware of the violation, followed by a written report within five working days to TCEQ Region 14 and Compliance Monitoring Team (MC 224):

Pollutant	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
Methylene Chloride	0.020
Methyl Chloride	0.050
Naphthalene	0.010
Nitrobenzene	0.010
2-Nitrophenol	0.020

Pollutant	MAL (mg/L)
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 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.

2. 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.
3. Reporting requirements according to 30 TAC §§ 319.1-319.12 and any additional effluent reporting requirements contained in the permit are suspended from the effective date of the permit until plant startup or discharge, whichever occurs first, from the facility described by this permit. The permittee shall provide written notice to the TCEQ Region 14 Office, Applications Review and Processing Team (MC 148) of the Water Quality Division, and Compliance Monitoring Team (MC 224) at least forty-five days prior to plant startup or anticipated discharge, whichever occurs first, on Notification of Completion Form 20007.
4. COOLING WATER INTAKE STRUCTURE REQUIREMENTS

When in operation, the cooling water system must be operated and maintained as represented in

the application for this permit. The permittee shall provide written notification to the TCEQ Industrial Permits Team (MC 148) and Region 14 Office of any changes in the procedure or facility modification which alters 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.

5. The mixing zone for Outfall 001 is defined as a volume of water within a radius of 200 feet extending over the receiving water from the point where the discharge reaches Corpus Christi Inner Harbor. Chronic toxic criteria apply at the edge of the mixing zone.

The zone of initial dilution (ZID) for Outfall 001 is defined as a volume of water within a radius of 50 feet extending over the receiving water from the point where the discharge reaches the Corpus Christi Inner Harbor. Acute toxic criteria apply at the edge of the ZID.

6. Wastewaters produced from the generation of electricity are not authorized for discharge under this permit.
7. Monitoring results must be provided at the intervals specified in this permit. For pollutants which are monitored annually, effluent reports must be submitted in September of each year. For pollutants which are monitored twice per year, the first effluent report must be submitted six months after the date of plant start-up or discharge, whichever comes first, and subsequent reports every six months thereafter. For pollutants which are monitored four times per year, the first effluent report must be submitted three months after the date of plant start-up or discharge, whichever comes first, and subsequent reports every three months thereafter.
8. 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. Process wastewater at Internal Outfall 101 includes, but is not limited to, process wastewater from production processes at the PET and PTA plants, wastewater from process area air scrubbers, wastewater from the PET and PTA railcar wash stations, laboratory and sampling streams, and process area floor drains.
9. The term *first-flush stormwater*, as it is used in the permit, refers to the stormwater runoff from the first one-half inch of accumulation of stormwater from within the potentially contaminated areas of the polyethylene terephthalate (PET) and the terephthalic acid (PTA) plants.
10. The term *utility wastewaters* includes, but is not limited to, the following waste streams: non-contact cooling waters, boiler blowdown, cooling tower blowdown, water treatment wastes, air conditioner condensate, air compressor condensate, steam condensate, potable water, and raw water supplies.
11. The term *post first-flush stormwater*, as it is used in the permit, refers to the stormwater runoff that occurs after the first one-half inch of accumulation of stormwater from within the potentially contaminated areas of the polyethylene terephthalate (PET) and the terephthalic acid (PTA) plants.
12. The permittee may exercise the option to re-use portions of reverse osmosis reject water, filter backwash, process wastewater, utility wastewater, fire system (testing and flushing) water, domestic wastewater, cooling tower blowdown, utility wastewaters, and stormwater for the purpose of supplying non-potable water to the process, steam, utility, and cooling systems within the plant by routing these wastewaters for treatment by filtration or filtration and reverse osmosis and then use the treated wastewater as a non-potable industrial water supply in the process, steam, utility, and cooling systems within the plant. Wastewaters to be reused at the facility must

be routed for treatment by filtration or filtration and reverse osmosis prior to reuse as a non-potable industrial water supply and must not be used for potable or domestic purposes.

13. RETEST REQUIREMENTS:

Wastewater discharged via Outfall 001 must be sampled and analyzed as directed below for those parameters listed in Tables 1, 2, 3, 6, 8, 9, 10, and 11 of Attachment A of this permit. Analytical testing for Outfall 001 must be completed within 60 days of initial discharge. Results of the analytical testing must be submitted within 90 days of initial discharge to the TCEQ Industrial Permits Team (MC 148) and Region 14 Office. Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations, monitoring requirements, or both.

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

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

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

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

14. SCHEDULE OF COMPLIANCE FOR WATER QUALITY BASED EFFLUENT LIMITS

The permittee shall comply with the following schedule of activities for the attainment of water quality-based final effluent limitations for hexachlorobenzene at Outfall 001 and benzo(a)anthracene, benzo(a)pyrene, and hexachlorobenzene at internal Outfall 101:

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

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

PROGRESS REPORT DATE

January 1

April 1

July 1

October 1

The quarterly progress reports must include a discussion of the interim requirements that have been completed at the time of the report and must address the progress towards attaining the water quality-based final effluent limitations for hexachlorobenzene at Outfall 001 and

benzo(a)anthracene, benzo(a)pyrene, and hexachlorobenzene at internal Outfall 101 no later than three years from the date of permit issuance.

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

All reports must be submitted to the TCEQ Region 14 Office and to the Compliance Monitoring Team (MC-224).

15. NARRATIVE CRITERIA FOR SALINITY

The facility's discharge must be in accordance with the narrative criteria established in 30 TAC §307.4 (g)(3):

"Salinity gradients in estuaries must be maintained to support attainable estuarine dependent aquatic life uses. Numerical salinity criteria for Texas estuaries have not been established because of the high natural variability of salinity in estuarine systems, and because long-term studies by state agencies to assess estuarine salinities are still ongoing. Absence of numerical criteria must not preclude evaluations and regulatory actions based on estuarine salinity, and careful consideration must be given to all activities that may detrimentally affect salinity gradients."

Effluent salinity and flow monitoring data required on page 2 of this permit shall be submitted for review on a semi-annual basis to the TCEQ Standards Implementation Team (MC 150) upon commencement of discharge via Outfall 001. Effluent salinity data shall be reported for each weekly composite sample, and effluent flow shall be reported as an average of flow measurements for each day salinity samples are taken. The semi-annual time periods are defined as January through June and July through December of each calendar year during the permit term. Data may be submitted in spreadsheet format and are due at the end of the month following each semi-annual period, on July 31 and December 31. Based on a review of the submitted data, an amendment may be initiated by TCEQ staff to include additional limitations, monitoring requirements, or both to ensure protection of aquatic life and the salinity gradient.

Attachment A

Table 1 – Conventionals and Non-conventionals

Outfall No.:	<input type="checkbox"/> C <input type="checkbox"/> 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)							
Salinity (ppt)							
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

¹ Indicate units if different than µg/L.

² Minimum Analytical Level

Pollutant	Effluent Concentration (µg/L) ¹					MAL ² (µg/L)
	Samp.	Samp.	Samp.	Samp.	Average	
Lead, Total						0.5
Mercury, Total						0.005
Nickel, Total						2
Selenium, Total						5
Silver, Total						0.5
Thallium, Total						0.5
Zinc, Total						5.0

Table 3 – Toxic Pollutants with Water Quality Criteria

Outfall No.:	<input type="checkbox"/> C <input type="checkbox"/> G	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)
Pollutant							
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
<i>m</i> -Dichlorobenzene							10
<i>o</i> -Dichlorobenzene							10
<i>p</i> -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- <i>n</i> -Butyl Phthalate							10
Epichlorohydrin							1,000

³ Indicate units if different than µg/L.

Outfall No.:	<input type="checkbox"/> C <input type="checkbox"/> G	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)
Pollutant							
Ethylbenzene							10
Ethylene Glycol							—
Fluoride							500
Hexachlorobenzene							5
Hexachlorobutadiene							10
Hexachlorocyclopentadiene							10
Hexachloroethane							20
4,4'-Isopropylidenediphenol [bisphenol A]							—
Methyl Ethyl Ketone							50
Methyl <i>tert</i> -butyl ether [MTBE]							—
Nitrobenzene							10
N-Nitrosodiethylamine							20
N-Nitroso-di- <i>n</i> -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

Table 1

Outfall No.	<input type="checkbox"/> C <input type="checkbox"/> G	Believed Present	Believed Absent	Average Concentration (mg/L)	Maximum Concentration (mg/L)	No. of Samples	MAL (mg/L)
Pollutant							
Bromide							0.400

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.

Outfall No.	<input type="checkbox"/> C <input type="checkbox"/> G	Believed Present	Believed Absent	Average Concentration (mg/L)	Maximum Concentration (mg/L)	No. of Samples	MAL (mg/L)
Pollutant							
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 2 – Volatile Compounds

Outfall No.	<input type="checkbox"/> C <input type="checkbox"/> G	Average (µg/L) ⁵	Maximum (µg/L) ⁶	No. of Samples	MAL (µg/L)
Pollutant					
Acrolein					50
Acrylonitrile					50
Benzene					10
Bromoform					10
Carbon tetrachloride					2
Chlorobenzene					10
Chlorodibromomethane					10
Chloroethane					50
2-Chloroethylvinyl ether					10
Chloroform					10
Dichlorobromomethane [Bromodichloromethane]					10
1,1-Dichloroethane					10
1,2-Dichloroethane					10
1,1-Dichloroethylene [1,1-Dichloroethene]					10
1,2-Dichloropropane					10
1,3-Dichloropropylene [1,3-Dichloropropene]					10
Ethylbenzene					10

⁵ Indicate units if different than µg/L.

Outfall No.	<input type="checkbox"/> C <input type="checkbox"/> G	Average (µg/L) ⁵	Maximum (µg/L) ⁶	No. of Samples	MAL (µg/L)
Pollutant					
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- <i>trans</i> -dichloroethylene [1,2- <i>trans</i> -dichloroethene]					10
1,1,1-Trichloroethane					10
1,1,2-Trichloroethane					10
Trichloroethylene [Trichloroethene]					10
Vinyl chloride					10

Table 3 – Acid Compounds

Outfall No.	<input type="checkbox"/> C <input type="checkbox"/> G	Average (µg/L) ⁶	Maximum (µg/L) ⁷	No. of Samples	MAL (µg/L)
Pollutant					
2-Chlorophenol					10
2,4-Dichlorophenol					10
2,4-Dimethylphenol					10
4,6-Dinitro- <i>o</i> -cresol					50
2,4-Dinitrophenol					50
2-Nitrophenol					20
4-Nitrophenol					50
<i>p</i> -Chloro- <i>m</i> -cresol					10
Pentachlorophenol					5
Phenol					10
2,4,6-Trichlorophenol					10

Table 4 – Base/Neutral Compounds

Outfall No.	<input type="checkbox"/> C <input type="checkbox"/> G	Average (µg/L) ⁷	Maximum (µg/L) ⁸	No. of Samples	MAL (µg/L)
Pollutant					
Acenaphthene					10
Acenaphthylene					10
Anthracene					10
Benzidine					50
Benzo(<i>a</i>)anthracene					5

⁶ Indicate units if different than µg/L.⁷ Indicate units if different than µg/L.

Outfall No.	<input type="checkbox"/> C <input type="checkbox"/> G	Average (µg/L) ⁷	Maximum (µg/L) ⁸	No. of Samples	MAL (µg/L)
Pollutant					
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 [<i>o</i> -Dichlorobenzene]					10
1,3-Dichlorobenzene [<i>m</i> -Dichlorobenzene]					10
1,4-Dichlorobenzene [<i>p</i> -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- <i>cd</i>)pyrene					5
Isophorone					10
Naphthalene					10
Nitrobenzene					10
N-Nitrosodimethylamine					50
N-Nitrosodi- <i>n</i> -propylamine					20
N-Nitrosodiphenylamine					20
Phenanthrene					10
Pyrene					10
1,2,4-Trichlorobenzene					10

Table 5 – Pesticides

Outfall No.	<input type="checkbox"/> C <input type="checkbox"/> G	Average (µg/L) ⁸	Maximum (µg/L) ⁹	No. of Samples	MAL (µg/L)
Pollutant					
Aldrin					0.01
<i>alpha</i> -BHC [<i>alpha</i> -Hexachlorocyclohexane]					0.05
<i>beta</i> -BHC [<i>beta</i> -Hexachlorocyclohexane]					0.05
<i>gamma</i> -BHC [<i>gamma</i> -Hexachlorocyclohexane]					0.05
<i>delta</i> -BHC [<i>delta</i> -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 (<i>alpha</i>)					0.01
Endosulfan II (<i>beta</i>)					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.

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. Within 90 days of initial discharge, the permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified below and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," third edition (EPA-821-R-02-014) or its most recent update:
 - 1) Chronic static renewal 7-day survival and growth test using the mysid shrimp (*Mysidopsis bahia*) (Method 1007.0). A minimum of eight replicates with five organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.
 - 2) Chronic static renewal 7-day larval survival and growth test using the inland silverside (*Menidia beryllina*) (Method 1006.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 5%, 7%, 10%, 13%, and 17% effluent. The critical dilution, defined as 13% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. **Testing Frequency Reduction**
 - 1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.
 - 2) If one or more of the first four consecutive quarterly tests demonstrates

significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee will resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fails to meet any of the following criteria:

- 1) a control mean survival of 80% or greater;
- 2) a control mean dry weight of surviving mysid shrimp of 0.20 mg or greater;
- 3) a control mean dry weight for surviving unpreserved inland silverside of 0.50 mg or greater and 0.43 mg or greater for surviving preserved inland silverside.
- 4) a control coefficient of variation percent (CV%) between replicates of 40 or less in the growth and survival tests;
- 5) a critical dilution CV% of 40 or less in the growth and survival endpoints for either growth and survival test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test;
- 6) a percent minimum significant difference of 37 or less for mysid shrimp growth; and
- 7) a percent minimum significant difference of 28 or less for inland silverside growth.

b. Statistical Interpretation

- 1) For the mysid shrimp and the inland silverside larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b.
- 2) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 3) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.

- 4) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is herein defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution 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 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 "o."
 - 5) For the mysid shrimp, Parameter TPP3E, report the NOEC for growth.
 - 6) For the mysid shrimp, Parameter TYP3E, report the LOEC for growth.
 - 7) For the inland silverside, Parameter TLP6B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "o."
 - 8) For the inland silverside, Parameter TOP6B, report the NOEC for survival.
 - 9) For the inland silverside, Parameter TXP6B, report the LOEC for survival.
 - 10) For the inland silverside, Parameter TWP6B, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "o."
 - 11) For the inland silverside, Parameter TPP6B, report the NOEC for growth.
 - 12) For the inland silverside, Parameter TYP6B, report the LOEC for growth.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "o."
 - 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "o."

4. Persistent Toxicity

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

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE Action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the

reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.
- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.
- e. Regardless of whether retesting for lethal or sublethal effects or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical 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

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

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%												
5%												
7%												
10%												
13%												
17%												

* 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%	5%	7%	10%	13%	17%
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%	5%	7%	10%	13%	17%
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 (13%): _____ 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 (13%): _____ 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

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

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

INLAND SILVERSIDE SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0%									
5%									
7%									
10%									
13%									
17%									

* 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%							
5%							
7%							
10%							
13%							
17%							
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 (13%): _____ 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 (13%): _____ YES _____ NO

3. Enter percent effluent corresponding to each NOEC/LOEC below:

a.) NOEC survival = _____ % effluent

b.) LOEC survival = _____ % effluent

c.) NOEC growth = _____ % effluent

d.) LOEC growth = _____ % effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: MARINE

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

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this Section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. Within 90 days of initial discharge, the toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,” fifth edition (EPA-821-R-02-012) or its most recent update:
 - 1) Acute 24-hour static toxicity test using the mysid shrimp (*Mysidopsis bahia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
 - 2) Acute 24-hour static toxicity test using the inland silverside (*Menidia beryllina*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, then repeat, an invalid test during the same reporting period. The repeat test shall include the control and all effluent dilutions and use the appropriate number of organisms and replicates, as specified above. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in Part 2.b., the control and dilution water shall consist of standard, synthetic, reconstituted seawater.
- d. This permit may be amended to require a WET limit, a best management practice, a chemical-specific limit, additional toxicity testing, and other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with Part 1.c., the control and dilution water shall consist of standard, synthetic, reconstituted seawater.
- c. Samples and Composites
 - 1) The permittee shall collect one composite sample from Outfall 001.

- 2) The permittee shall collect the composite sample such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
- 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The sample shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
- 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.

3. Reporting

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

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.
 - 1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
 - 2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes for the appropriate parameters for valid tests only:
 - 1) For the mysid shrimp, Parameter TIE3E, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."
 - 2) For the inland silverside, Parameter TIE6B, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a "1."
- d. Enter the following codes for retests only:
 - 1) For retest number 1, Parameter 22415, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter "1."
 - 2) For retest number 2, Parameter 22416, enter a "0" if the mean survival at 24-hours is greater than 50% in the 100% effluent dilution; if the mean survival is

less than or equal to 50%, enter "1."

4. Persistent Mortality

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

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These additional effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5 of this Section.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a TRE. The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At a minimum, the TRE action plan shall include the following:
 - 1) Specific Activities - The TRE action plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

- 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source of effluent toxicity;
 - 3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and
 - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly TRE activities reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;
 - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
 - 3) any data and substantiating documentation that identifies the pollutant and source of effluent toxicity;
 - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
 - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
 - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant

lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

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

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in Part 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, the permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and to specify a chemical specific limit.
- j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)
MYSID SHRIMP SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC₅₀ below:

24 hour LC₅₀ = _____% effluent

TABLE 2 (SHEET 2 OF 2)

INLAND SILVERSIDE SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC₅₀ below:

24 hour LC₅₀ = _____% effluent

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0005019000, U.S. Environmental Protection Agency (EPA) ID No. TX0134635, to discharge to water in the state

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

Applicant: Corpus Christi Polymers LLC
7001 Joe Fulton International Trade Corridor
Corpus Christi, Texas 78409

Prepared By: Cole Gray, DrPH
Industrial Permitting Section
Water Quality Division
(512) 239-4736

Date: April 18, 2022

Permit Action: Renewal; TPDES Permit No. WQ0005019000

I. EXECUTIVE DIRECTOR RECOMMENDATION

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

II. APPLICANT ACTIVITY

The applicant proposes to operate Corpus Christi Polymers Plant, a plastic resins manufacturing facility.

III. DISCHARGE LOCATION

As described in the application, the facility is located at 7001 Joe Fulton International Trade Corridor, in the City of Corpus Christi, Nueces County, Texas 78409. Discharge is directly to Corpus Christi Inner Harbor in Segment No. 2484 of the Bays and Estuaries.

IV. RECEIVING STREAM USES

The designated uses for Segment No. 2484 are non-contact recreation and intermediate aquatic life use.

V. STREAM STANDARDS

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

VI. DISCHARGE DESCRIPTION

No monthly effluent report data is available for summary review because the facility is not in operation.

VII. DRAFT EFFLUENT LIMITATIONS

Effluent limitations are established in the draft permit as follows:

Outfall	Pollutant	Daily Average		Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
001	Flow	38.50 MGD		49.91 MGD	
	CBOD (5-day)	-	Report	-	Report
	TDS	-	Report	-	Report
	Sulfate	-	Report	-	Report
	Chloride	-	Report	-	Report
	Salinity (ppt)	-	Report	-	Report
	Ammonia (as N)	-	Report	-	Report
	Hexachlorobenzene ¹	-	0.000103	-	0.000217
	Hexachlorobenzene ²	-	0.000015	-	0.000033
	pH (SU)	6.0 (min)		9.0 (max)	
101	Flow	1.25 MGD		1.5 MGD	
	BOD (5-day)	250	-	668	-
	TSS	417	-	1356	-
	Oil and Grease	-	15	-	20
	Acenaphthene	0.23	-	0.61	-
	Acenaphthylene	0.23	-	0.61	-
	Acrylonitrile	1.00	-	2.52	-
	Anthracene	0.23	-	0.61	-
	Benzene	0.39	-	1.41	-
	Benzo(a)anthracene ¹	0.23	-	0.61	-
	Benzo(a)anthracene ²	0.183	-	0.386	-
	Benzo(a)pyrene ¹	0.24	-	0.64	-
	Benzo(a)pyrene ²	0.018	-	0.039	-
	3,4-Benzofluoranthene	0.24	-	0.64	-
	Benzo(k)fluoranthene	0.23	-	0.61	-
	Bis(2-ethylhexyl)phthalate	1.07	-	2.91	-
	Carbon Tetrachloride	0.19	-	0.40	-
	Chlorobenzene	0.16	-	0.29	-
	Chloroethane	1.08	-	2.79	-
	Chloroform	0.22	-	0.48	-
	2-Chlorophenol	0.32	-	1.02	-
	Chrysene	0.23	-	0.61	-
	1,2-Dichlorobenzene	0.80	-	1.70	-
	1,3-Dichlorobenzene	0.32	-	0.46	-

¹ Effective beginning upon the date of permit issuance and lasting for 2 years and 364 days.

² Effective beginning 3 years from the date of permit issuance and lasting through the date of permit expiration.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Outfall	Pollutant	Daily Average		Daily Maximum	
		lbs/day	mg/L	lbs/day	mg/L
101	1,4-Dichlorobenzene	0.16	-	0.29	-
	1,1-Dichloroethane	0.23	-	0.61	-
	1,2-Dichloroethane	0.71	-	2.20	-
	1,1-Dichloroethylene	0.17	-	0.26	-
	1,2-trans Dichloroethylene	0.22	-	0.56	-
	2,4-Dichlorophenol	0.41	-	1.17	-
	1,2-Dichloropropane	1.60	-	2.40	-
	1,3-Dichloropropylene	0.30	-	0.46	-
	Diethyl phthalate	0.84	-	2.12	-
	2,4-Dimethylphenol	0.19	-	0.37	-
	Dimethyl phthalate	0.20	-	0.49	-
	Di-n-butyl phthalate	0.28	-	0.59	-
	4,6-Dinitro- <i>o</i> -cresol	0.81	-	2.89	-
	2,4-Dinitrophenol	0.74	-	1.28	-
	2,4-Dinitrotoluene	1.18	-	2.97	-
	2,6-Dinitrotoluene	2.67	-	6.69	-
	Ethylbenzene	0.33	-	1.13	-
	Fluoranthene	0.26	-	0.71	-
	Fluorene	0.23	-	0.61	-
	Hexachlorobenzene ¹	0.16	-	0.29	-
	Hexachlorobenzene ²	0.005	-	0.011	-
	Hexachloroethane	0.22	-	0.56	-
	Hexachlorobutadiene	0.21	-	0.51	-
	Methyl Chloride	0.90	-	1.98	-
	Methylene Chloride	0.42	-	0.93	-
	Naphthalene	0.23	-	0.61	-
	Nitrobenzene	0.28	-	0.71	-
	2-Nitrophenol	0.43	-	0.72	-
	4-Nitrophenol	0.75	-	1.29	-
	Phenanthrene	0.23	-	0.61	-
	Phenol	0.16	-	0.27	-
	Pyrene	0.26	-	0.70	-
	Tetrachloroethylene	0.23	-	0.58	-
	Toluene	0.27	-	0.83	-
	1,2,4-Trichlorobenzene	0.71	-	1.46	-
	1,1,1-Trichloroethane	0.22	-	0.56	-
	1,1,2-Trichloroethane	0.22	-	0.56	-
	Trichloroethylene	0.22	-	0.56	-
	Vinyl Chloride	1.08	-	2.79	-
	pH (SU)	6.0 (min)		9.0 (max)	
201	Flow	0.020 MGD		0.080 MGD	
	BOD (5-day)	-	20	-	45
	TSS	-	20	-	45
	<i>Enterococci</i>	35 ³		104 ³	
	Residual Chlorine	-	1.0 (min)	-	4.0
	pH	6.0 (min)		9.0 (max)	

³ Units are colony forming units (CFU) or most probable number (MPN) per 100 mL.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

OUTFALL LOCATIONS

Outfall	Latitude	Longitude
001	27. 831313 N	97.495621 W

VIII. SUMMARY OF CHANGES FROM APPLICATION

No changes were made from the application.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

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

1. Permittee's name and mailing address have been changed based on the order of transfer of title issued on February 28, 2019 and the information submitted with the application.
2. Pages 3-13 were updated (May 2021 version).
3. The Other Requirements section (beginning on page 14) was rearranged to assist with compliance monitoring.
4. Monitoring and reporting requirements for TDS, sulfates, chlorides, and salinity have been added to Outfall 001.
5. Explicit narrative criteria language for salinity has been added in Other Requirement 15.
6. Effluent limitations for hexachlorobenzene have been reduced at Outfall 001 from a daily average of 0.103 µg/L and a daily max of 0.217 µg/L to a daily average of 0.015 µg/L and a daily max of 0.033 µg/L.
7. Effluent limitations for benzo(a)anthracene have been reduced at internal Outfall 101 from a daily average of 0.23 lbs/day and a daily max of 0.61 lbs/day to a daily average of 0.183 lbs/day and a daily max of 0.386 lbs/day.
8. Effluent limitations for benzo(a)pyrene have been reduced at internal Outfall 101 from a daily average of 0.24 lbs/day and a daily max of 0.64 lbs/day to a daily average of 0.018 lbs/day and a daily max of 0.039 lbs/day.
9. Effluent limitations for hexachlorobenzene have been reduced at internal Outfall 101 from a daily average of 0.16 lbs/day and a daily max of 0.29 lbs/day to a daily average of 0.005 lbs/day and a daily max of 0.011 lbs/day.
10. A compliance period of three years was added to the draft permit for hexachlorobenzene at Outfall 001 and benzo(a)anthracene, benzo(a)pyrene, and hexachlorobenzene at internal Outfall 101.

X. DRAFT PERMIT RATIONALE

The following section sets forth the statutory and regulatory requirements considered in preparing the draft permit. Also set forth are any calculations or other necessary explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guidelines and water quality standards.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

A. REASON FOR PERMIT ISSUANCE

The applicant applied to the Texas Commission on Environmental Quality (TCEQ) for a renewal of Permit No. WQ0005019000, which authorizes the discharge of reverse osmosis reject water, filter backwash, previously monitored effluents [process wastewater, utility wastewater, fire system (testing and flushing) water, and stormwater from Internal Outfall 101; and treated domestic wastewater from Internal Outfall 201], fire system (testing and flushing) water, utility wastewaters, and stormwater at a daily average flow not to exceed 38,500,000 gallons per day via Outfall 001.

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

B. WATER QUALITY SUMMARY**Discharge Route**

The discharge route is directly to Corpus Christi Inner Harbor in Segment No. 2484 of the Bays and Estuaries. The designated uses for Segment No. 2484 are non-contact recreation and intermediate aquatic life use. Effluent limitations and conditions established in the draft permit comply with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses. Additional discussion of the water quality aspects of the draft permit can be found at Section X.D. of this fact sheet.

Endangered Species Review

The discharge from this permit is not expected to have an effect on any federal endangered or threatened aquatic or aquatic-dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS's) biological opinion on the State of Texas authorization of the TPDES (September 14, 1998; October 21, 1998 update). To make this determination for TPDES permits, TCEQ and the U.S. Environmental Protection Agency (EPA) only considered aquatic or aquatic-dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS's biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

Impaired Water Bodies

Segment No. 2484 is currently listed on the state's inventory of impaired and threatened waters, the 2020 Clean Water Act Section 303(d) list. The listing is for copper in water from US 181 to Viola Turning Basin (AU 2484_01).

This permit action is a renewal that will not increase the loadings of copper in this segment. Further, copper is not expected to be present in the discharge of this facility. Therefore, no changes were made in the draft permit to address the 303(d) listings.

Completed Total Maximum Daily Loads (TMDLs)

There are no completed TMDLs for Segment No. 2484.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS1. GENERAL COMMENTS

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

The draft permit authorizes the discharge of reverse osmosis reject water, filter backwash, previously monitored effluents [process wastewater, utility wastewater, fire system (testing and flushing) water, and stormwater from Internal Outfall 101; and treated domestic wastewater from Internal Outfall 201], fire system (testing and flushing) water, utility wastewaters, and stormwater via Outfall 001 at a daily average flow not to exceed 38.5 MGD.

The discharge of reverse osmosis reject water, filter backwash, previously monitored effluents [process wastewater, utility wastewater, fire system (testing and flushing) water, and stormwater from Internal Outfall 101; and treated domestic wastewater from Internal Outfall 201], fire system (testing and flushing) water, utility wastewaters, and stormwater via Outfall 001 from this facility is subject to federal effluent limitation guidelines at 40 CFR Part 414, Subparts D and I. A new source determination was performed, and the discharge of Outfall 001 is a new source as defined at 40 CFR §122.2. Therefore, new source performance standards (NSPS) are required for this discharge.

The wastewater system at this facility consists of the following components:

- Wastewater Treatment Plant 1 (WWTP1), which will consist of equalization, mixed bed biological reactor, clarification, and filtration of process wastewaters, utility wastewater, and the first-flush of stormwater from process areas. Wastewaters treated in WWTP1 will be monitored at Internal Outfall 101, prior to being discharged via Outfall 001.
- Wastewater Treatment Plant 2 (WWTP2), which will consist of extended aeration, clarification, sludge digestion, and chlorination of domestic wastewater. Wastewater treated in WWTP2 will be monitored at Internal Outfall 201, prior to being discharged via Outfall 001.
- The facility may also process utility wastewater, post first-flush stormwater, and previously monitored effluent from Internal Outfalls 101 and 201 in the desalinization plant.
- A desalination unit, which will consist of a two-stage reverse osmosis (RO) treatment unit that desalinates sea water for use at the facility. Desalinated water from stage one of the RO unit is to be used for general industrial purposes at the facility. Desalinated water from stage two of the RO unit is high purity water and is to be used in the production processes in the polyethylene terephthalate (PET) and the terephthalic acid (PTA) plants.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

- Cooling towers and boilers, which will produce blowdown that will be commingled and collected in a "blowdown tank." Blowdown collected in the tank can be routed to the RO treatment unit for re-use or routed to Outfall 001 for discharge.
- Process air scrubbers, which will produce process wastewater from the treatment (scrubbing) of gaseous emissions from the process production areas of the PET and PTA plants and the tank farm.
- A railcar wash station, which will produce process wastewater from the cleaning railcars used for transporting PET and PTA.
- The facility will conduct periodic testing and flushing of the fire water system at the facility.

The permittee will re-use portions of reverse osmosis reject water, filter backwash, previously monitored effluents (process wastewater, utility wastewater, fire system (testing and flushing) water, and stormwater via Internal Outfall 101 and treated domestic wastewater via Internal Outfall 201) and cooling tower blowdown, fire system (testing and flushing) water, utility wastewaters, and stormwater via Outfall 001 for the purpose of supplying non-potable water to the process, steam, utility, and cooling systems within the plant. These wastewaters will be routed for treatment by filtration or filtration and reverse osmosis prior to re-use as a non-potable industrial water supply at the facility. Wastewater that receives treatment by filtration or treatment by filtration and reverse osmosis for the purpose of re-use is not to be re-used for potable or domestic purposes. Other Requirement No. 12 provides the conditions and requirements for the re-use of wastewater at the facility.

2. CALCULATIONS

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

Technology-based effluent limitations for flow at Outfall 001 are based on the applicant's requested flow in the application.

Technology-based effluent limitations for pH at Outfall 001 were originally based on BPJ and are continued based on anti-backsliding regulations in 40 CFR §122.44(l).

Technology-based effluent limitations for flow and oil & grease at Outfall 101 were originally based on BPJ and are continued based on anti-backsliding regulations in 40 CFR §122.44(l).

Technology-based effluent limitations for biochemical oxygen demand (5-day); total suspended solids; and pH at Outfall 101 are based on 40 CFR §414.44.

Technology-based effluent limitations for acenaphthene; acenaphthylene; acrylonitrile; anthracene; benzene; benzo(a)anthracene; benzo(a)pyrene; 3,4-benzofluoranthene; benzo(k)fluoranthene; bis(2-ethylhexyl)phthalate; carbon

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

tetrachloride; chlorobenzene; chloroethane; chloroform; 2-chlorophenol; chrysene; 1,2-dichlorobenzene; 1,3-dichlorobenzene; 1,4-dichlorobenzene; 1,1-dichloroethane; 1,2-dichloroethane; 1,1-dichloroethylene; 1,2-trans dichloroethylene; 2,4-dichlorophenol; 1,2-dichloropropane; 1,3-dichloropropylene; diethyl phthalate; 2,4-dimethylphenol; dimethyl phthalate; di-n-butyl phthalate; 4,6-dinitro-*o*-cresol; 2,4-dinitrophenol; 2,4-dinitrotoluene; 2,6-dinitrotoluene; ethylbenzene; fluoranthene; fluorene; hexachlorobenzene; hexachloroethane; hexachlorobutadiene; methyl chloride; methylene chloride; naphthalene; nitrobenzene; 2-nitrophenol; 4-nitrophenol; phenanthrene; phenol; pyrene; tetrachloroethylene; toluene; 1,2,4-trichlorobenzene; 1,1,1-trichloroethane; 1,1,2-trichloroethane; trichloroethylene; and vinyl chloride at Outfall 101 are based on 40 CFR §414.91.

Technology-based effluent limitations for flow, biochemical oxygen demand (5-day), total suspended solids, total residual chlorine, and pH at internal Outfall 201 are continued from the existing permit. Effluent limitations for biochemical oxygen demand (5-day), total suspended solids, and pH are based on the applicable criteria for secondary treatment [30 TAC 309.1(b)]. Effluent limitations for total residual chlorine are based on the applicable requirements located in 30 TAC 309.3(g). Effluent limitations for flow were originally based on BPJ and are continued based on anti-backsliding regulations in 40 CFR §122.44(l).

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

Outfall	Pollutant	Daily Average	Daily Maximum
001	Flow	38.50 MGD	49.91 MGD
	pH	6.0 SU (min)	9.0 SU
101	Flow	1.25 MGD	1.5 MGD
	BOD (5-day)	250 lbs/day	668 lbs/day
	TSS	417 lbs/day	1356 lbs/day
	Oil and Grease	15 mg/L	20 mg/L
	Acenaphthene	0.23 lbs/day	0.61 lbs/day
	Acenaphthylene	0.23 lbs/day	0.61 lbs/day
	Acrylonitrile	1.00 lbs/day	2.52 lbs/day
	Anthracene	0.23 lbs/day	0.61 lbs/day
	Benzene	0.39 lbs/day	1.41 lbs/day
	Benzo(a)anthracene	0.23 lbs/day	0.61 lbs/day
	Benzo(a)pyrene	0.24 lbs/day	0.64 lbs/day
	3,4-Benzofluoranthene	0.24 lbs/day	0.64 lbs/day
	Benzo(k)fluoranthene	0.23 lbs/day	0.61 lbs/day
	Bis(2-ethylhexyl)phthalate	1.07 lbs/day	2.91 lbs/day
	Carbon Tetrachloride	0.19 lbs/day	0.40 lbs/day
	Chlorobenzene	0.16 lbs/day	0.29 lbs/day
	Chloroethane	1.08 lbs/day	2.79 lbs/day
	Chloroform	0.22 lbs/day	0.48 lbs/day
	2-Chlorophenol	0.32 lbs/day	1.02 lbs/day
	Chrysene	0.23 lbs/day	0.61 lbs/day
	1,2-Dichlorobenzene	0.80 lbs/day	1.70 lbs/day
	1,3-Dichlorobenzene	0.32 lbs/day	0.46 lbs/day

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Outfall	Pollutant	Daily Average	Daily Maximum
101	1,4-Dichlorobenzene	0.16 lbs/day	0.29 lbs/day
	1,1-Dichloroethane	0.23 lbs/day	0.61 lbs/day
	1,2-Dichloroethane	0.71 lbs/day	2.20 lbs/day
	1,1-Dichloroethylene	0.17 lbs/day	0.26 lbs/day
	1,2-trans Dichloroethylene	0.22 lbs/day	0.56 lbs/day
	2,4-Dichlorophenol	0.41 lbs/day	1.17 lbs/day
	1,2-Dichloropropane	1.60 lbs/day	2.40 lbs/day
	1,3-Dichloropropylene	0.30 lbs/day	0.46 lbs/day
	Diethyl phthalate	0.84 lbs/day	2.12 lbs/day
	2,4-Dimethylphenol	0.19 lbs/day	0.37 lbs/day
	Dimethyl phthalate	0.20 lbs/day	0.49 lbs/day
	Di-n-butyl phthalate	0.28 lbs/day	0.59 lbs/day
	4,6-Dinitro- <i>o</i> -cresol	0.81 lbs/day	2.89 lbs/day
	2,4-Dinitrophenol	0.74 lbs/day	1.28 lbs/day
	2,4-Dinitrotoluene	1.18 lbs/day	2.97 lbs/day
	2,6-Dinitrotoluene	2.67 lbs/day	6.69 lbs/day
	Ethylbenzene	0.33 lbs/day	1.13 lbs/day
	Fluoranthene	0.26 lbs/day	0.71 lbs/day
	Fluorene	0.23 lbs/day	0.61 lbs/day
	Hexachlorobenzene	0.16 lbs/day	0.29 lbs/day
	Hexachloroethane	0.22 lbs/day	0.56 lbs/day
	Hexachlorobutadiene	0.21 lbs/day	0.51 lbs/day
	Methyl Chloride	0.90 lbs/day	1.98 lbs/day
	Methylene Chloride	0.42 lbs/day	0.93 lbs/day
	Naphthalene	0.23 lbs/day	0.61 lbs/day
	Nitrobenzene	0.28 lbs/day	0.71 lbs/day
	2-Nitrophenol	0.43 lbs/day	0.72 lbs/day
	4-Nitrophenol	0.75 lbs/day	1.29 lbs/day
	Phenanthrene	0.23 lbs/day	0.61 lbs/day
	Phenol	0.16 lbs/day	0.27 lbs/day
	Pyrene	0.26 lbs/day	0.70 lbs/day
	Tetrachloroethylene	0.23 lbs/day	0.58 lbs/day
	Toluene	0.27 lbs/day	0.83 lbs/day
	1,2,4-Trichlorobenzene	0.71 lbs/day	1.46 lbs/day
	1,1,1-Trichloroethane	0.22 lbs/day	0.56 lbs/day
	1,1,2-Trichloroethane	0.22 lbs/day	0.56 lbs/day
	Trichloroethylene	0.22 lbs/day	0.56 lbs/day
	Vinyl Chloride	1.08 lbs/day	2.79 lbs/day
	pH	6.0 SU (min)	9.0 SU
201	Flow	0.020 MGD	0.080 MGD
	BOD (5-day)	20 mg/L	45 mg/L
	TSS	20 mg/L	45 mg/L
	Residual Chlorine	1.0 mg/L (min)	4.0 mg/L
	pH	6.0 SU (min)	9.0 SU

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS1. GENERAL COMMENTS

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

TPDES permits contain technology-based effluent limits reflecting the best controls available. Where these technology-based permit limits do not protect water quality or the designated uses, additional water quality-based effluent limitations or conditions are included. State narrative and numerical water quality standards are used in conjunction with EPA criteria and other toxicity databases to determine the adequacy of technology-based permit limits and the need for additional water quality-based controls. A comparison of technology-based effluent limits and calculated water quality-based effluent limits can be found in Appendix D of this fact sheet.

2. AQUATIC LIFE CRITERIAa. SCREENING

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

Acute saltwater criteria are applied at the edge of the zone of initial dilution (ZID), and chronic saltwater criteria are applied at the edge of the aquatic life mixing zone. The ZID for this discharge is defined as a volume within a radius of 50 feet from the point where the discharge enters Corpus Christi Inner Harbor. The aquatic life mixing zone for this discharge is defined as a volume within a radius of 200 feet from the point where the discharge enters Corpus Christi Inner Harbor.

TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edges of the ZID and aquatic life mixing zone for discharges greater than 10 MGD into bays, estuaries, or wide tidal rivers. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentages are calculated based on the permitted daily average flow of 38.5 MGD:

Acute Effluent %	50%	Chronic Effluent %	13%
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FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

General Screening Procedures

Wasteload allocations (WLAs) are calculated using the above estimated effluent percentages, criteria outlined in the *Texas Surface Water Quality Standards*, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration that can be discharged when, after mixing in the receiving stream, the instream numerical criteria will not be exceeded.

From the WLA, a long-term average (LTA) is calculated using a lognormal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level. The LTA is the long-term average effluent concentration for which the WLA will never be exceeded using a selected percentile confidence level.

The lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12).

Assumptions used in deriving the effluent limitations include the segment-specific value for TSS according to the *IPs*. The segment value is 10 mg/L for TSS. For additional details on the calculation of water quality-based effluent limitations, refer to the *IPs*.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application equals or exceeds 85 percent of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application equals or exceeds 70 percent of the calculated daily average water quality-based effluent limitation.

b. PERMIT ACTION

No analytical data is available for screening against water quality-based effluent limitations because the facility is not in operation.

3. WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA

a. SCREENING AND REASONABLE POTENTIAL ANALYSIS

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

The facility has yet to be fully constructed. Therefore, there is no WET testing history to review. WET testing will be required within 90 days of initial discharge of the completed facility. Minimum chronic marine biomonitoring conditions required for EPA-classified major facilities are proposed in the draft permit as outlined below.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

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

b. PERMIT ACTION

The provisions of this section apply to Outfall 001.

Based on information contained in the permit application, the TCEQ has determined that there may be pollutants present in the effluent that may have the potential to cause toxic conditions in the receiving stream.

Whole effluent toxicity testing (biomonitoring) is the most direct measure of potential toxicity, which incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit are as follows:

- i) Chronic static renewal 7-day survival and growth test using the mysid shrimp (*Mysidopsis bahia*). The frequency of the testing shall be once per quarter.
- ii) Chronic static renewal 7-day larval survival and growth test using the inland silverside (*Menidia beryllina*). The frequency of the testing shall be once per quarter.

Toxicity tests shall be performed in accordance with protocols described in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition (EPA-821-R-02-014) or the latest revision. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the state water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

c. DILUTION SERIES

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 5%, 7%, 10%, 13%, and 17%. The low-flow effluent concentration (critical dilution) is defined as 13% effluent.

The dilution series outlined above was calculated using a 0.75 factor applied to the critical dilution. The critical dilution is the estimated effluent dilution at the edge of the aquatic life mixing zone, which is discussed in Section X.D.2.a. of this fact sheet.

4. AQUATIC ORGANISM TOXICITY CRITERIA (24-HOUR ACUTE)a. SCREENING

The existing permit includes 24-hour acute marine biomonitoring requirements for Outfall 001. Minimum 24-hour acute marine biomonitoring requirements are proposed in the draft permit as outlined below.

b. PERMIT ACTION

Twenty-four-hour 100% acute biomonitoring tests are required at Outfall 001 at a frequency of once per six months for the life of the permit.

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

- i) Acute 24-hour static toxicity test using the mysid shrimp (*Mysidopsis bahia*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.
- ii) Acute 24-hour static toxicity test using the inland silverside (*Menidia beryllina*). A minimum of five (5) replicates with eight (8) organisms per replicate shall be used for this test.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Toxicity tests shall be performed in accordance with protocols described in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition (EPA-821-R-02-012) or the latest revision.

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIAa. SCREENING

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

Fish tissue bioaccumulation criteria are applied at the edge of the human health mixing zone for discharges into bays, estuaries and wide tidal rivers. The human health mixing zone for this discharge is defined as a volume within a radius of 400 feet from the point where the discharge enters Corpus Christi Inner Harbor. TCEQ uses the EPA horizontal jet plume model to estimate dilution at the edge of the human health mixing zone for discharges greater than 10 MGD into a bay, estuary, or wide tidal river. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentage is calculated based on the permitted daily average flow of 38.5 MGD:

Human Health Effluent %: 6%

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

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

b. PERMIT ACTION

No analytical data is available for screening against water quality-based effluent limitations because the facility is not in operation. The limits in the existing permit were compared to the calculated water quality-based effluent limits, and as a result, daily average and daily maximum hexachlorobenzene at Outfall 001 and benzo(a)anthracene, benzo(a)pyrene, and hexachlorobenzene at Outfall 101 have been made more stringent based on screening for aquatic life protection. These limitations are more stringent than the required technology-based effluent limitations. An interim three-year compliance period is being established for these parameters in accordance with 30 TAC §307.2(f). The draft permit includes a new Other Requirement No. 14, which provides a three-year compliance schedule to meet the final effluent

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

limitations of daily average and daily maximum hexachlorobenzene at Outfall 001 and benzo(a)anthracene, benzo(a)pyrene, and hexachlorobenzene at internal Outfall 101. The complexity and time required for redesigning the treatment facilities and possible reconstruction justifies a three-year compliance period for the attainment of the proposed water quality-based effluent limitations.

6. DRINKING WATER SUPPLY PROTECTIONa. SCREENING

Segment No. 2484, which receives the discharge from this facility, is not designated as a public water supply. Screening reported analytical data of the effluent against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable.

b. PERMIT ACTION

None.

7. TOTAL DISSOLVED SOLIDS, CHLORIDE, AND SULFATE STANDARDS PROTECTIONa. SCREENING

Segment No. 2484, 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. However, TCEQ deemed it appropriate to include monitoring and reporting requirements for TDS, chloride, and sulfate in the proposed draft permit.

b. PERMIT ACTION

Monitoring and reporting requirements for TDS, chloride, and sulfate have been added to Outfall 001.

8. PROTECTION OF pH STANDARDSa. SCREENING

The existing permit includes pH limits of 6.0 – 9.0 SU at Outfall 001, which discharges directly into Corpus Christi Inner Harbor, Segment No. 2484. Screening was performed to ensure that these existing pH limits would not cause a violation of the 6.5 – 9.0 SU pH criteria for Corpus Christi Inner Harbor (see Appendix C).

b. PERMIT ACTION

The existing effluent limits of 6.0 – 9.0 SU are adequate to ensure that the discharge will not violate the pH criteria in Corpus Christi Inner Harbor.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

9. DISSOLVED OXYGEN PROTECTIONa. SCREENING

Estimated concentrations of oxygen-demanding constituents were developed for Outfall 001 and a dissolved oxygen analysis of Segment No. 2484 was conducted using an uncalibrated QUAL-TX model using the following assumptions: effluent flow rate of 38.5 MGD; and effluent concentrations of 2.7 mg/L for CBOD₅, 1 mg/L for ammonia (as nitrogen), and 2 mg/L for dissolved oxygen. A summary of the evaluation and the resulting recommendations were included in the TCEQ Interoffice Memorandum (IOM) from Gunnar Dubke, P.E., TCEQ, Water Quality Assessment Team to TCEQ, Industrial Permits Team dated March 11, 2022.

Based on model results, the existing effluent limits of 250 lbs/day BOD₅ at Outfall 101 and 20 mg/L BOD₅ at Outfall 201, are predicted to be adequate to maintain dissolved oxygen level above the criterion stipulated by the Standards Implementation Team for Corpus Christi Inner Harbor (3.0 mg/L). The monitoring requirement for CBOD₅ and Ammonia-Nitrogen contained in the existing permit for Outfall 001 is recommended to be continued in the renewal permit so that future evaluations can be performed with data collected during actual plant operation. This monitoring requirement can be structured to expire upon expiration of the amended permit.

b. PERMIT ACTION

The draft permit continues the monitoring requirements for CBOD₅ and ammonia (as nitrogen) from the existing permit into the draft permit as recommended.

10. BACTERIA STANDARDS PROTECTIONa. SCREENING

The draft permit authorizes the discharge of treated domestic wastewater (monitored at Internal Outfall 201) directly into Corpus Christi Inner Harbor via Outfall 001. Based on the rules and requirements for the disinfection of domestic wastewater located in 30 TAC §307.7(a)(1)(B) and in 30 TAC §309.3(g)(1) and 30 TAC §309.3(h)(1)(B), discharges of treated domestic wastewater into a marine waterbody are required to be limited for enterococci bacteria.

b. PERMIT ACTION

The existing permit includes effluent limitations for enterococci bacteria and total residual chlorine that are continued in the draft permit at internal Outfall 201, based on the rules and requirements for anti-backsliding located in 40 CFR §122.44(l) and are located in Appendix D of this fact sheet.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

The effluent limitations for Enterococci are based on the rules and requirements for the disinfection of domestic wastewater located in 30 TAC §307.7(a)(1)(B) and in 30 TAC §309.3(g) and (h)(1)(B).

Effluent limitations for total residual chlorine are based on the applicable requirements located in 30 TAC §309.3(g).

11. COOLING WATER INTAKE STRUCTURE (CWIS)a. SCREENING

The facility operates two cooling water intake structures (CWIS) located on the Inner Harbor in Nueces County, to obtain water for cooling purposes. The CWIS is considered below the threshold for applicability under Section 316(b) of the CWA because less than 25 percent of the total water withdrawn by the CWIS will be used at the facility exclusively for cooling purposes on a monthly average basis.

Cooling water withdrawn via the CWIS supplies cooling towers, a form of closed-cycle cooling. The CWIS is operated in a manner consistent with closed-cycle recirculating system (CCRS) as defined at 40 CFR 125.83, minimizing surface water withdrawals for make-up purposes only.

Rulemaking for Section 316(b) of the CWA considered cooling towers to be the most effective impingement mortality and entrainment technology available because the use of cooling towers dramatically reduces surface water withdrawals. Additionally, the EPA could not identify any other technology which more effectively reduced rates of impingement mortality or rates of entrainment.

The operation of a CCRS (i.e., cooling towers) reduces withdrawals from surface waters effectively, thereby reducing the impingement and entrainment of aquatic organisms. The facility meets Best Technology Available (BTA) standards based upon BPJ.

b. PERMIT ACTION

Other Requirement No. 12 (now No. 4) has been carried forward in the draft permit to include the current standard requirement language regarding notification requirements related to any planned changes to the design or operations at the facility that impact the methodology in the obtainment of and use of water for cooling purposes at the facility.

If it is later determined that the current CWIS configuration is not representative of BTA standards for Impingement Mortality and Entrainment, the permit may be reopened to incorporate additional terms and conditions.

XI. PRETREATMENT REQUIREMENTS

This facility is not defined as a publicly owned treatment works. Pretreatment requirements are not proposed in the draft permit.

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for reviewing and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, the Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

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

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

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

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For additional information about this application, contact Cole Gray at (512) 239-4736.

XIV. ADMINISTRATIVE RECORD

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

A. PERMIT

TPDES Permit No. WQ0005019000 issued on February 28, 2019.

B. APPLICATION

TPDES wastewater permit application received on December 1, 2021.

C. 40 CFR CITATIONS

40 CFR Part 414, Subparts D and I. (NSPS and BAT).

D. LETTERS/MEMORANDA/RECORDS OF COMMUNICATION

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

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

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

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

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

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

TCEQ Interoffice Memorandum dated February 26, 2022, from M. A. Wallace, PhD, of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Standards Memo).

TCEQ Interoffice Memorandum dated March 2, 2022, from Josi Robertson of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Critical Conditions Memo).

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

TCEQ Interoffice Memorandum dated March 11, 2022, from Xing Lu, P.E. of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Modeling Memo).

TCEQ Interoffice Memorandum dated March 16, 2022, from Michael Pfeil of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Biomonitoring Memo).

E. MISCELLANEOUS

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

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

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

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

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

Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, Third Edition (EPA-821-R-02-014).

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

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

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

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Appendix A
Calculated Technology-Based Effluent Limits

The draft permit authorizes the discharge of reverse osmosis reject water, filter backwash, previously monitored effluents [process wastewater, utility wastewater, fire system (testing and flushing) water, and stormwater from Internal Outfall 101; and treated domestic wastewater from Internal Outfall 201], fire system (testing and flushing) water, utility wastewaters, and stormwater at a daily average flow not to exceed 38,500,000 gallons per day via Outfall 001. This appendix includes the rationale, development, and calculations of the technology-based effluent limitations for the draft permit.

Outfall 001

Outfall 001 is the final discharge point for all commingled wastestreams from the facility. The wastewaters not previously monitored at an internal outfall include reverse osmosis reject water, filter backwash, fire system (testing and flushing) water (from areas located outside of the potentially process-contaminated areas of the PET and PTA plants), utility wastewaters, and stormwater (post-first flush stormwater from the potentially process-contaminated areas of the PET and PTA plants, and stormwater from non-process areas of the facility).

Effluent limitations for flow are based on the design flow provided by the applicant in the submitted application.

Technology-based effluent limitations for Outfall 001 are as follows:

Pollutant	Daily Avg mg/L	Daily Max mg/L
Flow	38.5 MGD	49.91 MGD

Outfall 101

Wastewaters monitored at Internal Outfall 101 include process wastewater (includes process wastewater from production processes at the PET and PTA plants, wastewater from process area air scrubbers, wastewater from the PET and PTA railcar wash stations), utility wastewater, fire system (testing and flushing) water (from areas located within the potentially process-contaminated areas of the facility), and stormwater (includes the first-flush of potentially process-contaminated stormwater from the PET and PTA plants), which receive treatment in Wastewater Treatment Plant No. 1 (WWT1) prior to being discharged via Outfall 001. Discharges of process wastewater and stormwater from process areas are subject to categorical guidelines located in 40 CFR Part 414, Subparts D and I. Utility wastewaters are routed to the terephthalic acid (PTA) plant to liquefy or re-slurry the sludge. The resulting wastewaters are subject to categorical guidelines located in 40 CFR Part 414, Subparts D and I, which are routed to WWTP1 for treatment and monitored at internal Outfall 101 prior to being discharged via Outfall 001.

Technology-Based Limits for Process Wastewater

Mass allocations for biochemical oxygen demand (5-day) and total suspended solids are calculated as follows based on the applicable EPA categorical guidelines 40 CFR Part 414, Subparts D and I.

NSPS Effluent Limitations for process wastewater discharges resulting from the manufacture thermoplastic resins - 40 CFR Part 414, Subpart D [40 CFR §414.44]

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Pollutant	Daily Avg mg/L	Daily Max mg/L	Daily Avg lbs/day	Daily Max lbs/day
Biochemical Oxygen Demand (5-day)	24	64	250.35	667.6
Total Suspended Solids	40	130	417.25	1356.06

$$\text{Mass (lbs/day)} = [\text{concentration (mg/L)}] * [1.25 \text{ MGD}] * [8.345]$$

BAT Effluent Limitations for direct discharge point sources that use end-of-pipe biological treatment - 40 CFR Part 414, Subpart I [40 CFR §414.91]

Total Flow from Outfall	1.25 MGD
Process Wastewater Flow	1.25 MGD
Metal Bearing Wastewater Flow	0 MGD
Cyanide Bearing Wastewater Flow	0 MGD

$$\text{Mass (lbs/day)} = [\text{concentration (ug/L/1000)}] * [8.345] * [1.25 \text{ MGD}]$$

<u>Pollutant</u>	<u>Daily Avg (ug/L)</u>	<u>Daily Max (ug/L)</u>	<u>Daily Avg (lb/day)</u>	<u>Daily Max (lb/day)</u>
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	0.23	0.61
Acenaphthylene	22	59	0.23	0.61
Acrylonitrile	96	242	1.00	2.52
Anthracene	22	59	0.23	0.61
Benzene	37	136	0.39	1.41
Benzo(a)anthracene	22	59	0.23	0.61
Benzo(a)pyrene	23	61	0.24	0.64
3,4-Benzofluoranthene	23	61	0.24	0.64
Benzo(k)fluoranthene	22	59	0.23	0.61
Bis(2-ethylhexyl)phthalate	103	279	1.07	2.91
Carbon Tetrachloride	18	38	0.19	0.40
Chlorobenzene	15	28	0.16	0.29
Chloroethane	104	268	1.08	2.79
Chloroform	21	46	0.22	0.48
2-Chlorophenol	31	98	0.32	1.02
Chrysene	22	59	0.23	0.61
1,2-Dichlorobenzene	77	163	0.80	1.70
1,3-Dichlorobenzene	31	44	0.32	0.46
1,4-Dichlorobenzene	15	28	0.16	0.29
1,1-Dichloroethane	22	59	0.23	0.61

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

<u>Pollutant</u>	<u>Daily Avg (ug/L)</u>	<u>Daily Max (ug/L)</u>	<u>Daily Avg (lb/day)</u>	<u>Daily Max (lb/day)</u>
1,2-Dichloroethane	68	211	0.71	2.20
1,1-Dichloroethylene	16	25	0.17	0.26
1,2-trans Dichloroethylene	21	54	0.22	0.56
2,4-Dichlorophenol	39	112	0.41	1.17
1,2-Dichloropropane	153	230	1.60	2.40
1,3-Dichloropropylene	29	44	0.30	0.46
Diethyl phthalate	81	203	0.84	2.12
2,4-Dimethylphenol	18	36	0.19	0.37
Dimethyl phthalate	19	47	0.20	0.49
Di-n-butyl phthalate	27	57	0.28	0.59
4,6-Dinitro- <i>o</i> -cresol	78	277	0.81	2.89
2,4-Dinitrophenol	71	123	0.74	1.28
2,4-Dinitrotoluene	113	285	1.18	2.97
2,6-Dinitrotoluene	255	641	2.67	6.69
Ethylbenzene	32	108	0.33	1.13
Fluoranthene	25	68	0.26	0.71
Fluorene	22	59	0.23	0.61
Hexachlorobenzene	15	28	0.16	0.29
Hexachloroethane	21	54	0.22	0.56
Hexachlorobutadiene	20	49	0.21	0.51
Methyl Chloride	86	190	0.90	1.98
Methylene Chloride	40	89	0.42	0.93
Naphthalene	22	59	0.23	0.61
Nitrobenzene	27	68	0.28	0.71
2-Nitrophenol	41	69	0.43	0.72
4-Nitrophenol	72	124	0.75	1.29
Phenanthrene	22	59	0.23	0.61
Phenol	15	26	0.16	0.27
Pyrene	25	67	0.26	0.70
Tetrachloroethylene	22	56	0.23	0.58
Toluene	26	80	0.27	0.83
1,2,4-Trichlorobenzene	68	140	0.71	1.46
1,1,1-Trichloroethane	21	54	0.22	0.56
1,1,2-Trichloroethane	21	54	0.22	0.56
Trichloroethylene	21	54	0.22	0.56
Vinyl Chloride	104	268	1.08	2.79

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Oil and Grease

The current permit established effluent limitations for oil & grease based on 1) the authorization of discharge of *de minimus* quantities of low volume wastes, which are regulated by EPA categorical guidelines [40 CFR Part 423.15(c)] for steam electric stations (SES); and 2) BPJ allocations for the other wastewaters (OCPSF process wastewater) and utility wastewaters (reused to liquefy or re-slurry the sludge in the PTA unit) would be based on the same concentration criteria. The following BPJ effluent limitations for oil & grease are continued in the draft permit at Internal Outfall 101.

Pollutant	Daily Avg mg/L	Daily Max mg/L
Oil and Grease	15	20

pH

The applicable guidelines for each contributing wastestream require the pH to be “*Within the range of 6.0 to 9.0 at all times.*” The following limitations are applied directly to Internal Outfall 101.

Pollutant	Daily Avg	Daily Max
pH	6.0 S.U. (min)	9.0 S.U.

Flow

The following effluent limitations for flow at Internal Outfall 101 are based on the design flow provided by the applicant in the submitted application.

Pollutant	Daily Avg	Daily Max
Flow	1.25 MGD	1.5 MGD

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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:

TPDES Permit No:

Outfall No:

Prepared by:

Date:

Corpus Christi Polymers LLC

WQ0005019000

001

Cole Gray, DrPH

April 28, 2022

DISCHARGE INFORMATION

Receiving Waterbody:

Segment No:

TSS (mg/L):

Effluent Flow for Aquatic Life (MGD)

% Effluent for Chronic Aquatic Life (Mixing Zone):

% Effluent for Acute Aquatic Life (ZID):

Oyster Waters?

Effluent Flow for Human Health (MGD):

% Effluent for Human Health:

Corpus Christi Inner Harbor

2484

10

38.5

13

50

no

38.5

6

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

<i>Estuarine Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Source</i>	<i>Water Effect Ratio (WER)</i>	<i>Source</i>
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	13489.63	0.881		1.00	Assumed
Lead	6.06	-0.85	162181.01	0.381		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

<i>Estuarine Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Source</i>	<i>Water Effect Ratio (WER)</i>	<i>Source</i>
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	131825.67	0.431		1.00	Assumed
Zinc	5.36	-0.52	69183.10	0.591		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>SW Acute Criterion (µg/L)</i>	<i>SW Chronic Criterion (µg/L)</i>	<i>WLAa (µg/L)</i>	<i>WLAc (µg/L)</i>	<i>LTAa (µg/L)</i>	<i>LTAc (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Acrolein	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aldrin	1.3	N/A	2.60	N/A	0.832	N/A	1.22	2.58
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	149	78	298	600	95.4	366	140	296
Cadmium	40.0	8.75	80.0	67.3	25.6	41.1	37.6	79.6
Carbaryl	613	N/A	1226	N/A	392	N/A	576	1220
Chlordane	0.09	0.004	0.180	0.0308	0.0576	0.0188	0.0275	0.0583
Chlorpyrifos	0.011	0.006	0.0220	0.0462	0.00704	0.0282	0.0103	0.0218
Chromium (trivalent)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (hexavalent)	1090	49.6	2180	382	698	233	342	723
Copper	13.5	3.6	30.6	31.4	9.81	19.2	14.4	30.4
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	11.2	43.1	3.58	26.3	5.26	11.1
4,4'-DDT	0.13	0.001	0.260	0.00769	0.0832	0.00469	0.00689	0.0145
Demeton	N/A	0.1	N/A	0.769	N/A	0.469	0.689	1.45
Diazinon	0.819	0.819	1.64	6.30	0.524	3.84	0.770	1.63
Dicofol [Kelthane]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	0.71	0.002	1.42	0.0154	0.454	0.00938	0.0137	0.0291
Diuron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan I (<i>alpha</i>)	0.034	0.009	0.0680	0.0692	0.0218	0.0422	0.0319	0.0676
Endosulfan II (<i>beta</i>)	0.034	0.009	0.0680	0.0692	0.0218	0.0422	0.0319	0.0676
Endosulfan sulfate	0.034	0.009	0.0680	0.0692	0.0218	0.0422	0.0319	0.0676
Endrin	0.037	0.002	0.0740	0.0154	0.0237	0.00938	0.0137	0.0291
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.0769	N/A	0.0469	0.0689	0.145
Heptachlor	0.053	0.004	0.106	0.0308	0.0339	0.0188	0.0275	0.0583
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	0.16	N/A	0.320	N/A	0.102	N/A	0.150	0.318

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>SW Acute Criterion (µg/L)</i>	<i>SW Chronic Criterion (µg/L)</i>	<i>WLAa (µg/L)</i>	<i>WLAc (µg/L)</i>	<i>LTAa (µg/L)</i>	<i>LTAc (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Lead	133	5.3	697	107	223	65.2	95.8	202
Malathion	N/A	0.01	N/A	0.0769	N/A	0.0469	0.0689	0.145
Mercury	2.1	1.1	4.20	8.46	1.34	5.16	1.97	4.17
Methoxychlor	N/A	0.03	N/A	0.231	N/A	0.141	0.206	0.437
Mirex	N/A	0.001	N/A	0.00769	N/A	0.00469	0.00689	0.0145
Nickel	118	13.1	236	101	75.5	61.5	90.3	191
Nonylphenol	7	1.7	14.0	13.1	4.48	7.98	6.58	13.9
Parathion (ethyl)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	15.1	9.6	30.2	73.8	9.66	45.0	14.2	30.0
Phenanthrene	7.7	4.6	15.4	35.4	4.93	21.6	7.24	15.3
Polychlorinated Biphenyls [PCBs]	10	0.03	20.0	0.231	6.40	0.141	0.206	0.437
Selenium	564	136	1128	1046	361	638	530	1122
Silver	2	N/A	9.27	N/A	2.97	N/A	4.36	9.22
Toxaphene	0.21	0.0002	0.420	0.00154	0.134	0.000938	0.00137	0.00291
Tributyltin [TBT]	0.24	0.0074	0.480	0.0569	0.154	0.0347	0.0510	0.107
2,4,5 Trichlorophenol	259	12	518	92.3	166	56.3	82.7	175
Zinc	92.7	84.2	314	1096	100	668	147	312

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>Fish Only Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Acrylonitrile	115	1917	1783	2620	5543
Aldrin	1.147E-05	0.000191	0.000178	0.000261	0.000552
Anthracene	1317	21950	20414	30007	63485
Antimony	1071	17850	16601	24402	51627
Arsenic	N/A	N/A	N/A	N/A	N/A
Barium	N/A	N/A	N/A	N/A	N/A
Benzene	581	9683	9006	13238	28007
Benzydine	0.107	1.78	1.66	2.43	5.15
Benzo(a)anthracene	0.025	0.417	0.388	0.569	1.20
Benzo(a)pyrene	0.0025	0.0417	0.0388	0.0569	0.120
Bis(chloromethyl)ether	0.2745	4.58	4.25	6.25	13.2
Bis(2-chloroethyl)ether	42.83	714	664	975	2064

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>Fish Only Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.55	126	117	172	363
Bromodichloromethane [Dichlorobromomethane]	275	4583	4263	6265	13256
Bromoform [Tribromomethane]	1060	17667	16430	24152	51097
Cadmium	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	46	767	713	1048	2217
Chlordane	0.0025	0.0417	0.0388	0.0569	0.120
Chlorobenzene	2737	45617	42424	62362	131937
Chlorodibromomethane [Dibromochloromethane]	183	3050	2837	4169	8821
Chloroform [Trichloromethane]	7697	128283	119304	175376	371033
Chromium (hexavalent)	502	8367	7781	11438	24198
Chrysene	2.52	42.0	39.1	57.4	121
Cresols [Methylphenols]	9301	155017	144166	211923	448354
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.0333	0.0310	0.0455	0.0964
4,4'-DDE	0.00013	0.00217	0.00202	0.00296	0.00626
4,4'-DDT	0.0004	0.00667	0.00620	0.00911	0.0192
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol [Fenprothrin]	473	7883	7332	10777	22800
1,2-Dibromoethane [Ethylene Dibromide]	4.24	70.7	65.7	96.6	204
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	595	9917	9223	13557	28681
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	3299	54983	51135	75167	159028
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	2.24	37.3	34.7	51.0	107
1,2-Dichloroethane	364	6067	5642	8293	17546
1,1-Dichloroethylene [1,1-Dichloroethene]	55114	918567	854267	1255772	2656770
Dichloromethane [Methylene Chloride]	13333	222217	206662	303792	642717
1,2-Dichloropropane	259	4317	4015	5901	12485
1,3-Dichloropropene [1,3-Dichloropropylene]	119	1983	1845	2711	5736
Dicofol [Kelthane]	0.30	5.00	4.65	6.83	14.4
Dieldrin	2.0E-05	0.000333	0.000310	0.000455	0.000964
2,4-Dimethylphenol	8436	140600	130758	192214	406657
Di- <i>n</i> -Butyl Phthalate	92.4	1540	1432	2105	4454
Dioxins/Furans [TCDD Equivalents]	7.97E-08	0.0000013	0.0000012	0.0000018	0.0000038
Endrin	0.02	0.333	0.310	0.455	0.964
Epichlorohydrin	2013	33550	31202	45866	97036

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>Fish Only Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Ethylbenzene	1867	31117	28939	42539	89998
Ethylene Glycol	1.68E+07	280000000	260400000	382788000	809844000
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.0001	0.00167	0.00155	0.00227	0.00482
Heptachlor Epoxide	0.00029	0.00483	0.00450	0.00660	0.0139
Hexachlorobenzene	0.00068	0.0113	0.0105	0.0154	0.0327
Hexachlorobutadiene	0.22	3.67	3.41	5.01	10.6
Hexachlorocyclohexane (<i>alpha</i>)	0.0084	0.140	0.130	0.191	0.404
Hexachlorocyclohexane (<i>beta</i>)	0.26	4.33	4.03	5.92	12.5
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	0.341	5.68	5.29	7.76	16.4
Hexachlorocyclopentadiene	11.6	193	180	264	559
Hexachloroethane	2.33	38.8	36.1	53.0	112
Hexachlorophene	2.90	48.3	45.0	66.0	139
4,4'-Isopropylidenediphenol [Bisphenol A]	15982	266367	247721	364149	770412
Lead	3.83	167	156	228	484
Mercury	0.0250	0.417	0.388	0.569	1.20
Methoxychlor	3.0	50.0	46.5	68.3	144
Methyl Ethyl Ketone	9.92E+05	16533333	15376000	22602720	47819360
Methyl <i>tert</i> -butyl ether [MTBE]	10482	174700	162471	238832	505284
Nickel	1140	19000	17670	25974	54953
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	1873	31217	29032	42676	90287
N-Nitrosodiethylamine	2.1	35.0	32.6	47.8	101
N-Nitroso-di- <i>n</i> -Butylamine	4.2	70.0	65.1	95.6	202
Pentachlorobenzene	0.355	5.92	5.50	8.08	17.1
Pentachlorophenol	0.29	4.83	4.50	6.60	13.9
Polychlorinated Biphenyls [PCBs]	6.4E-04	0.0107	0.00992	0.0145	0.0308
Pyridine	947	15783	14679	21577	45650
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.24	4.00	3.72	5.46	11.5
1,1,2,2-Tetrachloroethane	26.35	439	408	600	1270
Tetrachloroethylene [Tetrachloroethylene]	280	4667	4340	6379	13497
Thallium	0.23	3.83	3.57	5.24	11.0
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.183	0.171	0.250	0.530
2,4,5-TP [Silvex]	369	6150	5720	8407	17787

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>Fish Only Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
1,1,1-Trichloroethane	784354	13072567	12157487	17871505	37809784
1,1,2-Trichloroethane	166	2767	2573	3782	8002
Trichloroethylene [Trichloroethene]	71.9	1198	1114	1638	3465
2,4,5-Trichlorophenol	1867	31117	28939	42539	89998
TTM [Sum of Total Trihalomethanes]	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	16.5	275	256	375	795

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

<i>Aquatic Life Parameter</i>	<i>70% of Daily Avg. (µg/L)</i>	<i>85% of Daily Avg. (µg/L)</i>
Acrolein	N/A	N/A
Aldrin	0.856	1.03
Aluminum	N/A	N/A
Arsenic	98.1	119
Cadmium	26.3	31.9
Carbaryl	403	490
Chlordane	0.0193	0.0234
Chlorpyrifos	0.00724	0.00879
Chromium (trivalent)	N/A	N/A
Chromium (hexavalent)	239	290
Copper	10.0	12.2
Copper (oyster waters)	N/A	N/A
Cyanide (free)	3.68	4.47
4,4'-DDT	0.00482	0.00586
Demeton	0.482	0.586
Diazinon	0.539	0.654
Dicofol [Kelthane]	N/A	N/A
Dieldrin	0.00965	0.0117
Diuron	N/A	N/A
Endosulfan I (<i>alpha</i>)	0.0223	0.0271
Endosulfan II (<i>beta</i>)	0.0223	0.0271
Endosulfan sulfate	0.0223	0.0271
Endrin	0.00965	0.0117
Guthion [Azinphos Methyl]	0.0482	0.0586

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Aquatic Life	70% of Daily Avg.	85% of Daily Avg.
Parameter	(µg/L)	(µg/L)
Heptachlor	0.0193	0.0234
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	0.105	0.127
Lead	67.0	81.4
Malathion	0.0482	0.0586
Mercury	1.38	1.67
Methoxychlor	0.144	0.175
Mirex	0.00482	0.00586
Nickel	63.2	76.8
Nonylphenol	4.60	5.59
Parathion (ethyl)	N/A	N/A
Pentachlorophenol	9.94	12.0
Phenanthrene	5.07	6.15
Polychlorinated Biphenyls [PCBs]	0.144	0.175
Selenium	371	451
Silver	3.05	3.70
Toxaphene	0.000965	0.00117
Tributyltin [TBT]	0.0357	0.0433
2,4,5 Trichlorophenol	57.9	70.3
Zinc	103	125

Human Health	70% of Daily Avg.	85% of Daily Avg.
Parameter	(µg/L)	(µg/L)
Acrylonitrile	1834	2227
Aldrin	0.000182	0.000222
Anthracene	21005	25506
Antimony	17081	20742
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	9266	11252
Benzidine	1.70	2.07
Benzo(<i>a</i>)anthracene	0.398	0.484
Benzo(<i>a</i>)pyrene	0.0398	0.0484
Bis(chloromethyl)ether	4.37	5.31
Bis(2-chloroethyl)ether	683	829
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	120	146
Bromodichloromethane [Dichlorobromomethane]	4386	5325

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Human Health	70% of Daily Avg.	85% of Daily Avg.
Parameter	(µg/L)	(µg/L)
Bromoform [Tribromomethane]	16906	20529
Cadmium	N/A	N/A
Carbon Tetrachloride	733	890
Chlordane	0.0398	0.0484
Chlorobenzene	43653	53008
Chlorodibromomethane [Dibromochloromethane]	2918	3544
Chloroform [Trichloromethane]	122763	149069
Chromium (hexavalent)	8006	9722
Chrysene	40.1	48.8
Cresols [Methylphenols]	148346	180134
Cyanide (free)	N/A	N/A
4,4'-DDD	0.0318	0.0387
4,4'-DDE	0.00207	0.00251
4,4'-DDT	0.00637	0.00774
2,4'-D	N/A	N/A
Danitol [Fenprothrin]	7544	9160
1,2-Dibromoethane [Ethylene Dibromide]	67.6	82.1
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	9489	11523
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	52617	63892
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	35.7	43.3
1,2-Dichloroethane	5805	7049
1,1-Dichloroethylene [1,1-Dichloroethene]	879040	1067406
Dichloromethane [Methylene Chloride]	212654	258223
1,2-Dichloropropane	4130	5016
1,3-Dichloropropene [1,3-Dichloropropylene]	1897	2304
Dicofol [Kelthane]	4.78	5.81
Dieldrin	0.000318	0.000387
2,4-Dimethylphenol	134549	163382
Di- <i>n</i> -Butyl Phthalate	1473	1789
Dioxins/Furans [TCDD Equivalents]	0.0000013	0.0000015
Endrin	0.318	0.387
Epichlorohydrin	32106	38986
Ethylbenzene	29777	36158
Ethylene Glycol	267951600	325369800
Fluoride	N/A	N/A
Heptachlor	0.00159	0.00193
Heptachlor Epoxide	0.00462	0.00561

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Human Health	70% of Daily Avg.	85% of Daily Avg.
Parameter	(µg/L)	(µg/L)
Hexachlorobenzene	0.0108	0.0131
Hexachlorobutadiene	3.50	4.26
Hexachlorocyclohexane (<i>alpha</i>)	0.133	0.162
Hexachlorocyclohexane (<i>beta</i>)	4.14	5.03
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	5.43	6.60
Hexachlorocyclopentadiene	185	224
Hexachloroethane	37.1	45.1
Hexachlorophene	46.2	56.1
4,4'-Isopropylidenediphenol [Bisphenol A]	254904	309527
Lead	160	194
Mercury	0.398	0.484
Methoxychlor	47.8	58.1
Methyl Ethyl Ketone	15821904	19212312
Methyl <i>tert</i> -butyl ether [MTBE]	167182	203007
Nickel	18182	22078
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	29873	36274
N-Nitrosodiethylamine	33.4	40.6
N-Nitroso-di- <i>n</i> -Butylamine	66.9	81.3
Pentachlorobenzene	5.66	6.87
Pentachlorophenol	4.62	5.61
Polychlorinated Biphenyls [PCBs]	0.0102	0.0123
Pyridine	15104	18340
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	3.82	4.64
1,1,2,2-Tetrachloroethane	420	510
Tetrachloroethylene [Tetrachloroethylene]	4465	5422
Thallium	3.66	4.45
Toluene	N/A	N/A
Toxaphene	0.175	0.213
2,4,5-TP [Silvex]	5885	7146
1,1,1-Trichloroethane	12510054	15190780
1,1,2-Trichloroethane	2647	3214
Trichloroethylene [Trichloroethene]	1146	1392
2,4,5-Trichlorophenol	29777	36158
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	263	319

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Calculation of mass limitations for select pollutants based on the daily average permitted flow of 38.5 MGD and the following equation.

$$\text{lbs/day} = [(\text{concentration ug/L})/(1000)] \times [38.5 \text{ MGD}] \times [8.345]$$

<u>POLLUTANT</u>	<u>Dly Avg ug/l</u>	<u>Dly Max ug/l</u>	<u>Dly Avg lbs/day</u>	<u>Dly Max lbs/day</u>
Acrylonitrile	2620	5543	842	1781
Anthracene	30007	63485	9641	20397
Benzene	13238	28007	4253	8998
Benzo(a)anthracene	0.569	1.2	0.183	0.386
Benzo(a)pyrene	0.0569	0.12	0.018	0.039
Bis(2-ethylhexyl)phthalate	172	363	55.3	117
Carbon Tetrachloride	1048	2217	337	712
Chlorobenzene	62362	131937	20036	42389
Chloroform	175376	371033	56345	119206
Chrysene	57.4	121	18.4	38.9
<i>m</i> -Dichlorobenzene	13557	28681	4356	9215
<i>o</i> -Dichlorobenzene	75167	159028	24150	51093
<i>p</i> -Dichlorobenzene	N/A	N/A	N/A	N/A
1,2-Dichloroethane	8293	17546	2664	5637
1,1-Dichloroethylene	1255772	2656770	403458	853574
1,2-Dichloropropane	5901	12485	1896	4011
1,3-Dichloropropene (1,3- Dichloropropylene)	2711	5736	871	1843
2,4-Dimethylphenol	192214	406657	61755	130652
Di- <i>n</i> -Butyl Phthalate	2105	4454	676	1431
Ethylbenzene	42539	89998	13667	28915
Hexachlorobenzene	0.0154	0.0327	0.005	0.011
Hexachlorobutadiene	5.01	10.6	1.61	3.41
Hexachloroethane	53	112	17.0	36.0
Nitrobenzene	42676	90287	13711	29008
Phenanthrene	7.24	15.3	2.33	4.92
Tetrachloroethylene	6379	13497	2049	4336
Toluene	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	1.8E+07	3.8E+07	5.7E+06	1.2E+07
1,1,2-Trichloroethane	3782	8002	1215	2571
Trichloroethylene	1638	3465	526	1113
Vinyl Chloride	375	795	120	255

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Appendix C
pH Screening

Calculation of pH of a mixture in seawater.
Based on the CO2SYS program (Lewis and Wallace, 1998)
<http://cdiac.esd.ornl.gov/oceans/co2rpert.html>

INPUT

1. MIXING ZONE BOUNDARY CHARACTERISTICS

Dilution factor at mixing zone boundary	7.692
Depth at plume trapping level (m)	2.000

2. BACKGROUND RECEIVING WATER CHARACTERISTICS

Temperature (deg C):	33.00
pH:	7.90
Salinity (psu):	10.10
Total alkalinity (meq/L)	2.40

3. EFFLUENT CHARACTERISTICS

Temperature (deg C):	33.00
pH:	6.00
Salinity (psu)	2.00
Total alkalinity (meq/L):	0.40

4. CLICK THE 'calculate' BUTTON TO UPDATE OUTPUT RESULTS >>>

OUTPUT

CONDITIONS AT THE MIXING ZONE BOUNDARY

Temperature (deg C):	33.00
Salinity (psu)	9.05
Density (kg/m ³)	1001.42
Alkalinity (mmol/kg-SW):	2.14
Total Inorganic Carbon (mmol/kg-SW):	2.08
pH at Mixing Zone Boundary:	7.73

Notes:

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Notes on Data Sources

- A. Calculated from values in critical conditions memo (3/2/22): Effluent % at edge of mixing zone = 13%
- B. Default value. Various depths tested.
- C. Assumed. Various temperatures tested.
- D. Ambient pH for Segment 2484 from 2011 Ips.
- E. Median of data collected at nearby SWQM stations (14571, 14572, 14598, 15247, 15464, 15913, and 16516).
- F. Calculated from 15th percentile alkalinity (120 mg/L CaCO₃) collected at SWQM stations on Segment 2484.
- G. Assumed. Various temperatures tested.
- H. Proposed permit limit. Sequentially modified until predicted pH met segment criteria (6.5 to 9.0).
- 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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

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

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

Outfall	Pollutant	Technology-Based		Water Quality-Based		Existing Permit	
		Daily Avg	Daily Max	Daily Avg	Daily Max	Daily Avg	Daily Max
		lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
001	Flow	38.5 MGD	49.91 MGD	-	-	38.5 MGD	49.91 MGD
	CBOD (5-day)	Rpt, mg/L	Rpt, mg/L	-	-	Rpt, mg/L	Rpt, mg/L
	TDS	Rpt, mg/L	Rpt, mg/L	-	-	-	-
	Sulfate	Rpt, mg/L	Rpt, mg/L	-	-	-	-
	Chloride	Rpt, mg/L	Rpt, mg/L	-	-	-	-
	Salinity	Rpt, ppt	Report, ppt	-	-	-	-
	Ammonia (as N)	Rpt, mg/L	Rpt, mg/L	-	-	Rpt, mg/L	Rpt, mg/L
	Hexachlorobenzene	-	-	0.015 ug/L	0.033 ug/L	0.103 ug/L	0.217 ug/L
	pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU
101	Flow	1.25 MGD	1.5 MGD	-	-	1.25 MGD	1.5 MGD
	BOD (5-day)	250	668	-	-	250	668
	TSS	417	1356	-	-	417	1356
	Oil and Grease	15 mg/L	20 mg/L	-	-	15 mg/L	20 mg/L
	Acenaphthene	0.23	0.61	-	-	0.23	0.61
	Acenaphthylene	0.23	0.61	-	-	0.23	0.61
	Acrylonitrile	1.00	2.52	842	1781	1.00	2.52
	Anthracene	0.23	0.61	9641	20397	0.23	0.61
	Benzene	0.39	1.41	4253	8998	0.39	1.41
	Benzo(a)anthracene	0.23	0.61	0.183	0.386	0.23	0.61
	Benzo(a)pyrene	0.24	0.64	0.018	0.039	0.24	0.64
	3,4-Benzo fluoranthene	0.24	0.64	-	-	0.24	0.64
	Benzo(k)fluoranthene	0.23	0.61	-	-	0.23	0.61
	Bis(2-ethylhexyl) phthalate	1.07	2.91	55.3	117	1.07	2.91
	Carbon Tetrachloride	0.19	0.40	337	712	0.19	0.40
	Chlorobenzene	0.16	0.29	20036	42389	0.16	0.29
	Chloroethane	1.08	2.79	-	-	1.08	2.79

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Outfall	Pollutant	Technology-Based		Water Quality-Based		Existing Permit	
		Daily Avg	Daily Max	Daily Avg	Daily Max	Daily Avg	Daily Max
		lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
101	Chloroform	0.22	0.48	56345	119206	0.22	0.48
	2-Chlorophenol	0.32	1.02	-	-	0.32	1.02
	Chrysene	0.23	0.61	18.4	38.9	0.23	0.61
	1,2-Dichlorobenzene	0.80	1.70	24150	51093	0.80	1.70
	1,3-Dichlorobenzene	0.32	0.46	4356	9215	0.32	0.46
	1,4-Dichlorobenzene	0.16	0.29	-	-	0.16	0.29
	1,1-Dichloroethane	0.23	0.61	-	-	0.23	0.61
	1,2-Dichloroethane	0.71	2.20	2664	5637	0.71	2.20
	1,1-Dichloroethylene	0.17	0.26	403458	853574	0.17	0.26
	1,2-trans Dichloro ethylene	0.22	0.56	-	-	0.22	0.56
	2,4-Dichlorophenol	0.41	1.17	-	-	0.41	1.17
	1,2-Dichloropropane	1.60	2.40	1896	4011	1.60	2.40
	1,3-Dichloropropylene	0.30	0.46	871	1843	0.30	0.46
	Diethyl phthalate	0.84	2.12	-	-	0.84	2.12
	2,4-Dimethylphenol	0.19	0.37	61755	130652	0.19	0.37
	Dimethyl phthalate	0.20	0.49	-	-	0.20	0.49
	Di-n-butyl phthalate	0.28	0.59	676	1431	0.28	0.59
	4,6-Dinitro- <i>o</i> -cresol	0.81	2.89	-	-	0.81	2.89
	2,4-Dinitrophenol	0.74	1.28	-	-	0.74	1.28
	2,4-Dinitrotoluene	1.18	2.97	-	-	1.18	2.97
	2,6-Dinitrotoluene	2.67	6.69	-	-	2.67	6.69
	Ethylbenzene	0.33	1.13	13667	28915	0.33	1.13
	Fluoranthene	0.26	0.71	-	-	0.26	0.71
	Fluorene	0.23	0.61	-	-	0.23	0.61
	Hexachlorobenzene	0.16	0.29	0.005	0.011	0.16	0.29
	Hexachloroethane	0.22	0.56	17.0	36.0	0.22	0.56
	Hexachlorobutadiene	0.21	0.51	1.61	3.41	0.21	0.51
	Methyl Chloride	0.90	1.98	-	-	0.90	1.98
	Methylene Chloride	0.42	0.93	-	-	0.42	0.93
	Naphthalene	0.23	0.61	-	-	0.23	0.61
	Nitrobenzene	0.28	0.71	13711	29008	0.28	0.71
	2-Nitrophenol	0.43	0.72	-	-	0.43	0.72
	4-Nitrophenol	0.75	1.29	-	-	0.75	1.29
	Phenanthrene	0.23	0.61	2.33	4.92	0.23	0.61

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

Outfall	Pollutant	Technology-Based		Water Quality-Based		Existing Permit	
		Daily Avg	Daily Max	Daily Avg	Daily Max	Daily Avg	Daily Max
		lbs/day	lbs/day	lbs/day	lbs/day	lbs/day	lbs/day
101	Phenol	0.16	0.27	-	-	0.16	0.27
	Pyrene	0.26	0.70	-	-	0.26	0.70
	Tetrachloroethylene	0.23	0.58	2049	4336	0.23	0.58
	Toluene	0.27	0.83	-	-	0.27	0.83
	1,2,4-Trichloro benzene	0.71	1.46	-	-	0.71	1.46
	1,1,1-Trichloroethane	0.22	0.56	5741802	12147622	0.22	0.56
	1,1,2-Trichloroethane	0.22	0.56	1215	2571	0.22	0.56
	Trichloroethylene	0.22	0.56	526	1113	0.22	0.56
	Vinyl Chloride	1.08	2.79	120	255	1.08	2.79
	pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU
201	Flow	0.02 MGD	0.08 MGD	-	-	0.02 MGD	0.08 MGD
	BOD (5-day)	20 mg/L	45 mg/L	-	-	20 mg/L	45 mg/L
	TSS	20 mg/L	45 mg/L	-	-	20 mg/L	45 mg/L
	Enterococci	35 ¹	104 ¹	35 ¹	104 ¹	35¹	104¹
	Residual Chlorine	1.0 mg/L	4.0 mg/L	-	-	1.0 mg/L	4.0 mg/L
	pH	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU	6.0 SU (min)	9.0 SU

¹ Units are colony forming units (CFU) or most probable number (MPN) per 100 milliliters.

Appendix E

Calculations of Single Grab Limits for Outfall 001

The column labeled “Single Grab Method” in the table below refers to an explanation of how the single grab limit was calculated for each pollutant. The single grab limit included in the draft permit is shown in bold type.

Pollutant (Outfall 001)	Daily Average		Daily Maximum		Calculated Single Grab	Single Grab Method	Existing Single Grab	MAL
	mg/L	lbs/day	mg/L	lbs/day				
Hexachlorobenzene	0.000015	-	0.000033	-	0.005	E	0.005	0.005

Note	Single grab limit =							
A	$\frac{\text{Daily Avg (lbs/day)}}{38.5 \text{ MGD}} \times 3 = \text{Daily Avg (mg/L)} \times 3$							
B	$\frac{\text{Daily Max (lbs/day)}}{38.5 \text{ MGD}} \times 2 = \text{Daily Max (mg/L)} \times 2$							
C	$\frac{\text{Daily Max (lbs/day)}}{38.5 \text{ MGD}} \times \frac{1.25 \text{ MGD}}{38.5 \text{ MGD}} \times 1.5 = \text{Daily Max (mg/L)} \times \frac{1.25 \text{ MGD}}{38.5 \text{ MGD}} \times 1.5$							
D	$\frac{\text{Daily Max (lbs/day)}}{38.5 \text{ MGD}} \times 8.345 = \text{Daily Max (mg/L)} \text{ [when sample type is grab]}$							
E	MAL							

Calculations of Single Grab Limits for Internal Outfall 101

Pollutant (Outfall 101)	Daily Average		Daily Maximum		Calculated Single Grab	Single Grab Method	Existing Single Grab	MAL
	mg/L	lbs/day	mg/L	lbs/day				
Biochemical oxygen demand (5-day)	-	250	-	668	71.9	A	60	-
Total suspended solids	-	417	-	1356	120	A	200	-
Oil and grease	15	-	20	-	20	D	20	-
Acenaphthene	-	0.23	-	0.61	0.089	C	0.089	0.010
Acenaphthylene	-	0.23	-	0.61	0.089	C	0.089	0.010
Acrylonitrile	-	1.00	-	2.52	0.363	C	0.363	0.050
Anthracene	-	0.23	-	0.61	0.089	C	0.089	0.010
Benzene	-	0.39	-	1.41	0.204	C	0.204	0.010
Benzo(a)anthracene	-	0.183	-	0.386	0.089	C	0.089	0.005
Benzo(a)pyrene	-	0.018	-	0.039	0.092	C	0.092	0.005
3,4-Benzofluoranthene	-	0.24	-	0.64	0.092	C	0.092	0.010
Benzo(k)fluoranthene	-	0.23	-	0.61	0.089	C	0.089	0.005
Bis(2-ethylhexyl)phthalate	-	1.07	-	2.91	0.419	C	0.419	0.010
Carbon Tetrachloride	-	0.19	-	0.40	0.057	C	0.057	0.002
Chlorobenzene	-	0.16	-	0.29	0.042	C	0.042	0.010
Chloroethane	-	1.08	-	2.79	0.402	C	0.402	0.050
Chloroform	-	0.22	-	0.48	0.069	C	0.069	0.010

Pollutant (Outfall 101)	Daily Average		Daily Maximum		Calculated Single Grab	Single Grab Method	Existing Single Grab	MAL
	mg/L	lbs/day	mg/L	lbs/day				
2-Chlorophenol	-	0.32	-	1.02	0.147	C	0.147	0.010
Chrysene	-	0.23	-	0.61	0.089	C	0.089	0.005
1,2-Dichlorobenzene	-	0.80	-	1.70	0.245	C	0.245	0.010
1,3-Dichlorobenzene	-	0.32	-	0.46	0.066	C	0.066	0.010
1,4-Dichlorobenzene	-	0.16	-	0.29	0.042	C	0.042	0.010
1,1-Dichloroethane	-	0.23	-	0.61	0.089	C	0.089	0.010
1,2-Dichloroethane	-	0.71	-	2.20	0.317	C	0.317	0.010
1,1-Dichloroethylene	-	0.17	-	0.26	0.038	C	0.038	0.010
1,2-trans Dichloroethylene	-	0.22	-	0.56	0.081	C	0.081	0.010
2,4-Dichlorophenol	-	0.41	-	1.17	0.168	C	0.168	0.010
1,2-Dichloropropane	-	1.60	-	2.40	0.345	C	0.345	0.010
1,3-Dichloropropylene	-	0.30	-	0.46	0.066	C	0.066	0.010
Diethyl phthalate	-	0.84	-	2.12	0.305	C	0.305	0.010
2,4-Dimethylphenol	-	0.19	-	0.37	0.054	C	0.054	0.010
Dimethyl phthalate	-	0.20	-	0.49	0.071	C	0.071	0.010
Di-n-butyl phthalate	-	0.28	-	0.59	0.086	C	0.086	0.010
4,6-Dinitro-o-cresol	-	0.81	-	2.89	0.416	C	0.416	0.050
2,4-Dinitrophenol	-	0.74	-	1.28	0.185	C	0.185	0.050
2,4-Dinitrotoluene	-	1.18	-	2.97	0.428	C	0.428	0.010
2,6-Dinitrotoluene	-	2.67	-	6.69	0.962	C	0.962	0.010
Ethylbenzene	-	0.33	-	1.13	0.162	C	0.162	0.010
Fluoranthene	-	0.26	-	0.71	0.102	C	0.102	0.010
Fluorene	-	0.23	-	0.61	0.089	C	0.089	0.010
Hexachlorobenzene	-	0.005	-	0.011	0.005	E	0.042	0.005
Hexachloroethane	-	0.22	-	0.56	0.081	C	0.081	0.020
Hexachlorobutadiene	-	0.21	-	0.51	0.074	C	0.074	0.010
Methyl Chloride	-	0.90	-	1.98	0.285	C	0.285	0.050
Methylene Chloride	-	0.42	-	0.93	0.134	C	0.134	0.020
Naphthalene	-	0.23	-	0.61	0.089	C	0.089	0.010
Nitrobenzene	-	0.28	-	0.71	0.102	C	0.102	0.010
2-Nitrophenol	-	0.43	-	0.72	0.104	C	0.104	0.020
4-Nitrophenol	-	0.75	-	1.29	0.186	C	0.186	0.050
Phenanthrene	-	0.23	-	0.61	0.089	C	0.089	0.010
Phenol	-	0.16	-	0.27	0.039	C	0.039	0.010
Pyrene	-	0.26	-	0.70	0.101	C	0.101	0.010
Tetrachloroethylene	-	0.23	-	0.58	0.084	C	0.084	0.010
Toluene	-	0.27	-	0.83	0.120	C	0.120	0.010
1,2,4-Trichlorobenzene	-	0.71	-	1.46	0.210	C	0.210	0.010
1,1,1-Trichloroethane	-	0.22	-	0.56	0.081	C	0.081	0.010
1,1,2-Trichloroethane	-	0.22	-	0.56	0.081	C	0.081	0.010
Trichloroethylene	-	0.22	-	0.56	0.081	C	0.081	0.010
Vinyl Chloride	-	1.08	-	2.79	0.402	C	0.402	0.010

Note	Single grab limit =		
A	$\frac{\text{Daily Avg (lbs/day)}}{1.25 \text{ MGD} \times 8.345} \times 3$	=	Daily Avg (mg/L) $\times 3$
B	$\frac{\text{Daily Max (lbs/day)}}{1.25 \text{ MGD} \times 8.345} \times 2$	=	Daily Max (mg/L) $\times 2$
C	$\frac{\text{Daily Max (lbs/day)}}{1.25 \text{ MGD} \times 8.345} \times \frac{1.25 \text{ MGD}}{1.25 \text{ MGD}} \times 1.5$	=	Daily Max (mg/L) $\times \frac{1.25 \text{ MGD}}{1.25 \text{ MGD}} \times 1.5$
D	$\frac{\text{Daily Max (lbs/day)}}{1.25 \text{ MGD} \times 8.345}$	=	Daily Max (mg/L) [when sample type is grab]
E	MAL		

Calculations of Single Grab Limits for Outfall 201

Pollutant (Outfall 201)	Daily Average		Daily Maximum		Calculated Single Grab	Single Grab Method	Existing Single Grab	MAL
	mg/L	lbs/day	mg/L	lbs/day				
Biochemical oxygen demand (5-day)	20	-	45	-	65	C	65	-
Total suspended solids	20	-	45	-	65	C	65	-
Enterococci	35 ¹		104 ¹		104 ¹	D	104¹	-

Note	Single grab limit =		
A	$\frac{\text{Daily Avg (lbs/day)}}{0.02 \text{ MGD} \times 8.345} \times 3$	=	Daily Avg (mg/L) $\times 3$
B	$\frac{\text{Daily Max (lbs/day)}}{0.02 \text{ MGD} \times 8.345} \times 2$	=	Daily Max (mg/L) $\times 2$
C	$\frac{\text{Daily Max (lbs/day)}}{0.02 \text{ MGD} \times 8.345} \times 1.5$	=	Daily Max (mg/L) $\times 1.5$
D	$\frac{\text{Daily Max (lbs/day)}}{0.02 \text{ MGD} \times 8.345}$	=	Daily Max (mg/L) [when sample type is grab]
E	MAL		

¹ Units are colony forming units (CFU) or most probable number (MPN) per 100 mls.



Compliance History Report

Compliance History Report for CN605616226, RN106631427, Rating Year 2021 which includes Compliance History (CH) components from September 1, 2016, through August 31, 2021.

Customer, Respondent, or Owner/Operator:	CN605616226, CORPUS CHRISTI POLYMERS LLC	Classification: HIGH	Rating: 0.00
Regulated Entity:	RN106631427, CORPUS CHRISTI POLYMER PLANT	Classification: HIGH	Rating: 0.00
Complexity Points:	16	Repeat Violator: NO	
CH Group:	05 - Chemical Manufacturing		
Location:	7001 JOE FULTON INTERNATIONAL TRADE CORRIDOR STE 200 NUECES, TX, NUECES COUNTY		
TCEQ Region:	REGION 14 - CORPUS CHRISTI		

ID Number(s):

AIR OPERATING PERMITS PERMIT 3811

AIR NEW SOURCE PERMITS PERMIT 108819

AIR NEW SOURCE PERMITS EPA PERMIT GHGPSDTX58

AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1352

STORMWATER PERMIT TXR15059V

WASTEWATER EPA ID TX0134635

AIR NEW SOURCE PERMITS EPA PERMIT PSDTX1354

AIR NEW SOURCE PERMITS PERMIT 108446

AIR NEW SOURCE PERMITS EPA PERMIT GHGPSDTX57

AIR NEW SOURCE PERMITS AFS NUM 4835501689

WASTEWATER PERMIT WQ0005019000

AIR EMISSIONS INVENTORY ACCOUNT NUMBER NEA030D

Compliance History Period: September 01, 2016 to August 31, 2021 **Rating Year:** 2021 **Rating Date:** 09/01/2021

Date Compliance History Report Prepared: March 31, 2022

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

Component Period Selected: December 01, 2016 to December 01, 2021

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

Name: Cole Gray

Phone: (512) 239-4736

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.):

Item 1	July 05, 2017	(1433593)
Item 2	September 07, 2017	(1445819)
Item 3	September 08, 2017	(1452426)
Item 4	October 18, 2017	(1458290)
Item 5	November 20, 2017	(1470176)
Item 6	January 17, 2018	(1476886)
Item 7	February 16, 2018	(1489018)

Item 8	March 09, 2018	(1492669)
Item 9	March 12, 2018	(1489019)
Item 10	March 28, 2018	(1495981)
Item 11	May 18, 2018	(1502946)
Item 12	June 12, 2018	(1510040)
Item 13	July 10, 2018	(1516361)
Item 14	August 10, 2018	(1522404)
Item 15	September 11, 2018	(1529621)
Item 16	October 15, 2018	(1535908)
Item 17	November 14, 2018	(1543783)
Item 18	December 13, 2018	(1547479)
Item 19	January 08, 2019	(1566661)
Item 20	January 16, 2019	(1533321)
Item 21	February 11, 2019	(1566659)
Item 22	March 07, 2019	(1566660)
Item 23	April 01, 2019	(1574150)
Item 24	May 20, 2019	(1587851)
Item 25	June 18, 2019	(1587852)
Item 26	July 20, 2019	(1595557)
Item 27	August 13, 2019	(1601780)
Item 28	August 15, 2019	(1579680)
Item 29	September 06, 2019	(1608683)
Item 30	October 08, 2019	(1615558)
Item 31	November 20, 2019	(1621361)
Item 32	December 02, 2019	(1628697)
Item 33	January 02, 2020	(1636315)
Item 34	February 13, 2020	(1642933)
Item 35	March 12, 2020	(1649439)
Item 36	April 08, 2020	(1655803)
Item 37	May 14, 2020	(1662344)
Item 38	June 18, 2020	(1668892)
Item 39	July 19, 2020	(1675839)
Item 40	July 24, 2020	(1657602)
Item 41	August 05, 2020	(1682632)
Item 42	September 11, 2020	(1689178)
Item 43	October 14, 2020	(1695542)
Item 44	November 06, 2020	(1684410)
Item 45	November 10, 2020	(1719221)
Item 46	December 16, 2020	(1719222)
Item 47	January 18, 2021	(1719223)
Item 48	February 01, 2021	(1732293)
Item 49	February 12, 2021	(1699091)
Item 50	March 02, 2021	(1732294)
Item 51	April 12, 2021	(1732295)
Item 52	May 12, 2021	(1743431)
Item 53	June 14, 2021	(1743432)
Item 54	July 12, 2021	(1753943)
Item 55	August 02, 2021	(1759300)
Item 56	August 04, 2021	(1746502)
Item 57	September 02, 2021	(1768695)
Item 58	October 06, 2021	(1779887)
Item 59	November 01, 2021	(1785941)

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