Jon Niermann, *Chairman*
Emily Lindley, *Commissioner*
Bobby Janecka, *Commissioner*
Erin Chancellor, *Interim Executive Director*

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

May 24, 2023

VIA ELECTRONIC FILING

Ms. Laurie Gharis
Office of the Chief Clerk
Texas Commission on Environmental Quality
Post Office Box 13087, MC-105
Austin, Texas 78711-3087

Re: Executive Director's Backup Documents Filed for Consideration of Hearing Requests at Agenda for the Application by Clean Harbors San Leon, Inc. for TCEQ Permit No. WQ0004086000; TCEQ Docket No. 2023-0579-WQ

Dear Ms. Gharis:

Enclosed please find a copy of the following documents for inclusion in the background material for this permit application. If you have any questions or comments, please call me at 512-239-0622 or email me at Aubrey.Pawelka@tceq.texas.gov.

- Statement of Basis and ED's Preliminary Decision/ Draft Permit
- Compliance History Report

Thank you for your attention to this matter.

Sincerely,

Aubrey Pawelka

Aubrey Pawelka, *Staff Attorney*
Environmental Law Division

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0004086000, U.S. Environmental Protection Agency (EPA) ID No. TX0117757, to discharge to water in the state

Issuing Office:	Texas Commission on Environmental Quality (TCEQ) P.O. Box 13087 Austin, Texas 78711-3087
Applicant:	Clean Harbors San Leon, Inc. 2700 Avenue South San Leon, Texas 77539
Prepared By:	Ruiqiang Zong Wastewater Permitting Section Water Quality Division (512) 239-4589
Date:	July 18, 2022
Permit Action:	Major amendment with renewal to relocate Outfall 001; TPDES Permit No. WQ0004086000

I. EXECUTIVE DIRECTOR RECOMMENDATION

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

II. APPLICANT ACTIVITY

The applicant currently operates Clean Harbors San Leon, a recycling and storage facility that manages catalyst and oily wastes from the petroleum refining and petrochemical industries.

III. DISCHARGE LOCATION

As described in the application, the facility is located at 2700 Avenue South, in the City of San Leon, Galveston County, Texas 77539. Discharge is currently via Outfall 001 to a drainage ditch, thence to an unnamed tidal tributary of Dickinson Bayou, thence to Dickinson Bayou Tidal in Segment No. 1103 of the San Jacinto-Brazos Coastal Basin. The relocated Outfall 001 will be discharged directly to Dickinson Bayou Tidal in Segment No. 1103 of the San Jacinto – Brazos Coastal Basin.

IV. RECEIVING STREAM USES

The unclassified receiving water uses are minimal aquatic life use for the drainage ditch and high aquatic life use for unnamed tidal tributary. The designated uses for Segment No. 1103 are primary contact recreation and high aquatic life use.

V. STREAM STANDARDS

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

VI. DISCHARGE DESCRIPTION

The following is a quantitative description of the discharge described in the monthly effluent report data for the period July 2017 through May 2022. The "average of daily average" values presented in the following table are the average of all daily average values for the reporting period for each pollutant. The "maximum of daily maximum" values presented in the following table are the individual maximum values for the reporting period for each pollutant. Flows are expressed in million gallons per day (MGD). All pH values are expressed in standard units (SU).

A. Flow

Outfall	Frequency	Average of Daily Average, MGD	Maximum of Daily Maximum, MGD
001	Intermittent	0.19	5.73
101	Intermittent	0.0288	0.084
102	Intermittent	No discharge	No discharge

B. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average	Maximum of Daily Maximum
001	Total Organic Carbon	N/A	23.3 mg/L
	Oil and Grease	N/A	2.2 mg/L
	BTEX[1]	N/A	0.0043 mg/L
	Total Aluminum	N/A	Not reported
	Total Copper	N/A	Not reported
	Total Lead	N/A	Not reported
	Total Nickel	N/A	Not reported
	Total Mercury	N/A	Not reported
	Total Zinc	0.36 mg/L	2.49 mg/L
	pH	6.0 SU (min)	7.96 SU (max)
101	Total Suspended Solids	2.8 mg/L	4.7 mg/L
		1.44 lbs/day	2 lbs/day
	Oil and Grease	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	Total Arsenic	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	Total Cadmium	0.0021 mg/L	0.0021 mg/L
		0.00893 lbs/day	0.015 lbs/day
	Total Chromium	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	Total Cobalt	0.62 mg/L	2.67 mg/L
		0.29 lbs/day	1.40 lbs/day
	Total Copper	0.0056 mg/L	0.0149 mg/L
		0.0021 lbs/day	0.0039 lbs/day
101	Total Lead	0.0015 mg/L	0.0079 mg/L
		0.0004 lbs/day	0.0021 lbs/day
	Total Mercury	0 mg/L	0 mg/L

[1] BTEX includes benzene, toluene, ethylbenzene, and total xylenes.

B. Effluent Characteristics

Outfall	Pollutant	Average of Daily Average	Maximum of Daily Maximum
		0 mg/L	0 mg/L
	Total Tin	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	Total Zinc	2.28 mg/L	17.3 mg/L
		0.73 lbs/day	5.54 lbs/day
	Bis(2-ethylhexyl) phthalate	0.0024 mg/L	0.0024 mg/L
		0.00048 lbs/day	0.00048 lbs/day
	Butylbenzyl phthalate	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	Carbazole	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	n-Decane	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	Fluoranthene	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	n-Octadecane	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	Total Petroleum Hydrocarbons	0 mg/L	0 mg/L
		0 lbs/day	0 lbs/day
	pH	6.35 SU (min)	7.45 SU (max)
102	Total Suspended Solids	No discharge	No discharge
	Oil and Grease	No discharge	No discharge
	Total Arsenic	No discharge	No discharge
	Total Cadmium	No discharge	No discharge
	Total Chromium	No discharge	No discharge
	Total Cobalt	No discharge	No discharge
	Total Copper	No discharge	No discharge
	Total Lead	No discharge	No discharge
	Total Mercury	No discharge	No discharge
	Total Tin	No discharge	No discharge
	Total Zinc	No discharge	No discharge
	Bis(2-ethylhexyl) phthalate	No discharge	No discharge
	Butylbenzyl phthalate	No discharge	No discharge
	Carbazole	No discharge	No discharge
	n-Decane	No discharge	No discharge
	Fluoranthene	No discharge	No discharge
	n-Octadecane	No discharge	No discharge
	Total Petroleum Hydrocarbons	No discharge	No discharge
	pH	No discharge	No discharge

Effluent limit violations documented in the monthly effluent reports are summarized in the following table.

D. Effluent Limitation Violations

Outfall	Pollutant (units)	Month/ Year	Daily Average		Daily Maximum	
			Limit	Reported	Limit	Reported
101	Total zinc (mg/L)	2/2018	4.5	7.16	8.26	17.3

D. Effluent Limitation Violations

Outfall	Pollutant (units)	Month/ Year	Daily Average		Daily Maximum	
			Limit	Reported	Limit	Reported
		1/2019	4.5	5.45	N/A	N/A

The draft permit was not changed to address these effluent limit violations because the exceedances do not indicate a pattern of noncompliance.

VII. DRAFT EFFLUENT LIMITATIONS

The draft permit authorizes the discharge of stormwater associated with industrial activity and previously monitored effluent (treated process wastewater and treated contaminated stormwater from internal Outfalls 101 and 102) on a continuous and flow-variable basis via Outfall 001 in both interim and final phases, treated process wastewater and treated contaminated stormwater at a daily average flow not to exceed 0.065 MGD via internal Outfall 101, and treated process wastewater and treated contaminated stormwater at a daily average flow not to exceed 0.040 MGD via internal Outfall 102.

Effluent limitations are established in the draft permit as follows:

Outfall	Pollutant	Daily Average	Daily Maximum
001 Interim phase	Flow	Report, MGD	Report, MGD
	Total Organic Carbon (TOC)	N/A	55 mg/L
	Oil and grease	N/A	15 mg/L
	BTEX [1]	N/A	0.5 mg/L
	Total Aluminum [2]	Report	Report
	Total Aluminum [3]	0.834 mg/L	1.76 mg/L
	Total Copper [2]	Report	Report
	Total Copper [3]	0.0036 mg/L	0.0077 mg/L
	Total Lead [2]	Report	Report
	Total Lead [3]	0.012 mg/L	0.026 mg/L
	Total Nickel [2]	Report	Report
	Total Nickel [3]	0.011 mg/L	0.024 mg/L
	Total Mercury [2]	Report	Report
	Total Mercury [3]	0.000034 mg/L	0.000073 mg/L
	Total Zinc [2]	Report	6.0 mg/L
	Total Zinc [3]	0.072 mg/L	0.153 mg/L
	pH	6.0 SU, min	9.0 SU
	Lethal WET Limit [4] *Mysidopsis bahia* (7-day chronic NOEC)	Report %	Report %
	Sublethal WET Limit [4] *Mysidopsis bahia* (7-day chronic NOEC)	Report %	Report %
	Lethal WET Limit [5] *Mysidopsis bahia* (7-day chronic NOEC)	100%	100%

Outfall	Pollutant	Daily Average	Daily Maximum
001-Interim phase	Sublethal WET Limit [5] *Mysidopsis bahia* (7-day chronic NOEC)	80%	80%
001 Final phase	Flow	Report	Report
	Total Organic Carbon (TOC)	N/A	55 mg/L
	Oil and Grease	N/A	15 mg/L
	BTEX	N/A	0.5 mg/L
	pH	6.0 SU, min	9.0 SU
101	Flow	0.065 MGD	0.105 MGD
	Total Suspended Solids	30.6 mg/L 16.5 lbs/day	74.1 mg/L 40.1 lbs/day
	Oil and grease	38.0 mg/L 20.6 lbs/day	127 mg/L 68.8 lbs/day
	Total Arsenic	0.1 mg/L 0.0542 lbs/day	0.3 mg/L 0.163 lbs/day
	Total Cadmium	0.0102 mg/L 0.0055 lbs/day	0.0172 mg/L 0.0093 lbs/day
	Total Chromium	0.323 mg/L 0.175 lbs/day	0.746 mg/L 0.404 lbs/day
	Total Cobalt	18.8 mg/L 10.1 lbs/day	56.4 mg/L 30.5 lbs/day
	Total Copper	0.242 mg/L 0.131 lbs/day	0.500 mg/L 0.271 lbs/day
	Total Lead	0.160 mg/L 0.086 lbs/day	0.350 mg/L 0.189 lbs/day
	Total Mercury	0.005 mg/L 0.0027 lbs/day	0.01 mg/L 0.0054 lbs/day
	Total Tin	0.165 mg/L 0.089 lbs/day	0.335 mg/L 0.181 lbs/day
	Total Zinc	1.0 mg/L 0.542 lbs/day	6.0 mg/L 3.25 lbs/day
	Bis(2-ethylhexyl) phthalate	0.101 mg/L 0.054 lbs/day	0.215 mg/L 0.116 lbs/day
	Butylbenzyl phthalate	0.0887 mg/L 0.048 lbs/day	0.188 mg/L 0.101 lbs/day
	Carbazole	0.276 mg/L 0.149 lbs/day	0.598 mg/L 0.324 lbs/day
	n-Decane	0.437 mg/L 0.237 lbs/day	0.948 mg/L 0.514 lbs/day
	Fluoranthene	0.0268 mg/L 0.014 lbs/day	0.0537 mg/L 0.029 lbs/day
	n-Octadecane	0.302 mg/L 0.163 lbs/day	0.589 mg/L 0.319 lbs/day
	Total Petroleum Hydrocarbons	Report, mg/L Report, lbs/day	Report, mg/L Report, lbs/day
	pH	6.0 SU, min	9.0 SU

Outfall	Pollutant	Daily Average	Daily Maximum
102	Flow	0.040 MGD	0.050 MGD
	Total Suspended Solids	30.6 mg/L 10.2 lbs/day	74.1 mg/L 24.7 lbs/day
	Oil and grease	38.0 mg/L 12.6 lbs/day	127 mg/L 42.3 lbs/day
	Total Arsenic	0.1 mg/L 0.0334 lbs/day	0.3 mg/L 0.100 lbs/day
	Total Cadmium	0.0102 mg/L 0.0034 lbs/day	0.0172 mg/L 0.0057 lbs/day
	Total Chromium	0.323 mg/L 0.107 lbs/day	0.746 mg/L 0.249 lbs/day
	Total Cobalt	18.8 mg/L 6.27 lbs/day	56.4 mg/L 18.8 lbs/day
	Total Copper	0.242 mg/L 0.080 lbs/day	0.500 mg/L 0.166 lbs/day
	Total Lead	0.160 mg/L 0.053 lbs/day	0.350 mg/L 0.116 lbs/day
	Total Mercury	0.005 mg/L 0.0017 lbs/day	0.01 mg/L 0.0033 lbs/day
	Total Tin	0.165 mg/L 0.055 lbs/day	0.335 mg/L 0.111 lbs/day
	Total Zinc	1.0 mg/L 0.334 lbs/day	6.0 mg/L 2.00 lbs/day
	Bis(2-ethylhexyl) phthalate	0.101 mg/L 0.033 lbs/day	0.215 mg/L 0.071 lbs/day
	Butylbenzyl phthalate	0.0887 mg/L 0.029 lbs/day	0.188 mg/L 0.062 lbs/day
	Carbazole	0.276 mg/L 0.092 lbs/day	0.598 mg/L 0.199 lbs/day
	n-Decane	0.437 mg/L 0.145 lbs/day	0.948 mg/L 0.316 lbs/day
	Fluoranthene	0.0268 mg/L 0.0089 lbs/day	0.0537 mg/L 0.018 lbs/day
	n-Octadecane	0.302 mg/L 0.100 lbs/day	0.589 mg/L 0.196 lbs/day
	Total Petroleum Hydrocarbons	Report, mg/L Report, lbs/day	Report, mg/L Report, lbs/day
	pH	6.0 SU, min	9.0 SU

1 BTEX means benzene, toluene, ethylbenzene, and total xylenes
2 Beginning upon date of permit issuance and lasting through July 5, 2023.
3 Beginning on July 6, 2023 and lasting through the date of permit expiration.
4 Beginning upon date of permit issuance and lasting for a period of 34 months.
5 Beginning 34 months after date of permit issuance and lasting through date of permit expiration.

OUTFALL LOCATIONS

Outfall	Latitude	Longitude
001-interim	29.470649 N	94.968408 W
001-final	29.467500 N	94.966653 W

VIII. SUMMARY OF CHANGES FROM APPLICATION

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

1. A Whole effluent toxicity (WET) limits (Other Requirement No. 12) have been added at Outfall 001-interim phase in the draft permit based on TCEQ Interoffice Memorandum from Standards Implementation Team dated June 9, 2022. See the WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA section on page 18 of the Fact Sheet.

   The permittee shall submit a Whole Effluent Toxicity Compliance Schedule Plan to initiate a toxicity identification study and include milestones to achieve compliance with the pending WET limit(s), as required by Other Requirement Item No. 13. This will require the permittee to perform an extensive evaluation of the treatment and collection system, effluent characterization, and all other possible sources of toxicity. The permittee must then characterize the pollutant(s) causing test failures, provided that the failure(s) are of an adequate magnitude to perform accurate characterization. The permittee will then need to evaluate potential source control options and potential wastewater treatment options for these pollutants. After the permittee selects the most effective combination of source controls and treatment options, then the selected option will then need to be implemented into the facility's operations. The amount of time needed to complete this process justifies the need for a 34-month compliance schedule.

2. The new calculated water quality-based effluent limitations (WQBELs) for total zinc at Outfall 001 in the interim phase are more stringent than the existing scheduled limits. The more stringent limits for total zinc are applied in the draft permit for the interim phase of Outfall 001.

3. Existing effluent limitations and calculated water quality-based effluent limitations at internal Outfalls 101 and 102 are compared with the more stringent limitation selected and included in the draft permit. In the case of heavy metals subject to 30 TAC §319.23, another comparison of the preliminary selected limits and the limits from 30 TAC §319.23 is made the more stringent effluent limitations selected and included in the draft permit. Based on the comparisons, the more stringent effluent limits from 30 TAC §319.23 for total arsenic, total mercury, and total zinc have been placed at internal Outfalls 101 and 102 in the draft permit.

4. A new section for Centralized Waste Treatment Requirements has been added to the draft permit after Other Requirements and before Biomonitoring Requirements based on the nature of this regulated facility.

IX. SUMMARY OF CHANGES FROM EXISTING PERMIT

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

The applicant requests to relocate the Outfall 001. In accordance with 30 TAC §307.5 and the TCEQ implementation procedure (June 2010), the relocation of Outfall 001 is not expected to degrade the receiving waters. Based on this request, the draft permit has been restructured to include an interim phase and a final phase for Outfall 001. The interim phase corresponds to the Outfall 001 current location and the final phase corresponds to the proposed Outfall 001 location. The effluent limits of total aluminum, total copper, total lead, total nickel, total mercury, and total zinc have not been carried forward from the interim phase to the final phase due to the water quality re-evaluation resulting from the relocation does not demonstrate a reasonable potential for this parameters at the new location.

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

1. Pages 3-13 were updated (May 2021 version).
2. Other Requirement No. 9 has been added based on the TCEQ Interoffice Memorandum from Water Quality Assessment Team dated June 8, 2022.

   Upon the relocation of Outfall 001, the permittee shall maintain the diffuser at Outfall 001 to achieve a maximum dilution of 2.8 percent effluent at the edge of the ZID. The ZID is defined as a volume within a radius of 50 feet centered on the diffuser port.
3. Existing Other Requirement No. 7 has been updated to include the definitions of mixing zone for final phase.
4. The biomonitoring requirements have been revised to include 48-hour acute biomonitoring requirements for Outfall 001 in final phase.
5. Other Requirement No. 10has been added to define the interim and final phases.
6. Other Requirement No. 11 has been added to require the permittee to report the startup of the final phase.

X. DRAFT PERMIT RATIONALE

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

A. REASON FOR PERMIT ISSUANCE

The applicant applied to the Texas Commission on Environmental Quality (TCEQ) for a major amendment to Permit No. WQ0004086000 to authorize the relocation of Outfall 001**.** The existing permit authorizes the discharge of stormwater associated with industrial activity and previously monitored effluent (treated process wastewater and treated contaminated stormwater from internal Outfalls 101 and 102) on an intermittent and flow-variable basis via Outfall 001, treated process wastewater and treated contaminated stormwater at daily average flow not to exceed 0.065 MGD via Outfall 101,

treated process wastewater and treated contaminated stormwater at a daily average flow not to exceed 0.040 MGD via Outfall 102.

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 in interim phase is to a drainage ditch, thence to an unnamed tidal tributary of Dickinson Bayou, thence to Dickinson Bayou Tidal in Segment No. 1103 of the San Jacinto-Brazos Coastal Basin. The discharge route in final phase is to Dickinson Bayou Tidal in Segment No. 1103 of the San Jacinto – Brazos Coastal Basin. The unclassified receiving water uses are minimal aquatic life use for the drainage ditch and high aquatic life use for unnamed tidal tributary. The designated uses for Segment No. 1103 are primary contact recreation and high aquatic life use. Effluent limitations and conditions established in the draft permit comply with state water quality standards and the applicable water quality management plan. The effluent limits in the draft permit will maintain and protect the existing instream uses. Additional discussion of the water quality aspects of the draft permit can be found at Section X.D. of this fact sheet.

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

Endangered Species Review
The discharge from this permit is not expected to have an effect on any federal endangered or threatened aquatic or aquatic-dependent species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS's) biological opinion on the State of Texas authorization of the TPDES (September 14, 1998; October 21, 1998 update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic-dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS's biological opinion. Though the piping plover, *Charadrius melodus* Ord, can occur in Galveston County, the county is north of Copano Bay and not a watershed of high priority per Appendix A of the 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. 1103 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 specifically for dioxin

and polychlorinated biphenyls (PCBs) in edible tissue, depressed dissolved oxygen, and elevated bacteria levels.

- The listing for dioxin and PCBs in edible tissue apply to the entire Segment (AUs 1103_01, 1103_02, 1103_03, 1103_04). The facility neither manufactures nor uses dioxin, and PCBs are not typically associated with petroleum refineries. Neither are expected to be present in the wastestream from this facility in concentrations above the minimum analytical level (MAL).

- The dissolved oxygen impairment is restricted from the upper Segment boundary to the confluence with Gum Bayou (AUs 1103_02, 1103_03, 1103_04). This application is a major amendment without renewal and does not represent an increase in the permitted levels of oxygen-demanding constituents being discharged to Segment No. 1103.

- The bacteria listing is confined to a reach from Dickinson Bay to the confluence with Gum Bayou (AU 1103_01). The facility is not authorized to discharge domestic wastewater and has no other known sources of bacteria.

Completed Total Maximum Daily Loads (TMDLs)
On February 8, 2012, the TCEQ adopted *Eight Total Maximum Daily Loads for Indicator Bacteria in Dickinson Bayou and Three Tidal Tributaries Segments 1103, 1103A, 1103B, 1103C, 1104*. The EPA approved the TMDLs on June 6, 2012. The TMDLs address elevated levels of bacteria in multiple segments and assessment units (AUs) in these water bodies. The waste load allocation (WLA) for wastewater treatment facilities was established as the permitted flow for each facility multiplied by one-half the geometric mean criterion for bacteria. Future growth from existing or new permitted sources is not limited by these TMDLs as long as the sources do not exceed the limits of one-half the bacteria geometric mean criterion for *E. coli* (for facilities discharging to freshwater AUs) and Enterococcus (for facilities discharging to saline water AUs). To ensure that effluent eliminations for these discharges are consistent with the WLAs provided in the TMDLs, concentration-based effluent limitations for *E. coli* of 63 MPN per 100 mL (for facilities discharging to freshwater AUs) and for Enterococcus of 17.5 MPN per 100 mL (for facilities discharging to saline water AUs) has been included in the draft permits. However, this facility is authorized to discharge stormwater via Outfall 001, therefore, no WLA was required for this permit in the TMDL.

C. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

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

The draft permit authorizes the discharge of stormwater associated with industrial activity and previously monitored effluent (treated process wastewater and treated contaminated stormwater from internal Outfalls 101 and 102) on a continuous and flow-variable basis via Outfall 001, treated process wastewater and treated contaminated stormwater at a daily average flow not to exceed 0.065 MGD via internal Outfall 101, and treated process wastewater and treated

contaminated stormwater at a daily average flow not to exceed 0.040 MGD via internal Outfall 102.

The discharge of treated process wastewater and treated contaminated stormwater via internal Outfalls 101 and 102 from this facility is subject to federal effluent limitation guidelines at 40 CFR Part 437 – The Centralized Waste Treatment Point Source Category, Subpart B – Oils Treatment and Recovery. A new source determination was performed, and the discharge of treated process wastewater and treated contaminated stormwater is a new source as defined at 40 CFR §122.2. Therefore, new source performance standards (NSPS) are required for this discharge.

The discharge of stormwater associated with industrial activity via Outfall 001 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment.

The facility is a Resource Conservation and Recovery Act (RCRA)–permitted recycling and storage facility that manages catalyst and oily wastes from petroleum and petrochemical industries. The facility accepts centralized waste treatment (CWT) subcategory B wastewater from offsite for treatment prior to discharge. Thermal desorption and/or dewatering are used to recover catalyst and oil for recycling.

Wastewater is composed of stormwater, contaminated stormwater, and process wastewater generated from the separation and treatment of oily waste and catalyst recycling. Process wastewaters and contaminated stormwater from inside the containment area are commingled prior to treatment and routed through an oil/water separator to remove bulk solids, then through bag housing with oil grabber bags to further remove fine suspended oils and suspended solids. Organoclay is used to remove remaining emulsified oils, some organics, and dissolved metals, and activated carbon is used to remove dissolved organics. Wastewater is routed through a silt screen and oil boom prior to discharge via Outfall 001. Uncontaminated stormwater from outside the containment area receive no treatment prior to discharge via Outfall 001. Domestic wastewater is disposed of by an onsite septic tank and drainfield system and is not authorized for discharge by this permit.

2. CALCULATIONS

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

D. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. GENERAL COMMENTS

The *Texas Surface Water Quality Standards* found at 30 TAC Chapter 307 state that surface waters will not be toxic to man from ingestion of water, consumption of aquatic organisms, or contact with the skin, or to terrestrial or aquatic life. The methodology outlined in the TCEQ guidance document *Procedures to Implement the Texas Surface Water Quality Standards* (IPs) is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is

designed to ensure that no source will be allowed to discharge any wastewater that (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health. Calculated water quality-based effluent limits can be found in Appendix B of this fact sheet.

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

2. AQUATIC LIFE CRITERIA

a. SCREENING

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

i. OUTFALL 001 (INTERIM PHASE)

There is no mixing zone or zone of initial dilution (ZID) for this discharge directly to a drainage ditch, an intermittent stream; acute freshwater criteria apply at the end of pipe. Acute and chronic saltwater criteria are applied in the bay, estuary, or wide tidal river. The width of the unnamed tidal tributary at the point the discharge enters it is approximately 15 feet.

The discharge is into a freshwater body that flows into a saltwater segment. therefore, data from a representative freshwater segment is recommended for screening the freshwater portion of the discharge route. The values for pH, TSS, total hardness, and chloride from Segment No. 1104 have been used to evaluate the immediate receiving waters.

For the intermittent stream, the percent effluent for acute protection of aquatic life is 100% because the seven-day, two-year low-flow (7Q2) of the intermittent stream is 0.0 cfs. TCEQ uses the EPA horizontal jet plume model to estimate dilution for discharges into sections of bays, estuaries, and wide tidal rivers that are less than 400 feet wide. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis the following critical effluent percentages are calculated based on a flow of <10 MGD:

Acute Effluent % (drainage ditch)	100 %
Acute Effluent % (unnamed tidal tributary)	100 %
Chronic Effluent % (unnamed tidal tributary)	100%

ii. OUTFALL 001 (FINAL PHASE)

The applicant is proposing to relocate the location of Outfall 001 to directly to Dickinson Bayou Tidal. As documented in the TCEQ Interoffice Memorandum (IOM), by Gunnar Dubke, P.E. A mixing analysis of the discharge from Outfall 001 into Dickinson Bayou Tidal was conducted using the CORMIX Version 12.0GTD modeling software, consistent with current standardized TCEQ procedures for these evaluations.

Upon its relocation, Outfall 001 will consist of a submerged single-port diffuser, located approximately 30 meters from the shoreline with an orientation perpendicular to the channel centerline. The diffuser port is approximately 0.5 meters above the channel bottom, has a diameter of 44.4 millimeters, and is horizontally oriented. The model was used to evaluate the permitted effluent flowrate of 0.105 MGD (combined permitted flows of internal Outfall 101 and 102) and tow-year median flowrate of 0.086 MGD.

The chronic aquatic life mixing zone is defined as a volume within a radius of 200 feet from the point of discharge. Chronic toxic criteria apply at the edge of the chronic aquatic life mixing zone. The ZID is defined as a volume within a radius of 50 feet from the point of discharge. The human health mixing zone is defined as a volume with a radius of 400 feet from the point of discharge enters Dickinson Bayou Tidal.

TCEQ practice is to establish minimum estimated effluent percentages at the edges of the ZID and aquatic life mixing zone for discharges that are 10 MGD or less into bays, estuaries, or wide tidal rivers that are at least 400 feet wide. These critical effluent percentages are as follows:

Acute Effluent %	2.8%	Chronic Effluent %	1.2%

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.

***Interim phase**:*

From the WLA, a long-term average (LTA) is calculated using a lognormal probability distribution, a given coefficient of variation

(0.6), and a 90th 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.

Assumptions used in deriving the effluent limitations include segment-specific values for TSS, pH, hardness, and chloride according to the *IPs*. The segment values are 8.6 mg/L for TSS, 7.3 standard units for pH, 162 mg/L for hardness (as calcium carbonate, $CaCO_3$), and 95 mg/L for chloride. For additional details on the calculation of water quality-based effluent limitations, refer to the *IPs*.

Final phase:

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.

Assumptions used in deriving the effluent limitations include the segment-specific value for TSS according to the *IPs*. The segment value is 9.0 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

i. OUTFALL 001 (INTERIM PHASE)

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

The limits in the existing permit were compared to the calculated water quality-based effluent limits to determine whether the existing limits are still protective. None of the recalculated effluent limits are more stringent than the existing ones except total zinc in the interim phase. The more stringent effluent limits for total zinc are applied at Outfall 001 interim phase in the draft permit.

Parameter	Daily Avg	Daily Max
Total Aluminum	0.834 mg/L	1.76 mg/L
Total Copper	0.0036 mg/L	0.0077 mg/L
Total Lead	0.012 mg/L	0.026 mg/L
Total Nickel	0.011 mg/L	0.024 mg/L
Total Mercury	0.000034 mg/L	0.000073 mg/L
Total Zinc	0.072 mg/L	0.153 mg/L

ii. OUTFALL 001 (FINAL PHASE)

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

3. WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA

a. SCREENING AND REASONABLE POTENTIAL ANALYSIS

i. OUTFALL 001 (INTERIM PHASE)

The existing permit includes chronic saltwater biomonitoring requirements at Outfall 001. In the past three years, the permittee has performed twenty-two chronic tests at the interim phase outfall, with five demonstrations of significant toxicity (i.e., five failures) by the mysid shrimp.

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 zero failures by the inland silverside, a determination of no RP was made.

With five failures by the mysid shrimp, a WET limit is required with a compliance period of 34 months. If the final phase outfall is constructed and the flow diverted before 34-month, the WET limit does not become effective.

ii. OUTFALL 001 (FINAL PHASE)

With no testing to date, and therefore zero failures, a determination of no RP is made for the final phase flow. 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

i. OUTFALL 001 (INTERIM PHASE)

The provisions of this section apply to Outfall 001 in the interim phase.

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

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

(a) 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.

(b) 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 Freshwater Organisms,* Fourth Edition (EPA-821-R-02-013) or the latest revision. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the state water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

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

WET limits are not required for inland silverside and the permittee may be eligible for the testing frequency reduction after one year of quarterly testing. A WET limit is required with a compliance period of 34 months. The mysid shrimp is not eligible for the testing frequency reduction for the interim flow phase. If the final phase outfall is constructed and the flow diverted before 34 months, the WET limit does not become effective.

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.

ii. OUTFALL 001 (FINAL PHASE)

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

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

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

(a) Acute static renewal 48-hour definitive toxicity test using the mysid shrimp (*Mysidopsis bahia*). The frequency of the testing shall be once per quarter.

(b) Acute static renewal 48-hour definitive toxicity 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 *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. The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the state water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge.

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

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

c. DILUTION SERIES

i. OUTFALL 001 (INTERIM PHASE)

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 32%, 42%, 56%, 80%, and 100%. The low-flow effluent concentration (critical dilution) is defined as 100% effluent.

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

ii. OUTFALL 001 (FINAL PHASE)

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%, 9%, 12%, and 16%. The low-flow effluent concentration (critical dilution) is defined as 12% 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.ii of this fact sheet.

d. WHOLE EFFLUENT TOXICITY (WET) LIMITS

i. OUTFALL 001 (INTERIM PHASE)

Parameter/Species	**Daily Avg**	**Daily Max**
Lethal WET Limit [1] *Mysidopsis bahia* (7-day chronic NOEC)	Report %	Report %
Sublethal WET Limit [1] *Mysidopsis bahia* (7-day chronic NOEC)	Report %	Report %
Lethal WET Limit [2] *Mysidopsis bahia* (7-day chronic NOEC)	100%	100%
Sublethal WET Limit [2] *Mysidopsis bahia* (7-day chronic NOEC)	80%	80%

1 Effective beginning upon date of permit issuance and lasting for a period of 34-months.

2 Effective beginning 34 months after the date of permit issuance and lasting through the date of permit expiration.

ii. OUTFALL 001 (FINAL PHASE)

Based on the biomonitoring memo from Standards Implementation Team dated June 9, 2022, the WET limits are not required for the final phase.

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

a. SCREENING

The existing permit includes 24-hour acute freshwater biomonitoring requirements for Outfall 001 interim phase. In the past three years, the permittee has performed ten 24-hour acute tests, with zero demonstrations of significant lethality (i.e., zero failures). Minimum 24-hour acute freshwater biomonitoring requirements are proposed in the draft permit as outlined below.

b. PERMIT ACTION

Twenty-four-hour 100% acute biomonitoring tests are required at Outfall 001 in both the interim phase and the final phase 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.

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

5. AQUATIC ORGANISM BIOACCUMULATION CRITERIA

a. SCREENING

i. OUTFALL 001 (INTERIM PHASE)

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 in the bay, estuary, or wide tidal river for a discharge to an intermittent stream that enters a bay, estuary, or wide tidal river within 3 miles downstream of the discharge point. TCEQ uses the EPA horizontal jet plume model to estimate dilution for discharges into sections of bays, estuaries, or wide tidal rivers that are less than 400 feet wide. General assumptions used in the horizontal jet plume model are a non-buoyant discharge, a submersed pipe, and no cross flow. Based on this analysis, the following critical effluent percentage is calculated based on the flow <10 MGD:

Human Health Effluent %: 100%

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

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

ii. OUTFALL 001 (FINAL PHASE)

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).

As documented in the TCEQ Interoffice Memorandum (IOM), by Gunnar Dubke, P.E. (Water Quality Assessment Team) dated June 8, 2022, a mixing analysis of the discharge from Outfall 001 into Dickson Bayou Tidal was conducted using the CORMIX Version 12.0GTD modeling software, consistent with current standardized TCEQ procedures for these evaluations.

Upon the relocation of Outfall 001, it will consist of a submerged single-port diffuser, located approximately 30 meters from the shoreline with an orientation perpendicular to the channel centerline. The diffuser port is approximately 0.5 meters above the channel bottom, has a diameter of 44.4 millimeters, and is horizontally oriented. The model was used to evaluate the permitted effluent flowrate of 0.105 MGD (combined permitted flows of internal Outfalls 101 and 102) and the two-year median flowrate of 0.086 MGD.

Human Health Effluent %: 0.8%

b. PERMIT ACTION

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

6. DRINKING WATER SUPPLY PROTECTION

a. SCREENING

Segment No. 1103, 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 PROTECTION

a. SCREENING

Segment No. 1103, 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.

b. PERMIT ACTION

None.

8. PROTECTION OF pH STANDARDS

a. SCREENING

i. OUTFALL 001 (INTERIM PHASE)

The existing permit includes pH limits of 6.0 – 9.0 standard units at Outfall 001 in the interim phase, which discharge into an unclassified water body. Consistent with the procedures for pH screening that were submitted to EPA with a letter dated May 28, 2014, and approved by EPA in a letter dated June 2, 2014, requiring a discharge to an unclassified water body to meet pH limits of 6.0 – 9.0 standard units reasonably ensures instream compliance with *Texas Surface Water Quality Standards* pH criteria.

ii. OUTFALL 001 (FINAL PHASE)

The proposed permit includes pH limits of 6.0 – 9.0 SU at Outfall 001 in final phase, which discharges directly into Dickinson Bayou Tidal, Segment No. 1103. 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 Dickinson Bayou Tidal (see Appendix C).

b. PERMIT ACTION

Interim phase: The existing pH limits of 6.0 – 9.0 standard units are carried forward in the draft permit at Outfall 001.

Final phase: The existing effluent limits of 6.0 – 9.0 SU are adequate to ensure that the discharge will not violate the pH criteria in Dickinson Bayou Tidal.

9. 30 TAC CHAPTER 319 METALS

a. SCREENING

30 TAC §319.23 specifies limitations for the discharge of specific heavy metals into tidal waters of the state.

b. PERMIT ACTION

Final selected effluent limitations based on calculated technology-based effluent limitations, calculated water quality-based effluent limitations, and existing limitations are compared to effluent limitations for those parameters regulated by 30 TAC §319.23. The regulated effluent limits from 30 TAC §319.23 for total arsenic, total mercury, and total zinc at Outfall 101; for total arsenic, total mercury, and total zinc at Outfall 102 are more stringent than the limitations derived from other sources (calculated water quality-based and technology-based limitations).

Based on the 30 TAC §319.24, the attainment of the specified levels by dilution, in the absence of any treatment is specifically prohibited. The following effluent limitations to maintain compliance with 30 TAC §319.23 are proposed at the internal Outfalls 101 and 102 in the draft permit (see Attachment C for calculations):

Outfall	Pollutant	Daily Average	Daily Maximum
101	Total Arsenic	0.1 mg/L 0.0542 lbs/day	0.3 mg/L 0.163 lbs/day
	Total Mercury	0.005 mg/L 0.0027 lbs/day	0.01 mg/L 0.0054 lbs/day
	Total Zinc	1.0 mg/L 0.542 lbs/day	6.0 mg/L 3.25 lbs/day
102	Total Arsenic	0.1 mg/L 0.0334 lbs/day	0.3 mg/L 0.100 lbs/day
	Total Mercury	0.005 mg/L 0.0017 lbs/day	0.01 mg/L 0.0033 lbs/day
	Total Zinc	1.0 mg/L 0.334 lbs/day	6.0 mg/L 2.00 lbs/day

XI. PRETREATMENT REQUIREMENTS

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

XII. VARIANCE REQUESTS

No variance requests have been received.

XIII. PROCEDURES FOR FINAL DECISION

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

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

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

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

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

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

For additional information about this application, contact Ruiqiang Zong at (512) 239-4589.

XIV. ADMINISTRATIVE RECORD

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

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

A. PERMIT(S)

TPDES Permit No. WQ0004086000 issued on July 6, 2020.

B. APPLICATION

TPDES wastewater permit application received on July 8, 2021.

C. 40 CFR CITATION(S)

40 CFR Part 437, Subpart B (NSPS)

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 November 15, 2021, from Brittany M. Lee of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Standards Memo).

TCEQ Interoffice Memorandum dated June 8, 2022, from Gunnar Dubke, P.E. of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Diffuser Review Memo).

TCEQ Interoffice Memorandum dated June 8, 2022, from Gunnar Dubke, P.E. of the Water Quality Assessment Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Critical Conditions Memo).

TCEQ Interoffice Memorandum dated June 9, 2022, from Michael B. Pfeil of the Standards Implementation Team, Water Quality Assessment Section, to the Industrial Permits Team, Wastewater Permitting Section (Biomonitoring Memo).

Electronic mail dated July 7, 2022, from Ruiqiang Zong of the Industrial Permits Team, Wastewater Permitting Section, to Mr. Bruce Riffel, Senior Compliance Manager, flowrate correction on DMR.

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.

Appendix A
Calculated Technology-Based Effluent Limits

Clean Harbors San Leon, Inc., operates a recycling and storage facility that manages catalyst and oily wastes from the petroleum refining and petrochemical industries. The draft permit authorizes the discharge of stormwater associated with industrial activity and previously monitored effluent (treated process wastewater and treated contaminated stormwater from internal Outfalls 101 and 102) on a continuous and flow-variable basis via Outfall 001, treated process wastewater and treated contaminated stormwater at a daily average flow not to exceed 0.065 MGD via internal Outfall 101, and treated process wastewater and treated contaminated stormwater at a daily average flow not to exceed 0.040 MGD via internal Outfall 102. The discharge of treated process wastewater and treated contaminated stormwater via internal Outfalls 101 and 102 from this facility is subject to federal effluent limitation guidelines at 40 CFR Part 437 - The Centralized Waste Treatment Point Source Category, Subpart B – Oils Treatment and Recovery. A new source determination was performed, and the discharge of treated process wastewater is a new source as defined at 40 CFR §122.2. Therefore, new source performance standards (NSPS) are required for this discharge.

The discharge of stormwater associated with industrial activity via Outfall 001 is not subject to federal effluent limitation guidelines and any technology-based effluent limitations are based on best professional judgment and are continued in the draft permit based on EPA's anti-backsliding regulations at 40 CFR § 122.44(l). The effluent limitations have also carried forward to the final phase in the draft permit based on BPJ.

Effluent Limitations at Outfall 001			
Outfall	**Parameter**	**Daily Avg**	**Daily Max**
001-interim phase and final phase	Total Organic Carbon	N/A	55
	Oil and Grease	N/A	15
	BTEX	N/A	0.5
	pH	Between 6.0 and 9.0 SU.	

Internal Outfall 101 – (treated process wastewater) – Effluent limitations for NSPS at 40 CFR § 437.24 are the same as the effluent limitations for Best Practicable Control Technology (BPT) at 40 CFR § 437.21.

Example Calculation:

Mass Limitation (lbs/day) = ELG (mg/L) × flow (MGD) × 8.345

Regulated Parameter	**Daily Avg mg/L**	**Daily Max mg/L**	**Daily Avg lbs/day**	**Daily Max lbs/day**
Conventional Parameters				
Oil and Grease	38	127	20.6	68.8
Total Suspended Solids	30.6	74.1	16.5	40.1
pH	6.0 SU (min)	9.0 SU (max)	6.0 SU (min)	9.0 SU (max)
Metal Parameters				
Arsenic, Total	1.33	2.95	0.721	1.60
Cadmium, Total	0.0102	0.0172	0.0055	0.0093
Chromium, Total	0.323	0.746	0.175	0.404
Cobalt, Total	18.8	56.4	10.1	30.5
Copper, Total	0.242	0.500	0.131	0.271
Lead, Total	0.160	0.350	0.086	0.189
Mercury, Total	0.00647	0.0172	0.0035	0.0093
Tin, Total	0.165	0.335	0.089	0.181
Zinc, Total	4.50	8.26	2.44	4.48

Regulated Parameter	Daily Avg mg/L	Daily Max mg/L	Daily Avg lbs/day	Daily Max lbs/day
Organic Parameters				
Bis(2-ethylhexyl) phthalate	0.101	0.215	0.054	0.116
Butylbenzyl phthalate	0.0887	0.188	0.048	0.101
Carbazole	0.276	0.598	0.149	0.324
n-Decane	0.437	0.948	0.237	0.514
Fluoranthene	0.0268	0.0537	0.014	0.029
n-Octadecane	0.302	0.589	0.163	0.319

In addition, daily average and daily maximum monitoring and reporting requirements for total petroleum hydrocarbons were included in the existing permit at internal Outfall 101 and are continued in the draft permit based on best professional judgment due to the potential for this constituent to be present in the effluent discharge from this facility.

Internal Outfall 102 – (treated process wastewater) – Effluent limitations for NSPS at 40 CFR § 437.24 are the same as the effluent limitations for Best Practicable Control Technology at 40 CFR § 437.21.

Example Calculation:

Mass Limitation (lbs/day) = ELG (mg/L) × flow (MGD) × 8.345

Regulated Parameter	Daily Avg mg/L	Daily Max mg/L	Daily Avg lbs/day	Daily Max lbs/day
Conventional Parameters				
Oil and Grease	38	127	12.6	42.3
Total Suspended Solids	30.6	74.1	10.2	24.7
pH	6.0 SU (min)	9.0 SU (max)	6.0 SU (min)	9.0 SU (max)
Metal Parameters				
Arsenic, Total	1.33	2.95	0.443	0.984
Cadmium, Total	0.0102	0.0172	0.0034	0.0057
Chromium, Total	0.323	0.746	0.107	0.249
Cobalt, Total	18.8	56.4	6.27	18.8
Copper, Total	0.242	0.500	0.080	0.166
Lead, Total	0.160	0.350	0.053	0.116
Mercury, Total	0.00647	0.0172	0.0021	0.0057
Tin, Total	0.165	0.335	0.055	0.111
Zinc, Total	4.50	8.26	1.50	2.75
Organic Parameters				
Bis(2-ethylhexyl) phthalate	0.101	0.215	0.033	0.071
Butylbenzyl phthalate	0.0887	0.188	0.029	0.062
Carbazole	0.276	0.598	0.092	0.199
n-Decane	0.437	0.948	0.145	0.316
Fluoranthene	0.0268	0.0537	0.0089	0.017
n-Octadecane	0.302	0.589	0.100	0.196

In addition, daily average and daily maximum monitoring and reporting requirements for total petroleum hydrocarbons were included at internal Outfall 102 based on best professional judgment due to the potential for this constituent to be present in the effluent discharge from this facility.

Appendix B
Calculated Water Quality-Based Effluent Limits

TEXTOX MENU #10 - INTERMITTENT FRESHWATER STREAM WITHIN 3 MILES OF A 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 Freshwater and 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:	Clean Harbors San Leon, Inc.
TPDES Permit No:	WQ0004086000
Outfall No:	001 -interim phase
Prepared by:	RUIQIANG ZONG
Date:	July 7, 2022

DISCHARGE INFORMATION

Intermittent Receiving Waterbody:	a drainage ditch
Segment No. for Freshwater Ambient Data:	1104
TSS (mg/L) (Intermittent):	8.6
pH (Standard Units) (Intermittent):	7.3
Hardness (mg/L as $CaCO_3$) (Intermittent):	162
Chloride (mg/L) (Intermittent):	95
Effluent Flow for Aquatic Life (MGD):	<10
% Effluent for Acute Aquatic Life (Intermittent):	100
Saltwater Receiving Waterbody:	Dickinson Bayou Tidal
Segment No.:	1103
TSS (mg/L) (Bay/Tidal River):	9
% Effluent for Chronic Aquatic Life (Bay/Tidal River):	100
% Effluent for Acute Aquatic Life (Bay/Tidal River):	100
Oyster Waters?	**no**
Effluent Flow for Human Health (MGD):	<10
% Effluent for Human Health (Bay/Tidal River):	99

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

Stream/River Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	99498.41	0.539		1.00	Assumed
Cadmium	6.60	-1.13	349958.66	0.249		1.00	Assumed
Chromium (total)	6.52	-0.93	447627.17	0.206		1.00	Assumed
Chromium (trivalent)	6.52	-0.93	447627.17	0.206		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.02	-0.74	213044.90	0.353		1.00	Assumed
Lead	6.45	-0.80	503966.00	0.187		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	5.69	-0.57	143660.01	0.447		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	261496.93	0.308		1.00	Assumed
Zinc	6.10	-0.70	279158.65	0.294		1.00	Assumed

Estuarine Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed

Estuarine Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
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	14552.76	0.884		1.00	Assumed
Lead	6.06	-0.85	177375.60	0.385		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	5.86	-0.74	142514.99	0.438		1.00	Assumed
Zinc	5.36	-0.52	73079.22	0.603		1.00	Assumed

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*FW Acute Criterion (µg/L)*	*SW Acute Criterion (µg/L)*	*SW Chronic Criterion (µg/L)*	*FW WLAa (µg/L)*	*SW WLAa (µg/L)*	*SW WLAc (µg/L)*	*FW LTAa (µg/L)*	*SW LTAa (µg/L)*	*SW LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Aldrin	3.0	1.3	N/A	3.0	1.30	N/A	1.72	0.42	N/A	0.61	1.29
Aluminum	991	N/A	N/A	991	N/A	N/A	568	N/A	N/A	835	1766
Arsenic	340	149	78	631	149	78	362	48	48	70	148
Cadmium	13.7	40.0	8.75	55.0	40	9	31.5	12.8	5.3	7.8	16.6
Carbaryl	2.0	613	N/A	2.0	613	N/A	1.15	196.2	N/A	1.68	3.56
Chlordane	2.4	0.09	0.004	2.4	0.090	0.004	1.38	0.029	0.002	0.004	0.008
Chlorpyrifos	0.083	0.011	0.006	0.083	0.011	0.006	0.048	0.004	0.004	0.005	0.011
Chromium (trivalent)	846	N/A	N/A	4102	N/A	N/A	2350	N/A	N/A	3455	7310
Chromium (hexavalent)	15.7	1090	49.6	15.7	1090	50	9.00	349	30	13.2	28.0
Copper	22.4	13.5	3.6	63.4	15.3	4.1	36.3	4.9	2.5	3.7	7.7
Copper (oyster waters)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cyanide (free)	45.8	5.6	5.6	45.8	5.6	5.6	26.2	1.79	3.4	2.63	5.6
4,4'-DDT	1.1	0.13	0.001	1.1	0.130	0.001	0.630	0.042	6e-4	0.001	0.002
Demeton	N/A	N/A	0.1	N/A	N/A	0.10	N/A	N/A	0.061	0.09	0.19
Diazinon	0.17	0.819	0.819	0.17	0.82	0.8	0.097	0.262	0.50	0.143	0.303
Dicofol [Kelthane]	59.3	N/A	N/A	59.3	N/A	N/A	34.0	N/A	N/A	49.9	106
Dieldrin	0.24	0.71	0.002	0.24	0.71	0.002	0.138	0.227	0.001	0.002	0.004
Diuron	210	N/A	N/A	210	N/A	N/A	120.3	N/A	N/A	176.9	374.2
Endosulfan I (*alpha*)	0.22	0.034	0.009	0.22	0.034	0.009	0.126	0.011	0.005	0.008	0.017
Endosulfan II (*beta*)	0.22	0.034	0.009	0.22	0.034	0.009	0.126	0.011	0.005	0.008	0.017
Endosulfan sulfate	0.22	0.034	0.009	0.22	0.034	0.009	0.126	0.011	0.005	0.008	0.017
Endrin	0.086	0.037	0.002	0.086	0.037	0.002	0.049	0.012	0.001	0.002	0.004
Guthion [Azinphos Methyl]	N/A	N/A	0.01	N/A	N/A	0.010	N/A	N/A	0.006	0.009	0.019
Heptachlor	0.52	0.053	0.004	0.52	0.053	0.004	0.298	0.017	0.002	0.004	0.008
Hexachlorocyclohexane (*gamma*) [Lindane]	1.126	0.16	N/A	1.126	0.160	N/A	0.645	0.051	N/A	0.075	0.159
Lead	109	133	5.3	580	345	14	332	111	8	12	26
Malathion	N/A	N/A	0.01	N/A	N/A	0.010	N/A	N/A	0.006	0.009	0.019
Mercury	2.4	2.1	1.1	2.4	2.10	1.1	1.38	0.67	0.67	0.99	2.09
Methoxychlor	N/A	N/A	0.03	N/A	N/A	0.030	N/A	N/A	0.018	0.027	0.057
Mirex	N/A	N/A	0.001	N/A	N/A	0.001	N/A	N/A	6e-4	0.001	0.002
Nickel	704	118	13.1	1574	118	13	902	38	8.0	12	25
Nonylphenol	28	7	1.7	28	7.0	1.7	16.0	2.24	1.0	1.5	3.2

AQUATIC LIFE
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*FW Acute Criterion (µg/L)*	*SW Acute Criterion (µg/L)*	*SW Chronic Criterion (µg/L)*	*FW WLAa (µg/L)*	*SW WLAa (µg/L)*	*SW WLAc (µg/L)*	*FW LTAa (µg/L)*	*SW LTAa (µg/L)*	*SW LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Parathion (ethyl)	0.065	N/A	N/A	0.065	N/A	N/A	0.037	N/A	N/A	0.055	0.116
Pentachlorophenol	11.8	15.1	9.6	11.8	15.1	10	6.8	4.8	5.9	7.1	15.0
Phenanthrene	30	7.7	4.6	30	7.7	4.6	17.2	2.46	2.8	3.6	7.7
Polychlorinated Biphenyls [PCBs]	2.0	10	0.03	2.0	10.0	0.030	1.15	3.2	0.018	0.027	0.057
Selenium	20	564	136	20	564	136	11.5	180	83	16.8	35.6
Silver	0.8	2	N/A	20.55	4.6	N/A	11.77	1.46	N/A	2.15	4.5
Toxaphene	0.78	0.21	0.0002	0.78	0.210	2e-4	0.447	0.067	1e-4	2e-4	4e-4
Tributyltin [TBT]	0.13	0.24	0.0074	0.13	0.240	0.007	0.074	0.077	0.005	0.007	0.014
2,4,5 Trichlorophenol	136	259	12	136	259	12	77.9	83	7.3	11	23
Zinc	176	92.7	84.2	600	154	140	344	49	85	72	153

HUMAN HEALTH
CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Only Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Acrylonitrile	115	116	108	159	336
Aldrin	1.147E-05	1.16E-05	1.08E-05	1.58E-05	3.35E-05
Anthracene	1317	1330	1237	1819	3848
Antimony	1071	1082	1006	1479	3129
Arsenic	N/A	N/A	N/A	N/A	N/A
Barium	N/A	N/A	N/A	N/A	N/A
Benzene	581	587	546	802	1697
Benzidine	0.107	0.11	0.10	0.15	0.31
Benzo(*a*)anthracene	0.025	0.025	0.023	0.035	0.07
Benzo(*a*)pyrene	0.0025	0.003	0.002	0.003	0.007
Bis(chloromethyl)ether	0.2745	0.28	0.26	0.38	0.8
Bis(2-chloroethyl)ether	42.83	43	40	59	125
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.55	8	7	10	22
Bromodichloromethane [Dichlorobromomethane]	275	278	258	380	803
Bromoform [Tribromomethane]	1060	1071	996	1464	3097
Cadmium	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	46	46	43	64	134
Chlordane	0.0025	0.003	0.002	0.003	0.007
Chlorobenzene	2737	2765	2571	3780	7996
Chlorodibromomethane [Dibromochloromethane]	183	185	172	253	535
Chloroform [Trichloromethane]	7697	7775	7231	10629	22487
Chromium (hexavalent)	502	507	472	693	1467
Chrysene	2.52	2.5	2.4	3.5	7
Cresols [Methylphenols]	9301	9395	8737	12844	27173
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.002	0.002	0.003	0.006
4,4'-DDE	0.00013	0.0001	0.0001	0.0002	0.0004
4,4'-DDT	0.0004	0.000	0.0004	0.001	0.001
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	473	478	444	653	1382
1,2-Dibromoethane [Ethylene Dibromide]	4.24	4	4.0	6	12
m-Dichlorobenzene [1,3-Dichlorobenzene]	595	601	559	822	1738
o-Dichlorobenzene [1,2-Dichlorobenzene]	3299	3332	3099	4556	9638
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	2.24	2.3	2.1	3.1	7

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Only Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
1,2-Dichloroethane	364	368	342	503	1063
1,1-Dichloroethylene [1,1-Dichloroethene]	55114	55671	51774	76107	161016
Dichloromethane [Methylene Chloride]	13333	13468	12525	18412	38953
1,2-Dichloropropane	259	262	243	358	757
1,3-Dichloropropene [1,3-Dichloropropylene]	119	120	112	164	348
Dicofol [Kelthane]	0.30	0.30	0.28	0.4	0.9
Dieldrin	2.0E-05	2.02E-05	1.88E-05	2.76E-05	5.84E-05
2,4-Dimethylphenol	8436	8521	7925	11649	24646
Di-*n*-Butyl Phthalate	92.4	93	87	128	270
Dioxins/Furans [TCDD Equivalents]	7.97E-08	8.05E-08	7.49E-08	1.10E-07	2.33E-07
Endrin	0.02	0.020	0.019	0.028	0.06
Epichlorohydrin	2013	2033	1891	2780	5881
Ethylbenzene	1867	1886	1754	2578	5454
Ethylene Glycol	1.68E+07	1.70E+07	1.58E+07	2.32E+07	4.91E+07
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.0001	0.0001	0.0001	0.0001	0.0003
Heptachlor Epoxide	0.00029	0.0003	0.0003	0.000	0.001
Hexachlorobenzene	0.00068	0.001	0.001	0.001	0.002
Hexachlorobutadiene	0.22	0.22	0.21	0.30	0.6
Hexachlorocyclohexane (*alpha*)	0.0084	0.008	0.008	0.012	0.025
Hexachlorocyclohexane (*beta*)	0.26	0.26	0.24	0.36	0.8
Hexachlorocyclohexane (*gamma*) [Lindane]	0.341	0.34	0.32	0.5	1.0
Hexachlorocyclopentadiene	11.6	12	11	16	34
Hexachloroethane	2.33	2.4	2.2	3.2	7
Hexachlorophene	2.90	2.9	2.7	4.0	8
4,4'-Isopropylidenediphenol [Bisphenol A]	15982	16143	15013	22070	46692
Lead	3.83	10	9	14	29
Mercury	0.025	0.025	0.023	0.035	0.07
Methoxychlor	3.0	3	3	4	9
Methyl Ethyl Ketone	9.92E+05	1.00E+06	9.32E+05	1.37E+06	2.90E+06
Methyl *tert*-butyl ether [MTBE]	10482	10588	9847	14475	30623
Nickel	1140	1152	1071	1574	3331
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	1873	1892	1759	2586	5472
N-Nitrosodiethylamine	2.1	2.1	2.0	2.9	6
N-Nitroso-di-*n*-Butylamine	4.2	4	3.9	6	12
Pentachlorobenzene	0.355	0.36	0.33	0.5	1.0
Pentachlorophenol	0.29	0.29	0.27	0.40	0.8
Polychlorinated Biphenyls [PCBs]	6.4E-04	0.001	0.001	0.001	0.002
Pyridine	947	957	890	1308	2767
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.24	0.24	0.23	0.33	0.7
1,1,2,2-Tetrachloroethane	26.35	27	25	36	77
Tetrachloroethylene [Tetrachloroethylene]	280	283	263	387	818
Thallium	0.23	0.23	0.22	0.32	0.7
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.011	0.010	0.015	0.032
2,4,5-TP [Silvex]	369	373	347	510	1078
1,1,1-Trichloroethane	784354	792277	736817	1083122	2291502
1,1,2-Trichloroethane	166	168	156	229	485
Trichloroethylene [Trichloroethene]	71.9	73	68	99	210
2,4,5-Trichlorophenol	1867	1886	1754	2578	5454

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Only Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
TTHM [Sum of Total Trihalomethanes]	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	16.5	17	16	23	48

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

Aquatic Life	*70% of Daily Avg.*	*85% of Daily Avg.*
Parameter	***(µg/L)***	***(µg/L)***
Aldrin	0.43	0.52
Aluminum	584	710
Arsenic	49	59
Cadmium	5.5	6.7
Carbaryl	1.18	1.43
Chlordane	0.003	0.003
Chlorpyrifos	0.004	0.004
Chromium (trivalent)	2419	2937
Chromium (hexavalent)	9.26	11.2
Copper	2.6	3.1
Copper (oyster waters)	N/A	N/A
Cyanide (free)	1.84	2.24
4,4'-DDT	0.0006	0.0008
Demeton	0.063	0.076
Diazinon	0.100	0.122
Dicofol [Kelthane]	35.0	42.5
Dieldrin	0.001	0.002
Diuron	124	150
Endosulfan I (*alpha*)	0.006	0.007
Endosulfan II (*beta*)	0.006	0.007
Endosulfan sulfate	0.006	0.007
Endrin	0.001	0.002
Guthion [Azinphos Methyl]	0.006	0.008
Heptachlor	0.003	0.003
Hexachlorocyclohexane (*gamma*) [Lindane]	0.053	0.064
Lead	9	10
Malathion	0.006	0.008
Mercury	0.69	0.84
Methoxychlor	0.019	0.023
Mirex	0.0006	0.0008
Nickel	8	10
Nonylphenol	1.07	1.30
Parathion (ethyl)	0.038	0.047
Pentachlorophenol	5.0	6.0
Phenanthrene	2.54	3.1
Polychlorinated Biphenyls [PCBs]	0.019	0.023
Selenium	11.8	14.3
Silver	1.50	1.83
Toxaphene	0.0001	0.0002
Tributyltin [TBT]	0.005	0.006
2,4,5 Trichlorophenol	7.5	9.1
Zinc	51	61

Human Health	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Acrylonitrile	111	135
Aldrin	1.11E-05	1.35E-05
Anthracene	1273	1546
Antimony	1035	1257
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	562	682
Benzidine	0.10	0.13
Benzo(*a*)anthracene	0.024	0.029
Benzo(*a*)pyrene	0.002	0.003
Bis(chloromethyl)ether	0.27	0.32
Bis(2-chloroethyl)ether	41	50
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7	9
Bromodichloromethane [Dichlorobromomethane]	266	323
Bromoform [Tribromomethane]	1025	1244
Cadmium	N/A	N/A
Carbon Tetrachloride	44	54
Chlordane	0.002	0.003
Chlorobenzene	2646	3213
Chlorodibromomethane [Dibromochloromethane]	177	215
Chloroform [Trichloromethane]	7440	9035
Chromium (hexavalent)	485	589
Chrysene	2.4	3.0
Cresols [Methylphenols]	8991	10917
Cyanide (free)	N/A	N/A
4,4'-DDD	0.002	0.002
4,4'-DDE	0.0001	0.0002
4,4'-DDT	0.0004	0.0005
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	457	555
1,2-Dibromoethane [Ethylene Dibromide]	4	5
m-Dichlorobenzene [1,3-Dichlorobenzene]	575	698
o-Dichlorobenzene [1,2-Dichlorobenzene]	3189	3872
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	2.2	2.6
1,2-Dichloroethane	352	427
1,1-Dichloroethylene [1,1-Dichloroethene]	53275	64691
Dichloromethane [Methylene Chloride]	12888	15650
1,2-Dichloropropane	250	304
1,3-Dichloropropene [1,3-Dichloropropylene]	115	140
Dicofol [Kelthane]	0.29	0.35
Dieldrin	1.93E-05	2.35E-05
2,4-Dimethylphenol	8155	9902
Di-*n*-Butyl Phthalate	89	108
Dioxins/Furans [TCDD Equivalents]	7.70E-08	9.35E-08
Endrin	0.019	0.023
Epichlorohydrin	1946	2363
Ethylbenzene	1805	2191
Ethylene Glycol	1.62E+07	1.97E+07
Fluoride	N/A	N/A
Heptachlor	0.0001	0.0001
Heptachlor Epoxide	0.0003	0.0003
Hexachlorobenzene	0.001	0.001
Hexachlorobutadiene	0.21	0.26

Human Health	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Hexachlorocyclohexane (*alpha*)	0.008	0.010
Hexachlorocyclohexane (*beta*)	0.25	0.31
Hexachlorocyclohexane (*gamma*) [Lindane]	0.33	0.40
Hexachlorocyclopentadiene	11	14
Hexachloroethane	2.3	2.7
Hexachlorophene	2.8	3.4
4,4'-Isopropylidenediphenol [Bisphenol A]	15449	18759
Lead	10	12
Mercury	0.024	0.029
Methoxychlor	2.9	3.5
Methyl Ethyl Ketone	9.59E+05	1.16E+06
Methyl *tert*-butyl ether [MTBE]	10132	12303
Nickel	1102	1338
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	1811	2198
N-Nitrosodiethylamine	2.0	2.5
N-Nitroso-di-*n*-Butylamine	4	5
Pentachlorobenzene	0.34	0.4
Pentachlorophenol	0.28	0.34
Polychlorinated Biphenyls [PCBs]	0.001	0.001
Pyridine	915	1112
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.23	0.28
1,1,2,2-Tetrachloroethane	25	31
Tetrachloroethylene [Tetrachloroethylene]	271	329
Thallium	0.22	0.27
Toluene	N/A	N/A
Toxaphene	0.011	0.013
2,4,5-TP [Silvex]	357	433
1,1,1-Trichloroethane	7.58E+05	9.21E+05
1,1,2-Trichloroethane	160	195
Trichloroethylene [Trichloroethene]	70	84
2,4,5-Trichlorophenol	1805	2191
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	16	19

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:	Clean Harbors San Leon, Inc.
TPDES Permit No:	1103
Outfall No:	001- final phase
Prepared by:	RUIQIANG ZONG
Date:	July 7, 2022

DISCHARGE INFORMATION

Receiving Waterbody:	Dickinson Bayou Tidal
Segment No:	1103
TSS (mg/L):	9
Effluent Flow for Aquatic Life (MGD)	N/A
% Effluent for Chronic Aquatic Life (Mixing Zone):	1.2
% Effluent for Acute Aquatic Life (ZID):	2.8
Oyster Waters?	**No**
Effluent Flow for Human Health (MGD):	N/A
% Effluent for Human Health:	0.8

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

Estuarine Metal	*Intercept (b)*	*Slope (m)*	*Partition Coefficient (Kp)*	*Dissolved Fraction (Cd/Ct)*	*Source*	*Water Effect Ratio (WER)*	*Source*
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Cadmium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (total)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (trivalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	4.85	-0.72	14552.76	0.884		1.00	Assumed
Lead	6.06	-0.85	177375.60	0.385		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	5.86	-0.74	142514.99	0.438		1.00	Assumed
Zinc	5.36	-0.52	73079.22	0.603		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*SW Acute Criterion (µg/L)*	*SW Chronic Criterion (µg/L)*	*WLAa (µg/L)*	*WLAc (µg/L)*	*LTAa (µg/L)*	*LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Acrolein	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aldrin	1.3	N/A	46.43	N/A	14.86	N/A	21.84	46.21
Aluminum	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic	149	78	5321	6500	1703	3965	2503	5296
Cadmium	40.0	8.75	1429	729	457.1	444.8	653.8	1383
Carbaryl	613	N/A	21892.86	N/A	7005.71	N/A	10298.40	21787.77
Chlordane	0.09	0.004	3.214	0.333	1.029	0.203	0.299	0.632
Chlorpyrifos	0.011	0.006	0.393	0.500	0.126	0.305	0.185	0.391

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*SW Acute Criterion (µg/L)*	*SW Chronic Criterion (µg/L)*	*WLAa (µg/L)*	*WLAc (µg/L)*	*LTAa (µg/L)*	*LTAc (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Chromium (trivalent)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium (hexavalent)	1090	49.6	38929	4133	12457	2521	3706	7841
Copper	13.5	3.6	545.3	339.3	174.5	207.0	256.5	542.7
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	200.0	466.7	64.00	284.7	94.08	199.0
4,4'-DDT	0.13	0.001	4.643	0.083	1.486	0.051	0.075	0.158
Demeton	N/A	0.1	N/A	8.33	N/A	5.083	7.47	15.81
Diazinon	0.819	0.819	29.25	68.3	9.360	41.63	13.76	29.11
Dicofol [Kelthane]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dieldrin	0.71	0.002	25.36	0.167	8.114	0.102	0.149	0.316
Diuron	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Endosulfan I (*alpha*)	0.034	0.009	1.214	0.750	0.389	0.458	0.571	1.208
Endosulfan II (*beta*)	0.034	0.009	1.214	0.750	0.389	0.458	0.571	1.208
Endosulfan sulfate	0.034	0.009	1.214	0.750	0.389	0.458	0.571	1.208
Endrin	0.037	0.002	1.321	0.167	0.423	0.102	0.149	0.316
Guthion [Azinphos Methyl]	N/A	0.01	N/A	0.833	N/A	0.508	0.747	1.581
Heptachlor	0.053	0.004	1.893	0.333	0.606	0.203	0.299	0.632
Hexachlorocyclohexane (*gamma*) [Lindane]	0.16	N/A	5.714	N/A	1.829	N/A	2.688	5.687
Lead	133	5.3	12333	1147	3946	700	1028	2175
Malathion	N/A	0.01	N/A	0.833	N/A	0.508	0.747	1.581
Mercury	2.1	1.1	75.00	91.7	24.00	55.92	35.28	74.64
Methoxychlor	N/A	0.03	N/A	2.500	N/A	1.525	2.242	4.743
Mirex	N/A	0.001	N/A	0.083	N/A	0.0508	0.075	0.158
Nickel	118	13.1	4214	1092	1349	665.9	979	2071
Nonylphenol	7	1.7	250.0	141.7	80.00	86.4	117.6	248.8
Parathion (ethyl)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pentachlorophenol	15.1	9.6	539.3	800	172.6	488.0	253.7	536.7
Phenanthrene	7.7	4.6	275.0	383.3	88.00	233.8	129.4	273.7
Polychlorinated Biphenyls [PCBs]	10	0.03	357.1	2.500	114.3	1.525	2.242	4.743
Selenium	564	136	20143	11333	6446	6913	9475	20046
Silver	2	N/A	163.0	N/A	52.17	N/A	76.70	162.3
Toxaphene	0.21	0.0002	7.500	0.0167	2.400	0.0102	0.0149	0.0316
Tributyltin [TBT]	0.24	0.0074	8.571	0.617	2.743	0.376	0.553	1.170
2,4,5 Trichlorophenol	259	12	9250	1000	2960	610.0	897	1897
Zinc	92.7	84.2	5488	11632	1756	7095	2582	5462

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Only Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Acrylonitrile	115	14375	13369	19652	41577
Aldrin	1.147E-05	1.43E-03	1.33E-03	1.96E-03	4.15E-03
Anthracene	1317	164625	153101	225059	476145
Antimony	1071	133875	124504	183021	387207
Arsenic	N/A	N/A	N/A	N/A	N/A
Barium	N/A	N/A	N/A	N/A	N/A
Benzene	581	72625	67541	99286	210053
Benzidine	0.107	13.38	12.44	18.28	38.68
Benzo(*a*)anthracene	0.025	3.125	2.906	4.272	9.04
Benzo(*a*)pyrene	0.0025	0.313	0.291	0.427	0.904

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Only Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Bis(chloromethyl)ether	0.2745	34.31	31.91	46.91	99.2
Bis(2-chloroethyl)ether	42.83	5354	4979	7319	15485
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	7.55	944	878	1290	2730
Bromodichloromethane [Dichlorobromomethane]	275	34375	31969	46994	99423
Bromoform [Tribromomethane]	1060	132500	123225	181141	383230
Cadmium	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	46	5750	5348	7861	16631
Chlordane	0.0025	0.313	0.291	0.427	0.904
Chlorobenzene	2737	342125	318176	467719	989528
Chlorodibromomethane [Dibromochloromethane]	183	22875	21274	31272	66161
Chloroform [Trichloromethane]	7697	962125	894776	1315321	2782754
Chromium (hexavalent)	502	62750	58358	85786	181492
Chrysene	2.52	315.0	293.0	430.6	911
Cresols [Methylphenols]	9301	1162625	1081241	1589425	3362660
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.250	0.233	0.342	0.723
4,4'-DDE	0.00013	0.0163	0.0151	0.0222	0.0470
4,4'-DDT	0.0004	0.050	0.047	0.068	0.145
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	473	59125	54986	80830	171007
1,2-Dibromoethane [Ethylene Dibromide]	4.24	530	492.9	725	1533
m-Dichlorobenzene [1,3-Dichlorobenzene]	595	74375	69169	101678	215115
o-Dichlorobenzene [1,2-Dichlorobenzene]	3299	412375	383509	563758	1192712
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	2.24	280.0	260.4	382.8	810
1,2-Dichloroethane	364	45500	42315	62203	131600
1,1-Dichloroethylene [1,1-Dichloroethene]	55114	6889250	6407003	9418294	19925778
Dichloromethane [Methylene Chloride]	13333	1666625	1549961	2278443	4820379
1,2-Dichloropropane	259	32375	30109	44260	93638
1,3-Dichloropropene [1,3-Dichloropropylene]	119	14875	13834	20336	43023
Dicofol [Kelthane]	0.30	37.50	34.88	51.3	108.5
Dieldrin	2.0E-05	2.50E-03	2.33E-03	3.42E-03	7.23E-03
2,4-Dimethylphenol	8436	1054500	980685	1441607	3049930
Di-*n*-Butyl Phthalate	92.4	11550	10742	15790	33406
Dioxins/Furans [TCDD Equivalents]	7.97E-08	9.96E-06	9.27E-06	1.36E-05	2.88E-05
Endrin	0.02	2.500	2.325	3.418	7.23
Epichlorohydrin	2013	251625	234011	343997	727775
Ethylbenzene	1867	233375	217039	319047	674991
Ethylene Glycol	1.68E+07	2.10E+09	1.95E+09	2.87E+09	6.07E+09
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.0001	0.0125	0.0116	0.0171	0.0362
Heptachlor Epoxide	0.00029	0.0363	0.0337	0.0496	0.1048
Hexachlorobenzene	0.00068	0.085	0.079	0.116	0.246
Hexachlorobutadiene	0.22	27.50	25.58	37.60	79.5
Hexachlorocyclohexane (*alpha*)	0.0084	1.050	0.977	1.435	3.037
Hexachlorocyclohexane (*beta*)	0.26	32.50	30.23	44.43	94.0
Hexachlorocyclohexane (*gamma*) [Lindane]	0.341	42.63	39.64	58.3	123.3
Hexachlorocyclopentadiene	11.6	1450	1349	1982	4194
Hexachloroethane	2.33	291.3	270.9	398.2	842
Hexachlorophene	2.90	362.5	337.1	495.6	1048
4,4'-Isopropylidenediphenol [Bisphenol A]	15982	1997750	1857908	2731124	5778092

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

Parameter	*Fish Only Criterion (µg/L)*	*WLAh (µg/L)*	*LTAh (µg/L)*	*Daily Avg. (µg/L)*	*Daily Max. (µg/L)*
Lead	3.83	1243	1156	1699	3595
Mercury	0.0250	3.125	2.906	4.272	9.04
Methoxychlor	3.0	375.0	348.8	513	1085
Methyl Ethyl Ketone	9.92E+05	1.24E+08	1.15E+08	1.70E+08	3.59E+08
Methyl *tert*-butyl ether [MTBE]	10482	1310250	1218533	1791243	3789636
Nickel	1140	142500	132525	194812	412153
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	1873	234125	217736	320072	677160
N-Nitrosodiethylamine	2.1	262.5	244.1	358.9	759
N-Nitroso-di-*n*-Butylamine	4.2	525	488.3	718	1518
Pentachlorobenzene	0.355	44.38	41.27	60.7	128.3
Pentachlorophenol	0.29	36.25	33.71	49.56	104.8
Polychlorinated Biphenyls [PCBs]	6.4E-04	0.080	0.074	0.109	0.231
Pyridine	947	118375	110089	161830	342376
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.24	30.00	27.90	41.01	86.8
1,1,2,2-Tetrachloroethane	26.35	3294	3063	4503	9527
Tetrachloroethylene [Tetrachloroethylene]	280	35000	32550	47849	101231
Thallium	0.23	28.75	26.74	39.30	83.2
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	1.375	1.279	1.880	3.977
2,4,5-TP [Silvex]	369	46125	42896	63057	133407
1,1,1-Trichloroethane	784354	98044250	91181153	134036294	283573384
1,1,2-Trichloroethane	166	20750	19298	28367	60015
Trichloroethylene [Trichloroethene]	71.9	8988	8358	12287	25995
2,4,5-Trichlorophenol	1867	233375	217039	319047	674991
TTHM [Sum of Total Trihalomethanes]	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	16.5	2063	1918	2820	5965

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

Aquatic Life	*70% of Daily Avg.*	*85% of Daily Avg.*
Parameter	***(µg/L)***	***(µg/L)***
Acrolein	N/A	N/A
Aldrin	15.29	18.56
Aluminum	N/A	N/A
Arsenic	1752	2128
Cadmium	457.7	555.8
Carbaryl	7208.88	8753.64
Chlordane	0.209	0.254
Chlorpyrifos	0.129	0.157
Chromium (trivalent)	N/A	N/A
Chromium (hexavalent)	2594	3150
Copper	179.6	218.0
Copper (oyster waters)	N/A	N/A
Cyanide (free)	65.86	79.97
4,4'-DDT	0.0523	0.0635
Demeton	5.231	6.352
Diazinon	9.631	11.70
Dicofol [Kelthane]	N/A	N/A
Dieldrin	0.105	0.127

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

Aquatic Life	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Diuron	N/A	N/A
Endosulfan I (*alpha*)	0.400	0.486
Endosulfan II (*beta*)	0.400	0.486
Endosulfan sulfate	0.400	0.486
Endrin	0.105	0.127
Guthion [Azinphos Methyl]	0.523	0.635
Heptachlor	0.209	0.254
Hexachlorocyclohexane (*gamma*) [Lindane]	1.882	2.285
Lead	720	874
Malathion	0.523	0.635
Mercury	24.70	29.99
Methoxychlor	1.569	1.905
Mirex	0.0523	0.0635
Nickel	685	832
Nonylphenol	82.32	99.96
Parathion (ethyl)	N/A	N/A
Pentachlorophenol	177.6	215.6
Phenanthrene	90.55	110.0
Polychlorinated Biphenyls [PCBs]	1.569	1.905
Selenium	6633	8054
Silver	53.69	65.19
Toxaphene	0.0105	0.0127
Tributyltin [TBT]	0.387	0.470
2,4,5 Trichlorophenol	627.7	762
Zinc	1807	2194

Human Health	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Acrylonitrile	13756	16704
Aldrin	1.37E-03	1.67E-03
Anthracene	157541	191300
Antimony	128114	155567
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	69500	84393
Benzidine	12.80	15.54
Benzo(*a*)anthracene	2.991	3.631
Benzo(*a*)pyrene	0.299	0.363
Bis(chloromethyl)ether	32.84	39.87
Bis(2-chloroethyl)ether	5123	6221
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	903	1097
Bromodichloromethane [Dichlorobromomethane]	32896	39945
Bromoform [Tribromomethane]	126799	153970
Cadmium	N/A	N/A
Carbon Tetrachloride	5503	6682
Chlordane	0.299	0.363
Chlorobenzene	327403	397561
Chlorodibromomethane [Dibromochloromethane]	21891	26582
Chloroform [Trichloromethane]	920725	1118023
Chromium (hexavalent)	60050	72918
Chrysene	301.4	366.0
Cresols [Methylphenols]	1112597	1351011
Cyanide (free)	N/A	N/A

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

Aquatic Life	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
4,4'-DDD	0.239	0.291
4,4'-DDE	0.0156	0.0189
4,4'-DDT	0.0478	0.0581
2,4'-D	N/A	N/A
Danitol [Fenpropathrin]	56581	68705
1,2-Dibromoethane [Ethylene Dibromide]	507	616
m-Dichlorobenzene [1,3-Dichlorobenzene]	71175	86426
o-Dichlorobenzene [1,2-Dichlorobenzene]	394631	479194
p-Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	268.0	325.4
1,2-Dichloroethane	43542	52873
1,1-Dichloroethylene [1,1-Dichloroethene]	6592806	8005550
Dichloromethane [Methylene Chloride]	1594910	1936677
1,2-Dichloropropane	30982	37621
1,3-Dichloropropene [1,3-Dichloropropylene]	14235	17285
Dicofol [Kelthane]	35.89	43.58
Dieldrin	2.39E-03	2.91E-03
2,4-Dimethylphenol	1009125	1225366
Di-*n*-Butyl Phthalate	11053	13422
Dioxins/Furans [TCDD Equivalents]	9.53E-06	1.16E-05
Endrin	2.392	2.905
Epichlorohydrin	240798	292397
Ethylbenzene	223333	271190
Ethylene Glycol	2.01E+09	2.44E+09
Fluoride	N/A	N/A
Heptachlor	0.0120	0.0145
Heptachlor Epoxide	0.0347	0.0421
Hexachlorobenzene	0.081	0.099
Hexachlorobutadiene	26.32	31.96
Hexachlorocyclohexane (*alpha*)	1.005	1.220
Hexachlorocyclohexane (*beta*)	31.10	37.77
Hexachlorocyclohexane (*gamma*) [Lindane]	40.79	49.53
Hexachlorocyclopentadiene	1388	1685
Hexachloroethane	278.7	338.4
Hexachlorophene	346.9	421.2
4,4'-Isopropylidenediphenol [Bisphenol A]	1911787	2321455
Lead	1190	1444
Mercury	2.991	3.631
Methoxychlor	358.9	435.8
Methyl Ethyl Ketone	1.19E+08	1.44E+08
Methyl *tert*-butyl ether [MTBE]	1253870	1522556
Nickel	136368	165590
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	224051	272061
N-Nitrosodiethylamine	251.2	305.0
N-Nitroso-di-*n*-Butylamine	502	610
Pentachlorobenzene	42.47	51.6
Pentachlorophenol	34.69	42.12
Polychlorinated Biphenyls [PCBs]	0.077	0.093
Pyridine	113281	137556
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	28.71	34.86
1,1,2,2-Tetrachloroethane	3152	3827

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

Aquatic Life	***70% of Daily Avg.***	***85% of Daily Avg.***
Parameter	***(µg/L)***	***(µg/L)***
Tetrachloroethylene [Tetrachloroethylene]	33494	40671
Thallium	27.51	33.41
Toluene	N/A	N/A
Toxaphene	1.316	1.598
2,4,5-TP [Silvex]	44140	53599
1,1,1-Trichloroethane	9.38E+07	1.14E+08
1,1,2-Trichloroethane	19857	24112
Trichloroethylene [Trichloroethene]	8601	10444
2,4,5-Trichlorophenol	223333	271190
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	1974	2397

Appendix C

30 TAC §319 Metals Calculations

Mass effluent limitations for the following metals are calculated based on the concentration limits specified in 30 TAC §319.23 using the following equation:

Mass (lbs/day) Limit = [Concentration Limit (mg/L) x [Flow (MGD)] x [8.345].

Outfall 101 – Flow (0.065 MGD)

Parameter	30 TAC §319.23 Concentration Dly Avg mg/L	Dly Max mg/L	30 TAC §319.23 Mass Limit Dly Avg lbs/day	Dly Max lbs/day
Arsenic, Total	0.1	0.3	0.0542	0.163
Cadmium, Total	0.1	0.3	0.0054	0.163
Chromium, Total	0.5	5.0	0.271	2.71
Copper, Total	0.5	2.0	0.271	1.08
Lead, Total	0.5	1.5	0.271	0.814
Mercury, Total	0.005	0.01	0.0027	0.0054
Zinc, Total	1.0	6.0	0.542	3.25

Outfall 102 – Flow (0.04 MGD)

Parameter	30 TAC §319.23 Concentration Dly Avg mg/L	Dly Max mg/L	30 TAC §319.23 Mass Limit Dly Avg lbs/day	Dly Max lbs/day
Arsenic, Total	0.1	0.3	0.0334	0.100
Cadmium, Total	0.1	0.3	0.0334	0.100
Chromium, Total	0.5	5.0	0.167	1.67
Copper, Total	0.5	2.0	0.167	0.668
Lead, Total	0.5	1.5	0.167	0.501
Mercury, Total	0.005	0.01	0.0017	0.0033
Zinc, Total	1.0	6.0	0.334	2.00

Appendix D
pH Screening

OUTFALL 001

Calculation of pH of a mixture in seawater.

Based on the CO2SYS program (Lewis and Wallace, 1998)
http://cdiac.esd.ornl.gov/oceans/co2rprt.html

INPUT

1. MIXING ZONE BOUNDARY CHARACTERISTICS		
Dilution factor at mixing zone boundary [1]	12.50	12.50
Depth at plume trapping level (m) [2]	3.00	3.00
2. BACKGROUND RECEIVING WATER CHARACTERISTICS		
Temperature (deg C): [3]	20.00	20.00
pH: [4]	7.30	7.30
Salinity (psu): [5]	20.00	20.00
Total alkalinity (meq/L) [6]	2.32	2.32
3. EFFLUENT CHARACTERISTICS		
Temperature (deg C): [7]	20.00	20.00
pH: [8]	6.00	9.00
Salinity (psu): [9]	2.00	2.00
Total alkalinity (meq/L): [10]	0.40	4.00

OUTPUT

CONDITIONS AT THE MIXING ZONE BOUNDARY		
Temperature (deg C):	20.00	32.00
Salinity (psu)	18.56	18.56
Density (kg/m^3)	1012.28	1012.28
Alkalinity (mmol/kg-SW):	2.14	2.42
Total Inorganic Carbon (mmol/kg-SW):	2.24	2.42
pH at Mixing Zone Boundary:	7.20	7.55

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)

Notes on Data Sources

[1] Calculated from values from June 8, 2022 critical conditions:

Effluent % at edge of mixing zone = 8%

[2] Default value. Various depths tested.

[3] Range of temperatures tested (5 to 35 degrees C).

[4] Ambient pH for Segment 0901 from 2010 IPs.

[5] Range of salinities tested (5 to 35 psu).

[6] Ambient hardness for Segment 0901 from 2010 IPs.

[7] Range of temperatures tested (5 to 35 degrees C).

[8] Proposed permit limit. Sequentially modified until predicted pH met segment criteria (6.5 to 9.0).

[9] Minimum salinity assumed because discharge is freshwater. However, values up to 5 ppt tested.

[10] 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.

Appendix D
Preliminary 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.

Outfall	*Pollutant*	*Technology-Based*				*Water Quality-Based*				*Existing Permit*			
		Daily Avg		*Daily Max*		*Daily Avg*		*Daily Max*		*Daily Avg*		*Daily Max*	
		lbs/day	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*
001 interim phase	Flow	Report, MGD		Report, MGD		N/A		N/A		**Report, MGD**		**Report, MGD**	
	Total Organic Carbon	N/A	N/A	N/A	55	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**55**
	Oil and Grease	N/A	N/A	N/A	15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**15**
	BTEX[1]	N/A	N/A	N/A	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**0.5**
	Total Aluminum[2]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**Report**
	Total Aluminum[3]	N/A	N/A	N/A	N/A	N/A	0.835	N/A	1.77	N/A	**0.834**	N/A	**1.76**
	Total Copper[2]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**Report**
	Total Copper[3]	N/A	N/A	N/A	N/A	N/A	0.0037	N/A	0.0077	N/A	**0.0036**	N/A	**0.0077**
	Total Lead[2]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**Report**
	Total Lead[3]	N/A	N/A	N/A	N/A	N/A	0.012	N/A	0.026	N/A	**0.012**	N/A	**0.026**
	Total Nickel[2]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**Report**
	Total Nickel[3]	N/A	N/A	N/A	N/A	N/A	0.012	N/A	0.025	N/A	**0.011**	N/A	**0.024**
	Total Mercury[2]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**Report**
	Total Mercury[3]	N/A	N/A	N/A	N/A	N/A	9.9e-5	N/A	2.09e-3	N/A	**3.5e-5**	N/A	**7.3e-5**
	Total Zinc[2]	N/A	N/A	N/A	6.0	N/A	N/A	N/A	N/A	N/A	**Report**	N/A	**N/A**
	Total Zinc[3]	N/A	N/A	N/A	6.0	N/A	**0.072**	N/A	**0.153**	N/A	0.073	N/A	0.154
	pH	6.0 SU (min)		9.0 SU (max)		6.5 SU (min)		9.0 SU (max)		**6.0 SU (min)**		**9.0SU (max)**	
001 final phase	Flow	Report, MGD		Report, MGD		N/A		N/A		Report, MGD		Report, MGD	
	Total Organic Carbon	N/A	N/A	N/A	**55**	N/A	N/A	N/A	N/A	-	-	-	**-**
	Oil and Grease	N/A	N/A	N/A	**15**	N/A	N/A	N/A	N/A	N/A	-	-	**-**
	BTEX[1]	N/A	N/A	N/A	**0.5**	N/A	N/A	N/A	N/A	N/A	-	-	**-**
	pH	**6.0 SU, min**		**9.0 SU**		6.5 SU, min		9.0 SU		-		-	

[1] BTEX means the summation of benzene, toluene, ethylbenzene, and total xylenes.
[2] Beginning from the date of permit issuance and lasting through 7/5/2023.
[3] Beginning on 7/6/2023 days and lasting through permit expiration.

Outfall	*Pollutant*	*Technology-Based*				*Water Quality-Based*				*Existing Permit*			
		Daily Avg		*Daily Max*		*Daily Avg*		*Daily Max*		*Daily Avg*		*Daily Max*	
		lbs/day	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*
101	Flow	0.065 MGD		0.105 MGD		N/A		N/A		**0.065 MGD**		**0.105 MGD**	
	Total Suspended Solids	16.5	30.6	40.1	74.1	N/A	N/A	N/A	N/A	**16.5**	**30.6**	**40.1**	**74.1**
	Oil and Grease	20.6	38.0	68.8	127	N/A	N/A	N/A	N/A	**20.6**	**38.0**	**68.8**	**127**
	Total Arsenic	0.721	1.33	1.60	2.95	N/A	N/A	N/A	N/A	**0.721**	**1.33**	**1.60**	**2.95**
	Total Cadmium	0.0055	0.0102	0.0093	0.0172	N/A	N/A	N/A	N/A	**0.0055**	**0.0102**	**0.0093**	**0.0172**
	Total Chromium	0.175	0.323	0.404	0.746	N/A	N/A	N/A	N/A	**0.175**	**0.323**	**0.404**	**0.746**
	Total Cobalt	10.1	18.8	30.5	56.4	N/A	N/A	N/A	N/A	**10.1**	**18.8**	**30.5**	**56.4**
	Total Copper	0.131	0.242	0.271	0.500	N/A	N/A	N/A	N/A	**0.131**	**0.242**	**0.271**	**0.500**
	Total Lead	0.086	0.160	0.189	0.350	N/A	N/A	N/A	N/A	**0.086**	**0.160**	**0.189**	**0.350**
	Total Mercury	0.0035	0.00647	0.0093	0.0172	N/A	N/A	N/A	N/A	**0.0035**	**0.00647**	**0.0093**	**0.0172**
	Total Tin	0.089	0.165	0.181	0.335	N/A	N/A	N/A	N/A	**0.089**	**0.165**	**0.181**	**0.335**
	Total Zinc	2.44	4.50	4.48	8.26	N/A	N/A	N/A	N/A	**2.44**	**4.50**	**4.48**	**8.26**
	Bis(2-ethylhexyl) phthalate	0.054	0.101	0.116	0.215	N/A	N/A	N/A	N/A	**0.054**	**0.101**	**0.116**	**0.215**
	Butylbenzyl phthalate	0.048	0.0887	0.101	0.188	N/A	N/A	N/A	N/A	**0.048**	**0.0887**	**0.101**	**0.188**
	Carbazole	0.149	0.276	0.324	0.598	N/A	N/A	N/A	N/A	**0.149**	**0.276**	**0.324**	**0.598**
	n-Decane	0.237	0.437	0.514	0.948	N/A	N/A	N/A	N/A	**0.237**	**0.437**	**0.514**	**0.948**
	Fluoranthene	0.014	0.0268	0.029	0.0537	N/A	N/A	N/A	N/A	**0.014**	**0.0268**	**0.029**	**0.0537**
	n-Octadecane	0.163	0.302	0.319	0.589	N/A	N/A	N/A	N/A	**0.163**	**0.302**	**0.319**	**0.589**
	Total Petroleum Hydrocarbons	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**Report**	**Report**	**Report**	**Report**
	pH	6.0 SU (min)		9.0 SU (max)		N/A	N/A	N/A	N/A	**6.0 SU (min)**		**9.0 SU (max)**	
102	Flow	0.040 MGD		0.050 MGD		N/A		N/A		**0.040 MGD**		**0.050 MGD**	
	Total Suspended Solids	10.2	30.6	24.7	74.1	N/A	N/A	N/A	N/A	**10.2**	**30.6**	**24.7**	**74.1**
	Oil and Grease	12.6	38	42.3	127	N/A	N/A	N/A	N/A	**12.6**	**38**	**42.3**	**127**
	Total Arsenic	0.443	1.33	0.984	2.95	N/A	N/A	N/A	N/A	**0.443**	**1.33**	**0.984**	**2.95**
	Total Cadmium	0.0034	0.0102	0.0057	0.0172	N/A	N/A	N/A	N/A	**0.0034**	**0.0102**	**0.0057**	**0.0172**
	Total Chromium	0.107	0.323	0.249	0.746	N/A	N/A	N/A	N/A	**0.107**	**0.323**	**0.249**	**0.746**
	Total Cobalt	6.27	18.8	18.8	56.4	N/A	N/A	N/A	N/A	**6.27**	**18.8**	**18.8**	**56.4**
	Total Copper	0.080	0.242	0.166	0.500	N/A	N/A	N/A	N/A	**0.080**	**0.242**	**0.166**	**0.500**
	Total Lead	0.053	0.160	0.116	0.350	N/A	N/A	N/A	N/A	**0.053**	**0.160**	**0.116**	**0.350**
	Total Mercury	0.0021	0.00647	0.0057	0.0172	N/A	N/A	N/A	N/A	**0.0021**	**0.00647**	**0.0057**	**0.0172**
	Total Tin	0.055	0.165	0.111	0.335	N/A	N/A	N/A	N/A	**0.055**	**0.165**	**0.111**	**0.335**
	Total Zinc	1.50	4.50	2.75	8.26	N/A	N/A	N/A	N/A	**1.50**	**4.50**	**2.75**	**8.26**
	Bis(2-ethylhexyl) phthalate	0.033	0.101	0.071	0.215	N/A	N/A	N/A	N/A	**0.033**	**0.101**	**0.071**	**0.215**
	Butylbenzyl phthalate	0.029	0.0887	0.062	0.188	N/A	N/A	N/A	N/A	**0.029**	**0.0887**	**0.062**	**0.188**

Outfall	*Pollutant*	*Technology-Based*				*Water Quality-Based*				*Existing Permit*			
		Daily Avg		*Daily Max*		*Daily Avg*		*Daily Max*		*Daily Avg*		*Daily Max*	
		lbs/day	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*	*lbs/day*	*mg/L*
102	Carbazole	0.092	0.276	0.199	0.598	N/A	N/A	N/A	N/A	**0.092**	**0.276**	**0.199**	**0.598**
	n-Decane	0.145	0.437	0.316	0.948	N/A	N/A	N/A	N/A	**0.145**	**0.437**	**0.316**	**0.948**
	Fluoranthene	0.0089	0.0268	0.017	0.0537	N/A	N/A	N/A	N/A	**0.0089**	**0.0268**	**0.017**	**0.0537**
	n-Octadecane	0.100	0.302	0.196	0.589	N/A	N/A	N/A	N/A	**0.100**	**0.302**	**0.196**	**0.589**
	Total Petroleum Hydrocarbons	Report	Report	Report	Report	N/A	N/A	N/A	N/A	**Report**	**Report**	**Report**	**Report**
	pH	6.0 SU (min)		9.0 SU (max)		N/A		N/A		6.0 SU, min		9.0 SU	

Secondary Comparison of preliminary Selected Limitations and 30 TAC §319.23-Based Limitations.

Existing effluent limitations and calculated technology-based effluent limitations at Outfalls 101 and 102 are compared with the more stringent limitations selected and included in the draft permit. In the case of heavy metals subject to 30 TAC §319.23, another comparison of the preliminary selected limits and the limits from 30 TAC §319.23 is made with the more stringent effluent limitations selected and included in the draft permit.

Outfall 101

Parameter	Preliminary Selected Limits		30 TAC §319.23 Based	
	Dly Avg	Dly Max	Dly Avg	Dly Max
Arsenic, Total	1.33 mg/L, 0.721 lbs/day	2.95 mg/L, 1.60 lbs/day	**0.1 mg/L, 0.052 lbs/day**	**0.3 mg/L, 0.163 lbs/day**
Cadmium, Total	0.0102 mg/L, 0.0055 lbs/day	0.0172 mg/L, 0.0093 lbs/day	0.1 mg/L, 0.0054 lbs/day	0.3 mg/L, 0.163 lbs/day
Chromium, Total	0.323 mg/L, 0.175 lbs/day	0.746 mg/L, 0.404 lbs/day	0.5 mg/L, 0.271 lbs/day	5.0 mg/L, 2.71 lbs/day
Copper, Total	0.242 mg/L, 0.131 lbs/day	0.500 mg/L, 0.271 lbs/day	0.5 mg/L, 0.271 lbs/day	2.0 mg/L, 1.08 lbs/day
Lead, Total	0.160 mg/L, 0.086 lbs/day	0.350 mg/L, 0.189 lbs/day	0.5 mg/L, 0.271 lbs/day	1.5 mg/L, 0.814 lbs/day
Mercury, Total	0.00647 mg/L, 0.0035 lbs/day	0.0172 mg/L, 0.0093 lbs/day	**0.005 mg/l, 0.0027 lbs/day**	**0.01 mg/L, 0.0054 mg/L**
Zinc, Total	4.5 mg/L, 2.44 lbs/day	8.26 mg/L, 4.48 lbs/day	**1.0 mg/L, 0.542 lbs/day**	**6.0 mg/L, 3.25 lbs/day**

Outfall 102

Parameter	Preliminary Selected Limits		30 TAC §319.23 Based	
	Dly Avg	Dly Max	Dly Avg	Dly Max
Arsenic, Total	1.33 mg/L 0.443 lbs/day	2.95 mg/L 0.98 lbs/day	**0.1 mg/L** **0.0334 lbs/day**	**0.3 mg/L** **0.100 lbs/day**
Cadmium, Total	0.0102 mg/L 0.0034 lbs/day	0.0172 mg/L 0.0057 lbs/day	0.1 mg/L 0.0334 lbs/day	0.3 mg/L 0.100 lbs/day
Chromium, Total	0.323 mg/L 0.107 lbs/day	0.746 mg/L 0.249 lbs/day	0.5 mg/L 0.167 lbs/day	5.0 mg/L 1.67 lbs/day
Copper, Total	0.242 mg/L 0.080 lbs/day	0.500 mg/L 0.166 lbs/day	0.5 mg/L 0.167 lbs/day	2.0 mg/L 0.668 lbs/day
Lead, Total	0.160 mg/L 0.053 lbs/day	0.350 mg/L 0.116 lbs/day	0.5 mg/L 0.167 lbs/day	1.5 mg/L 0.501 lbs/day
Mercury, Total	0.00647 mg/L 0.0017 lbs/day	0.0172 mg/L 0.0033 lbs/day	**0.005 mg/l** **0.0017 lbs/day**	**0.01 mg/L** **0.0033 mg/L**
Zinc, Total	4.5 mg/L 1.50 lbs/day	8.26 mg/L 2.75 lbs/day	**1.0 mg/L** **0.334 lbs/day**	**6.0 mg/L** **2.00 lbs/day**

TPDES PERMIT NO.
WQ0004086000
[For TCEQ office use only -
EPA I.D. No. TX0117757]

This major amendment replaces TPDES Permit No. WQ0004086000, issued on July 6, 2020.

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 437

Clean Harbors San Leon, Inc.

whose mailing address is

2700 Avenue S
San Leon, Texas 77539

is authorized to treat and discharge wastes from Clean Harbors San Leon, a recycling and storage facility that manages catalyst and oily wastes from the petroleum refining and petrochemical industries (SIC 4954 and 1311)

located at 2700 Avenue S, in the City of San Leon, Galveston County, Texas 77539

via Outfall 001 in interim phase to a drainage ditch, thence to an unnamed tidal tributary of Dickinson Bayou, thence to Dickinson Bayou Tidal in Segment No. 1103 of the San Jacinto-Brazos Coastal Basin

via Outfall 001 in final phase directly to Dickinson Bayou Tidal in Segment No. 1103 of the San Jacinto-Brazos Coastal Basin

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

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

ISSUED DATE:

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS-INTERIM PHASE [1] Outfall Number 001

1. During the period beginning upon the date of permit issuance and lasting through the date of outfall relocation [1], the permittee is authorized to discharge stormwater associated with industrial activity and previously monitored effluent (treated process wastewater and treated contaminated stormwater from internal Outfalls 101 and 201)) subject to the following effluent limitations:

   Volume: Intermittent and flow-variable

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [2]	Instantaneous
Total Organic Carbon	N/A	55	55	1/day [2]	Grab
Oil and Grease	N/A	15	15	1/day [2]	Grab
Total Aluminum [3]	Report	Report	N/A	1/week [2]	Grab
Total Aluminum [4]	0.834	1.76	1.76	1/week [2]	Grab
Total Copper [3]	Report	Report	N/A	1/week [2]	Grab
Total Copper [4]	0.0036	0.0077	0.0077	1/week [2]	Grab
Total Lead [3]	Report	Report	N/A	1/week [2]	Grab
Total Lead [4]	0.012	0.026	0.026	1/week [2]	Grab
Total Nickel [3]	Report	Report	N/A	1/week [2]	Grab
Total Nickel [4]	0.011	0.024	0.024	1/week [2]	Grab
Total Mercury [3]	Report	Report	N/A	1/week [2]	Grab
Total Mercury [4]	0.000034	0.000073	0.000073	1/week [2]	Grab
Total Zinc [3]	Report	6.0	6.0	1/week [2]	Grab
Total Zinc [4]	0.072	0.153	0.153	1/week [2]	Grab
BTEX [5]	N/A	0.5	0.5	1/month [2]	Grab

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS-INTERIM PHASE [1] (continued) Outfall Number 001

Effluent Characteristics	Discharge Limitations		Minimum Self-Monitoring Requirements	
	7-day Minimum	30-day Average	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Lethal Whole Effluent Toxicity (WET) limit (Parameter 51713) [6]				
Mysidopsis bahia (7-day chronic NOEC 7)	Report	Report	1/quarter	Composite
Sublethal Whole Effluent Toxicity (WET) limit (Parameter 51713) [6]				
Mysidopsis bahia (7-day chronic NOEC 7)	Report	Report	1/quarter	Composite
Lethal Whole Effluent Toxicity (WET) limit 100% (Parameter 51713) [6]				
Mysidopsis bahia (7-day chronic NOEC 7)	100%	100%	1/quarter	Composite
Sublethal Whole Effluent Toxicity (WET) limit 80% (Parameter 51713) [6]				
Mysidopsis bahia (7-day chronic NOEC 7)	80%	80%	1/quarter	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 [2] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 001, at the gated stormwater outfall in the northwest corner of the facility property.

[1]See Other Requirement No. 11.

[2]When discharge occurs, samples must be collected within 30 minutes of the beginning of the discharge.

[3]Begining upon the date of permit issuance and lasting through July 5, 2023.

[4]Begining on July 6, 2023 and lasting through permit expiration.

[5]BTEX means the summation of benzene, toluene, ethylbenzene, and total xylenes.

[6]Begining 34 months after date of permit issuance and lasting through date of permit expiration.

[7]The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. A significant effect is defined as a statistically significant difference between a specified effluent dilution and the control for toxicity (lethal or sublethal effects, whichever is specified).

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS-FINAL PHASE [1] Outfall Number 001

1. During the period beginning upon the date of outfall relocation [1] and lasting through the date of permit expiration, the permittee is authorized to discharge stormwater associated with industrial activity and previously monitored effluent (treated process wastewater and treated contaminated stormwater from internal Outfalls 101 and 201)) subject to the following effluent limitations:

   Volume: Intermittent and flow-variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average mg/L	Daily Maximum mg/L	Single Grab mg/L	Report Daily Average and Daily Maximum Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day [2]	Instantaneous
Total Organic Carbon	N/A	55	55	1/day [2]	Grab
Oil and Grease	N/A	15	15	1/day [2]	Grab
BTEX [3]	N/A	0.5	0.5	1/month [2]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day [2] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At Outfall 001, prior to Dickinson Bayou Tidal.

[1]See Other Requirement No. 11
[2]When discharge occurs. Samples must be collected within 30 minutes of the beginning of the discharge.
[3]BTEX means the summation of benzene, toluene, ethylbenzene, and total xylenes.

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 process wastewater and treated contaminated stormwater subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 0.065 million gallons per day (MGD). The daily maximum flow shall not exceed 0.105 MGD

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/L	lbs/day	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	0.065 MGD		0.105 MGD		N/A	1/day [1]	Record
Total Suspended Solids	16.5	30.6	40.1	74.1	74.1	1/day [1]	Grab
Oil and Grease	20.6	38.0	68.8	127	127	1/day [1]	Grab
Total Arsenic	0.0542	0.1	0.163	0.3	0.3	1/day [1]	Grab
Total Cadmium	0.0055	0.0102	0.0093	0.0172	0.0172	1/day [1]	Grab
Total Chromium	0.175	0.323	0.404	0.746	0.746	1/day [1]	Grab
Total Cobalt	10.1	18.8	30.5	56.4	56.4	1/day [1]	Grab
Total Copper	0.131	0.242	0.271	0.500	0.500	1/day [1]	Grab
Total Lead	0.086	0.160	0.189	0.350	0.350	1/day [1]	Grab
Total Mercury	0.0027	0.005	0.0054	0.01	0.01	1/day [1]	Grab
Total Tin	0.089	0.165	0.181	0.335	0.335	1/day [1]	Grab
Total Zinc	0.542	1.0	3.25	6.0	6.0	1/day [1]	Grab
Bis(2-ethylhexyl) phthalate	0.054	0.101	0.116	0.215	0.215	1/day [1]	Grab
Butylbenzyl phthalate	0.048	0.0887	0.101	0.188	0.188	2/week [1]	Grab
Carbazole	0.149	0.276	0.324	0.598	0.598	2/week [1]	Grab
n-Decane	0.237	0.437	0.514	0.948	0.948	2/week [1]	Grab
Fluoranthene	0.014	0.0268	0.029	0.0537	0.0537	2/week [1]	Grab
n-Octadecane	0.163	0.302	0.319	0.589	0.589	2/week [1]	Grab
Total Petroleum Hydrocarbons	Report	Report	Report	Report	N/A	1/week [1]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day [1] by grab sample.

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

4. Effluent monitoring samples shall be taken at the following location: At internal Outfall 101, prior to commingling with any other wastestreams.

[1]When discharge occurs.

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 process wastewater and treated contaminated stormwater subject to the following effluent limitations:

   The daily average flow of effluent shall not exceed 0.040 million gallons per day (MGD). The daily maximum flow shall not exceed 0.050 MGD.

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/L	lbs/day	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	0.040 MGD		0.050 MGD		N/A	1/day [1]	Record
Total suspended solids	10.2	30.6	24.7	74.1	74.1	1/day [1]	Grab
Oil and grease	12.6	38.0	42.3	127	127	1/day [1]	Grab
Total Arsenic	0.0334	0.1	0.100	0.3	0.3	1/day [1]	Grab
Total Cadmium	0.0034	0.0102	0.0057	0.0172	0.0172	1/day [1]	Grab
Total Chromium	0.107	0.323	0.249	0.746	0.746	1/day [1]	Grab
Total Cobalt	6.27	18.8	18.8	56.4	56.4	1/day [1]	Grab
Total Copper	0.080	0.242	0.166	0.500	0.500	1/day [1]	Grab
Total Lead	0.053	0.160	0.116	0.350	0.350	1/day [1]	Grab
Total Mercury	0.0017	0.005	0.0033	0.01	0.01	1/day [1]	Grab
Total Tin	0.055	0.165	0.111	0.335	0.335	1/day [1]	Grab
Total Zinc	0.334	1.0	2.00	6.0	6.0	1/day [1]	Grab
Bis(2-ethylhexyl) phthalate	0.033	0.101	0.071	0.215	0.215	1/day [1]	Grab
Butylbenzyl phthalate	0.029	0.0887	0.062	0.188	0.188	2/week [1]	Grab
Carbazole	0.092	0.276	0.199	0.598	0.598	2/week [1]	Grab
n-Decane	0.145	0.437	0.316	0.948	0.948	2/week [1]	Grab
Fluoranthene	0.0089	0.0268	0.018	0.0537	0.0537	2/week [1]	Grab
n-Octadecane	0.100	0.302	0.196	0.589	0.589	2/week [1]	Grab
Total Petroleum Hydrocarbons	Report	Report	Report	Report	N/A	1/week [1]	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day [11] 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 102, prior to commingling with any other wastestreams.

[1]When discharge occurs.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

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

1. Flow Measurements

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

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

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

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

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

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

2. Concentration Measurements

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

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

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

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

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

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

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

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

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

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

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

3. Sample Type

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

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

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

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

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

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

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

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

2. Test Procedures

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

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

3. Records of Results

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

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

   c. Records of monitoring activities shall include the following:

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

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

4. Additional Monitoring by Permittee

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

5. Calibration of Instruments

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

6. Compliance Schedule Reports

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

7. Noncompliance Notification

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

   b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:

      i. unauthorized discharges as defined in Permit Condition 2(g).
      ii. any unanticipated bypass that exceeds any effluent limitation in the permit.
      iii. violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.

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

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

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

9. Changes in Discharges of Toxic Substances

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

   a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) that is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:

      i. one hundred micrograms per liter (100 µg/L);
      ii. two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      iii. five (5) times the maximum concentration value reported for that pollutant in the permit application; or
      iv. the level established by the TCEQ.

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

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

10. Signatories to Reports

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

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

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

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

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

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

PERMIT CONDITIONS

1. General

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

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

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

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

2. Compliance

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

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

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

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

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

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

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

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

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

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

3. Inspections and Entry

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

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

4. Permit Amendment or Renewal

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

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

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

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

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

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

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

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

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

5. Permit Transfer

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

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

6. Relationship to Hazardous Waste Activities

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

7. Relationship to Water Rights

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

8. Property Rights

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

9. Permit Enforceability

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

10. Relationship to Permit Application

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

11. Notice of Bankruptcy.

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

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

    b. This notification must indicate:

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

OPERATIONAL REQUIREMENTS

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

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

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

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

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

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

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

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

7. Documentation

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

TCEQ Revision 05/2021

OTHER REQUIREMENTS

1. The executive director reviewed this action and found that the action is consistent with the applicable Texas Coastal Management Program (CMP) goals and policies and will not adversely affect any applicable coastal natural resource areas identified by the CMP.

2. PROGRESS REPORTS

The permittee shall collect and analyze one grab sample per year from Outfall 001 for the following toxic pollutants (from 40 CFR Part 122, Appendix D, Tables II and III). Testing shall be conducted utilizing the methods and procedures specified in 30 TAC §§ 319.11 – 319.12 and shall be sensitive enough to detect the following parameters at the minimum analytical level (MAL).

Results shall be included on the monthly effluent report form in September of each year. In addition, a copy of these results shall be submitted to the following address.

TCEQ
Industrial Wastewater Permits Team
MC-148
P.O. Box 13087
Austin, Texas 78711-3087

Pollutant	MAL (mg/L)
Aluminum (Total)	0.0025
Arsenic (Total)	0.0005
Beryllium (Total)	0.0005
Cadmium (Total)	0.001
Chromium (Total)	0.003
Copper (Total)	0.002
Cyanide (Total)	0.010
Lead (Total)	0.0005
Mercury (Total)	0.000005
Nickel (Total)	0.002
Phenols (Total)	0.010
Selenium (Total)	0.005
Silver (Total)	0.0005
Thallium (Total)	0.0005
Zinc (Total)	0.005

Pollutant	MAL (mg/L)
2-Chlorophenol	0.010
2,4-Dichlorophenol	0.010
2,4-Dimethylphenol	0.010
4,6-Dinitro-o-Cresol	0.050
2,4-Dinitrophenol	0.050
2-Nitrophenol	0.020
4-Nitrophenol	0.050
p-chloro-m-cresol	---
Pentachlorophenol	0.005
Phenol	0.010
2,4,6-Trichlorophenol	0.010

Pollutant	MAL (mg/L)
Acrolein	0.050
Acrylonitrile	0.050
Benzene	0.010
Bromoform	0.010
Carbon Tetrachloride	0.002
Chlorobenzene	0.010
Chlorodibromomethane	0.010
Chloroethane	0.050
2-chloroethylvinyl ether	0.010
Chloroform	0.010
1,1-Dichloroethane	0.010
1,2-Dichloroethane	0.010
1,1-Dichloroethylene	0.010
1,2-Dichloropropane	0.010
1,3-Dichloropropylene	0.010
Ethylbenzene	0.010
Methyl Bromide	0.050
Methyl Chloride	0.050
Methylene Chloride	0.020
1,1,2,2-Tetrachloroethane	0.010
Tetrachloroethylene	0.010
Toluene	0.010
1,2-trans-Dichloroethylene	0.010
1,1,1-Trichloroethane	0.010
1,1,2-Trichloroethane	0.010
Trichloroethylene	0.010
Vinyl Chloride	0.010

Pollutant	MAL (mg/L)
Acenaphthene	0.010
Acenaphthylene	0.010
Anthracene	0.010
Benzidine	0.050
Benzo(a)anthracene	0.005
Benzo(a)pyrene	0.005
3,4-Benzofluoranthene (Benzo(b)fluoranthene)	0.010
Benzo(ghi)perylene	0.020
Benzo(k)fluoranthene	0.005
Bis(2-chloroethoxy)methane	0.010
Bis(2-chloroethyl)ether	0.010
Bis(2-chloroisopropyl) ether	0.010
Bis(2-Ethylhexyl) phthalate	0.010
4-Bromophenyl phenyl ether	0.010
Butyl benzyl phthalate	0.010
2-Chloronapthalene	0.010
4-Chlorophenyl phenyl ether	0.010
Chrysene	0.005

Pollutant	MAL (mg/L)
Dibenzo(a,h)anthracene	0.005
1,2-Dichlorobenzene	0.010
1,3-Dichlorobenzene	0.010
1,4-Dichlorobenzene	0.010
3,3-Dichlorobenzidine	0.005
Diethyl Phthalate	0.010
Dimethyl Phthalate	0.010
Di-n-Butyl Phthalate	0.010
2,4-Dinitrotoluene	0.010
2,6-Dinitrotoluene	0.010
Di-n-Octyl phthalate	0.010
1,2-Diphenylhydrazine	0.010
Fluoranthene	0.010
Fluorene	0.010
Hexachlorobenzene	0.005
Hexachlorobutadiene	0.010
Hexachlorocyclopentadiene	0.010
Hexachloroethane	0.020
Indeno(1,2,3-cd)pyrene	0.005
Isophorone	0.010
Naphthalene	0.010
Nitrobenzene	0.010
N-Nitrosodimethylamine	0.050
N-Nitrosodi-n-propylamine	0.020
N-Nitrosodiphenylamine	0.020
Phenanthrene	0.010
Pyrene	0.010
1,2,4-Trichlorobenzene	0.010

Pollutant	MAL (µg/L)
Aldrin	0.00001
Chlordane	0.00015
4,4'-DDD	0.0001
4,4'-DDE	0.0001
4,4'-DDT	0.00002
Dieldrin	0.00002
Endosulfan I (*alpha*)	0.00001
Endosulfan II (*beta*)	0.00002
Endosulfan sulfate	0.0001
Endrin	0.00002
Endrin aldehyde	0.0001
Heptachlor	0.00001
Heptachlor epoxide	0.00001
Alpha-Hexachlorocyclohexane	0.00005
Beta-Hexachlorocyclohexane	0.00005
Gamma-Hexachlorocyclohexane (Lindane)	0.00005
Delta-Hexachlorocyclohexane	0.00005
PCB-1242	0.0002
PCB-1254	0.0002

Pollutant	MAL (µg/L)
PCB-1221	0.0002
PCB-1232	0.0002
PCB-1248	0.0002
PCB-1260	0.0002
PCB-1016	0.0002
Toxaphene	0.0003

3. Violations of daily maximum limitations for the following pollutants shall be reported orally or by facsimile to TCEQ Region 12 within 24 hours from the time the permittee becomes aware of the violation, followed by a written report within five working days to TCEQ Region 12 and Compliance Monitoring Team (MC 224):

Pollutant	MAL (mg/L)
Aluminum (Total)	0.0025
Arsenic (Total)	0.0005
Benzene	0.010
Bis(2-Ethylhexyl)phthalate	0.010
Butylbenzyl phthalate	0.010
Cadmium (Total)	0.001
Carbazole	0.02
Chromium (Total)	0.003
Cobalt (Total)	0.0003
Copper (Total)	0.002
Ethylbenzene	0.010
Fluoranthene	0.010
Lead (Total)	0.0005
Mercury (Total)	0.000005
Nickel (Total)	0.002
n-Decane	0.03
n-Octadecane	0.03
Tin (Total)	0.005
Toluene	0.010
Xylenes (Total)	0.010
Zinc (Total)	0.005

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.

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

5. This permit does not authorize the discharge of stormwater from inside containment areas that have contacted waste material from visible leaks or spills. This wastewater must be collected and managed as industrial or hazardous waste, as applicable.

6. The permittee must continue to implement, and update as needed, the operation and good housekeeping practices previously developed for areas where roll-off boxes are handled and stored. Roll-off boxes must be managed in such a manner as to reduce the amount of waste material that comes into contact with stormwater. All operations and housekeeping procedures must be documented and maintained with this permit.

7. MIXING ZONE DEFINITONS – OUTFALL 001

   Interim phase: There is no mixing zone established for this discharge to an intermittent stream. Acute toxic criteria apply at the point of discharge.

   Final phase: The chronic aquatic life mixing zone is defined as a volume within a radius of 200 feet from the point of discharge. Chronic toxic criteria apply at the edge of the chronic aquatic life mixing zone. The zone of initial dilution (ZID) is defined as volume within a radius of 50 feet from the point of discharge. The human health mixing zone is defined as a volume within a radius of 400 feet from the point of discharge.

8. The permittee must develop and implement a stormwater pollution plan (SWP3) that includes a set of best management practices (BMPs) to eliminate or lessen the exposure of stormwater to industrial activities and pollutants. The SWP3 must be maintained on site and be made readily available for review by authorized TCEQ personnel. The SWP3 must contain elements, or sections, to require implementation of the following activities:

   a. *Pollution Prevention Committee*

   b. *Facility Description*

   c. *Material Management Practices*

   d. *Maintenance Operations*

   e. *Employee Training*

   f. *Monitoring and Reporting Requirements*

   g. *Comprehensive Site Compliance Evaluation*

h. *Good Housekeeping Measures* – Activities must be defined and implemented to ensure areas of the facility that either contribute or potentially contribute pollutants to stormwater discharges are maintained and operated in a clean and orderly manner. The frequency for conducting each of the good housekeeping measures must be defined in the SWP3.

i. *Spill Prevention and Response Measures* – Areas must be identified where spills would likely contribute pollutants to stormwater discharges. Procedures must be identified and implemented to minimize or prevent contamination of stormwater from spills. Spill cleanup techniques must be identified and the necessary materials and equipment for cleanup made available to facility personnel. Facility personnel that work in the identified areas must be trained in spill prevention and response measures at a minimum frequency of once per year, maintained on site, and be made readily available for inspection by authorized TCEQ personnel upon request.

The SWP3 may be modified at any time in order to implement either additional or more effective pollution control measures. A summary of revisions, including the dates of the revisions, must be maintained on a quarterly basis, maintained as a part of the SWP3 document, and made readily available for inspection by authorized TCEQ personnel upon request.

Qualified personnel, who are familiar with the industrial activities performed at the facility, must conduct monthly inspections to determine the effectiveness of the Good Housekeeping Measures, Spill Prevention and Response Measures, Best Management Practices, and the Employee Training Program. The results of inspections must be documented in an inspection summary report; include an assessment for any necessary revisions or additional measures to increase effectiveness of the SWP3; and include a time-frame for implementation of any follow-up actions. The summary report must be maintained on site, and be made readily available for inspection by authorized TCEQ personnel upon request.

9. Upon the relocation of Outfall 001, the permittee shall maintain the diffuser at Outfall 001 to achieve a maximum dilution of 2.8 percent effluent at the edge of the ZID. The ZID is defined as a volume within a radius of 50 feet centered on the diffuser port.

10. Definitions for phases

    Interim phase: Outfall 001 continues to use the current location until the completion of relocation of Outfall 001.

    Final phase: When the construction of new location for Outfall 001 is completed and starts to discharge.

11. Reporting requirements according to 30 TAC §§ 319.1-319.12 and any additional effluent reporting requirements contained in the permit for the final phase of Outfall 001 are suspended from the effective date of the permit until final phase startup, whichever occurs first, from the facility described by this permit. The permittee shall provide written notice to the TCEQ Applications Review and Processing Team (MC 148), Compliance Monitoring Team (MC 224), and Region 12 Office, at least forty-five days prior to final phase startup on Notification of Completion Form 20007.

12. The permittee shall comply with the following schedule of activities for the attainment of the Whole Effluent Toxicity (WET) Limitation(s) on Page 2 for Outfall 001:

    A. Within 90 days of permit issuance- The permittee shall develop a WET compliance schedule plan (Plan) to initiate a toxicity identification strategy based upon: knowledge of their treatment system, influent/effluent characterization, Significant Industrial Users (SIUs),

source waters, housekeeping practices, etc. The permittee shall submit the Plan to the TCEQ Standards Implementation Team (MC 150).

B. Addition of Plan Milestones- The permittee shall submit an addendum to the Plan which includes milestones as pending studies dictate. The milestones below are provided as an example. Actual Plan milestones shall be based upon the previously prepared toxicity identification strategy and include the estimated date of completion.

Example

1. The permittee shall perform characterization studies to identify the possible cause of toxicity. Multiple studies may be necessary to correctly identify and confirm the cause.
2. The permittee shall select and evaluate corrective action(s).
3. The permittee shall implement the selected corrective action(s). Subsequent failures will require the permittee to re-evaluate the effectiveness of the correct action(s) or the possibility of an additional source of toxicity.

The Plan addendum shall be submitted to the TCEQ Standards Implementation Team (MC 150) with a quarterly progress report indicated below.

C. The permittee shall comply with the final WET limit(s) within 34 months from the date of permit issuance or one day before the permit expires, whichever comes first.

D. If the toxicant or a best management practice is identified prior to the effective date of the permit, the permittee may submit a major amendment application requesting the addition of a chemical-specific limit or best management practice.

E. The permittee shall submit quarterly progress reports in accordance with the following compliance schedule. The requirement to submit quarterly progress reports shall expire 34 months from the date of permit issuance.

PROGRESS REPORT DATES
January 1
April 1
July 1
October 1

The quarterly progress reports shall include a discussion of the milestones completed at the time of the report and shall address the progress towards attaining the final Whole Effluent Toxicity limit(s) at Outfall 001 no later than 34 months from the date of permit issuance or one day before the permit expires, whichever comes first.

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

All progress reports shall be submitted to the TCEQ Standards Implementation Team (MC 150). Copies of all progress reports and related documents shall be submitted to the Whole Effluent Toxicity Coordinator (6WQ-P), U.S. Environmental Protection Agency, 1445 Ross Avenue, Dallas, TX 75202.

CENTRALIZED WASTE TREATMENT REQUIREMENTS

a. DEFINITIONS

(1). The general definitions and abbreviations in 40 CFR Part 401 apply to this part.

(2). *Alternative effluent limitations or pretreatment standards* mean effluent limitations determined on a case-by-case basis under Section 402(a)(1) of the CWA or pretreatment standards developed as local limits by the control authority under 40 CFR §403.6(c) that apply to the discharge of wastewater subject to this provision. The permit writer (or control authority) will calculate these limitations or standards using a "building block" approach or the "combined wastestream formula." Under this approach, the permit writer (or control authority) will develop flow-weighted effluent limitations or standards for the treated combined wastestream by applying the limitations or standards in 40 CFR Subchapter N that would otherwise apply to a particular wastestream received from off-site if the wastestream were treated and discharged from the facility at which it was generated.

(3). *Centralized waste treatment (CWT) facility* means any facility that treats (for disposal, recycling or recovery of material) any hazardous or non-hazardous industrial wastes, hazardous or non-hazardous industrial wastewater, and/or used material received from off-site. "CWT facility" includes both a facility that treats waste received exclusively from off-site and a facility that treats wastes generated on-site as well as waste received from off-site. For example, an organic chemical manufacturing plant may, in certain circumstances, be a CWT facility if it treats industrial wastes received from offsite as well as industrial waste generated at the organic chemical manufacturing plant. CWT facilities may also include re-refiners and may be owned by the federal government.

(4). *Centralized waste treatment wastewater* means any wastewater generated as a result of CWT activities. CWT wastewater sources may include, but are not limited to: liquid waste receipts, solubilization water, used oil emulsion-breaking wastewater, tanker truck/drum/roll-off box washes, equipment washes, air pollution control scrubber blow-down, laboratory-derived wastewater, on-site landfill wastewaters, and contaminated stormwater.

(5). *Contaminated stormwater* means stormwater which comes in direct contact with CWT wastes, the waste handling and treatment areas, or other centralized waste treatment wastewater as defined in paragraph (D) above.

(6). *Discharger* means a facility that discharges wastewater directly to waters of the United States or introduces wastewater to a publicly-owned treatment works.

(7). *Dry* means not producing a wastewater.

(8). *Equivalent treatment* means a wastewater treatment system that achieves comparable pollutant removals to the applicable treatment technology selected as the basis for the limitations and pretreatment standards. Comparable removals may be demonstrated through literature, treatability tests, or self-monitoring data.

(9). *Fuel blending* means the process of combining waste, wastewater, or used material for the purpose of regenerating a fuel for reuse. However, fuel blending may be loosely applied to any process where recovered hydrocarbons are combined as a fuel product where some pretreatment operations generate wastewater.

(10). *High temperature metals recovery* means a metals recovery process in which solid forms of metal-containing materials are processed with a heat-based pyrometallurgical technology to produce a metal product.

(11). *Marine generated waste* means any waste, wastewater, and/or used material generated as part of the normal maintenance and operation of a ship, boat, or barge operating on inland, coastal, or open waters, or while berthed.

(12). *Metal-bearing wastes* means wastes and/or used materials from manufacturing or processing facilities or other commercial operations that contain significant quantities of metal pollutants, but not significant quantities of oil and grease (generally less than 100 mg/L). Examples of these wastes are spent electroplating baths and sludges, metal-finishing rinse water and sludges, chromate wastes, blow-down water and sludges from air pollution control, spent anodizing solutions, incineration air pollution control wastewaters, waste liquid mercury, cyanide containing wastes greater than 136 mg/L, and waste acids and bases with or without metals.

(13). *Multiple wastestream CWT facility* means a CWT facility which accepts waste in more than one CWT subcategory (metals, oils, or organics) and combines any portion of these different subcategory wastes at any point prior to the compliance discharge sampling location.

(14). *Off-site* means outside the boundaries of a facility.

(15). *Oily absorbent recycling* means the process of recycling oil-soaked or contaminated disposable rags, paper, or pads for the purpose of regenerating a fuel for reuse.

(16). *Oily wastes* means wastes and/or used materials that contain oil and grease (generally at or in excess of 100 mg/L) from manufacturing or processing facilities or other commercial operations. Examples of these wastes are used oils, oil-water emulsions or mixtures, lubricants, coolants, contaminated groundwater clean-up from petroleum sources, used petroleum products, oil spill clean-up, bilge water, rinse/wash waters from petroleum sources, interceptor wastes, off-specification fuels, underground storage tank remediation waste, and tank clean out from petroleum or oily sources.

(17). *On-site* means within the boundaries of a facility. A facility may encompass land areas that are bisected by public thoroughfares but are under the control of a common owner.

(18). *Organic wastes* means wastes and/or used materials that contain organic pollutants, but not a significant quantity of oil and grease (generally less than 100 mg/L) from manufacturing or processing facilities or other commercial operations. Examples of these wastes are landfill leachate, contaminated groundwater clean-up from non-petroleum sources, solvent-bearing wastes, off-specification organic product, still bottoms, byproduct glycols, wastewater from paint washes, wastewater from adhesives and/or epoxies, wastewater from chemical product operations, and tank clean-out from organic, non-petroleum sources.

(19). *Pipeline* means an open or closed conduit used for the conveyance of material. A pipeline includes a channel, pipe, tube, trench, or ditch, or fixed delivery system.

(20). *Product stewardship* means a manufacturer's treatment or recovery of its own unused products, shipping and storage containers with product residues, off-specification products, and does not include spent or used materials from use of its products.

(21). *Re-refining* means the processing of used oil using distillation, hydrotreating, and/or other treatment employing acid, caustic, solvent, clay and/or chemicals in order to produce high quality base stock for lubricants or other petroleum products.

(22). *Recovery* means the recycling or processing of a waste, wastewater or used material such that the material, or a portion thereof, may be reused or converted to a raw material, intermediate, or product. Recovery does not include the re-use of treated or untreated wastewater in place of potable or pure water in industrial processes such as the use of secondary POTW effluents as non-contact cooling water, stormwater in place of process water, or the re-use of spent chemicals in place of virgin treatment chemicals.

(23). *Solidification* means the addition of sorbents to convert liquid or semi-liquid waste to a solid by means of adsorption, absorption or both. The process is usually accompanied by stabilization.

(24). *Solvent recovery* includes fuel blending operations and the recycling of spent solvents through separation of solvent mixtures in distillation columns. Solvent recovery may require an additional, pretreatment step prior to distillation.

(25). *Stabilization* means a waste process that decreases the mobility of waste constituents by means of a chemical reaction. For the purpose of this rule, chemical precipitation is not a technique for stabilization.

(26). *Treatment* means any method, technique, or process designed to change the physical, chemical or biological character or composition of any metal-bearing, oily, or organic wastes to neutralize such wastes; to render such wastes amenable to discharge; or to recover energy or recover metal, oil, or organic content from the wastes. Treatment does not include (a) the re-use of treated or untreated wastewater in place of potable or pure water in industrial processes such as the use of secondary POTW effluents as non-contact cooling water or stormwater in place of process water or (b) the re-use of treated or untreated spent chemicals (such as pickle liquor) as treatment chemicals.

(27). *Non-contaminated stormwater* means stormwater which does not come in direct contact with CWT wastes, the waste handling and treatment areas, or other CWT wastewater that is defined in paragraph (D) of this section.

(28). *Used oil filter recycling* means crushing and draining of used oil filters of entrained oil and/or shredding and separation of used oil filters.

(29). *Waste* includes aqueous, non-aqueous, and solid waste, wastewater, and/or used material.

b. <u>CERTIFICATION REQUIREMENTS</u>

(1). Initial Certification Statement for this subpart means a written submission to the appropriate permitting authority (either the local control authority (the POTW) or NPDES permit writer) that is signed by the responsible corporate officer as defined in 40 CFR 403.12(l) or 40 CFR 122.22. The statement must:

(a) List and describe the subcategories of wastes accepted for treatment at the facility;

(b) List and describe the treatment systems in-place at the facility and conditions under which the treatment systems are operated for the subcategories of wastes accepted for treatment at the facility;

(c). Include information and supporting data establishing that these treatment systems will achieve equivalent treatment.

The discharger shall notify the TCEQ at the time of renewal or modification of its permit, of its desire to be subject to the Multiple Waste Subcategory by submitting an initial certification statement as described with its TPDES permit application.

(2). Periodic Certification Statement for this subpart means a written submission to the TCEQ which certifies that the facility is operating its treatment systems to provide equivalent treatment as set forth in the initial certification. In the event that the facility has modified its treatment systems, the facility should submit a description of the modified systems and information and supporting data to establish that the modified system will achieve equivalent treatment. The periodic certification statement must be signed by the responsible corporate officer as defined in 40 CFR §403.12(l) or 40 CFR §122.22.

The permittee shall submit to the TCEQ a periodic certification statement as described above once a year.

(3). On-site Compliance Paperwork for this subpart means data or information retained in the offices of the facility which supports the initial and periodic certification statements. This Paperwork must:

(a). List and describe the subcategory wastes being accepted for treatment at the facility;

(b). List and describe the treatment systems in-place at the facility, modifications to the treatment systems and the conditions under which the systems are operated for the subcategories of wastes accepted for treatment at the facility;

(c). Provide information and supporting data establishing that these treatment systems will achieve equivalent treatment;

(d). Describe the procedures it follows to ensure that its treatment systems are well-operated and maintained; and

(e). Explain why the procedures it has adopted will ensure its treatment systems are well-operated and maintained.

The permittee shall maintain at the office of the facility and make available for inspection the on-site compliance paperwork as described above.

BIOMONITORING REQUIREMENTS

CHRONIC BIOMONITORING REQUIREMENTS: MARINE

The provisions of this section apply to Outfall 001 (interim phase) 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 from Internal Outfall 101, the permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified below and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," third edition (EPA-821-R-02-014) or its most recent update:

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

      2) Chronic static renewal 7-day larval survival and growth test using the inland silverside (*Menidia beryllina*) (Method 1006.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

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

   c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 32%, 42%, 56%, 80%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.

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

   e. Testing Frequency Reduction

      1) If none of the first four consecutive quarterly inland silverside tests demonstrates significant toxicity, the permittee may submit this information in writing and, upon approval, reduce the testing frequency to once per year.

2) If one or more of the first four consecutive quarterly inland silverside tests demonstrates significant toxicity, the permittee shall continue quarterly testing 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 until this permit is reissued.

f. The lethal No Observed Effect Concentration (NOEC) effluent limitation of not less than 100% and the sublethal NOEC of not less than 80% (see the EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS section) are effective thirty-four months from the permit issue date for the mysid shrimp.

g. Thirty-four months from the permit issue date, if a mysid shrimp test fails to pass the sublethal endpoint at the 80% effluent concentration or the lethal effluent limitation at 100% effluent limitation, the testing frequency will increase to monthly until such time compliance with the NOEC effluent limitation is demonstrated for a period of three consecutive months, at which time the quarterly testing frequency may be resumed.

2. Required Toxicity Testing Conditions

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

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

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

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

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

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

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

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

b. Statistical Interpretation

1) For the mysid shrimp and the inland silverside larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b..

2) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled “Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)” (EPA 821-B-00-004) provides guidance on determining the validity of test results.

3) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.

4) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is herein defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control.

5) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 2.

6) Pursuant to the responsibility assigned to the permittee in Part 2.b.2), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 2 will be used when making a determination of test acceptability.

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

c. Dilution Water

1) Dilution water used in the toxicity tests must be the receiving water collected as close as possible to the point of discharge into the perennial marine waters but unaffected by the discharge.

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

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

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

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

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

d. Samples and Composites

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

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

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

4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time, are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

3. Reporting

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

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

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

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

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

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

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

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

1) For the mysid shrimp, Parameter TLP3E, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

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

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

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

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

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

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

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

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

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

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

12) For the inland silverside, Parameter TYP6B, report the LOEC for growth.

d. Enter the following codes for inland silverside retests only:

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

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

e. The permittee shall report the lethal and sublethal WET values for the 30-day average and the 7-day minimum under Parameter No. 51713 for the appropriate reporting period for the mysid shrimp. If more than one valid test was performed during the reporting period, the NOECs will be averaged arithmetically and reported as the 30-day average. The 7-day minimum value submitted should reflect the lowest NOEC results for the water flea during the reporting period.

4. Persistent Toxicity

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

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

b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.

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

e. Regardless of whether retesting for lethal or sublethal effects or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

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

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

1) Specific Activities - The TRE action plan shall specify the approach the

permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and alternative approaches. When conducting characterization analyses, the permittee shall perform multiple characterizations and follow the procedures specified in the document entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA/600/6-91/003) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;

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

3) Quality Assurance Plan - The TRE action plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, and mechanisms to detect artifactual toxicity; and

4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.

c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.

d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant performed during the quarter;

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

3) any data and substantiating documentation which identifies the pollutant and source of effluent toxicity;

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

5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

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

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

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

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

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

g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism.

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

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

TABLE 1 (SHEET 1 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

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

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic dilution water

MYSID SHRIMP SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers								Mean Percent Survival			CV%*
	A	B	C	D	E	F	G	H	24h	48h	7 day	
0%												
32%												
42%												
56%												
80%												
100%												

* Coefficient of Variation = standard deviation x 100/mean

DATA TABLE FOR GROWTH OF MYSID SHRIMP

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	32%	42%	56%	80%	100%
A						
B						
C						
D						
E						

TABLE 1 (SHEET 2 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

DATA TABLE FOR GROWTH OF MYSID SHRIMP (Continued)

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	32%	42%	56%	80%	100%
F						
G						
H						
Mean Dry Weight						
CV%*						
PMSD						

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

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

   CRITICAL DILUTION (100%): _____ YES _____ NO

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

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

   CRITICAL DILUTION (100%): _____ YES _____ NO

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

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC growth = _____% effluent

   d.) LOEC growth = _____% effluent

TABLE 1 (SHEET 3 OF 4)

INLAND SILVERSIDE MINNOW LARVAL SURVIVAL AND GROWTH TEST

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

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

INLAND SILVERSIDE SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0%									
32%									
42%									
56%									
80%									
100%									

* Coefficient of Variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)

INLAND SILVERSIDE LARVAL SURVIVAL AND GROWTH TEST

INLAND SILVERSIDE GROWTH

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

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

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

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

   CRITICAL DILUTION (100%): _____ YES _____ NO

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

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

   CRITICAL DILUTION (100%): _____ YES _____ NO

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

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC growth = _____% effluent

   d.) LOEC growth = _____% effluent

48-HOUR ACUTE BIOMONITORING REQUIREMENTS: MARINE

The provisions of this section apply to Outfall 001 (final phase) 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 of the test organisms.

b. Within 90 days of initial discharge of Outfall 001 final phase, the permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this part of this permit and in accordance with "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 static renewal 48-hour definitive 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. This test shall be conducted once per quarter.

2) Acute static renewal 48-hour definitive 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. This test shall be conducted once per quarter.

The permittee must perform and submit a valid test for each test species during the required reporting period for that species. A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution. A 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. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 5%, 7%, 9%, 12%, and 16% effluent. The critical dilution, defined as 12% 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 lethal 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.

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

species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant lethal effects, the permittee will resume a quarterly testing frequency for that species until 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 90% or greater; and

2) a coefficient of variation percent (CV%) of 40 or less for both the control and critical dilution. However, if significant lethality is demonstrated, a CV% greater than 40 shall not invalidate the test. The CV% requirement does not apply when significant lethality occurs.

b. Statistical Interpretation

1) For the mysid shrimp and inland silversides 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 90% 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 lethality is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which significant lethality is demonstrated. Significant lethality is defined as a statistically significant difference between the survival of the test organism in a specified effluent dilution compared to the survival of the test organism in the control.

5) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 2.

6) Pursuant to the responsibility assigned to the permittee in Part 2.b.2), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 2 will be used when making a determination of test acceptability.

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

c. Dilution Water

1) Dilution water used in the toxicity tests must be the receiving water collected as close to the point of discharge as possible but unaffected by the discharge.

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

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

b) the test indicating receiving water toxicity was carried out to completion; 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 two composite samples from Outfall 001. The second composite sample 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 the subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.

4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

3. Reporting

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

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit 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 2 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 TEM3E, enter a “1” if the NOEC for survival is less than the critical dilution; otherwise, enter a “0.”

2) For the mysid shrimp, Parameter TOM3E, report the NOEC for survival.

3) For the mysid shrimp, Parameter TXM3E, report the LOEC for survival.

4) For the inland silverside, Parameter TEM6B, enter a “1” if the NOEC for survival is less than the critical dilution; otherwise, enter a “0.”

5) For the inland silverside, Parameter TOM6B, report the NOEC for survival.

6) For the inland silverside, Parameter TXM6B, report the LOEC for survival.

d. Enter the following codes for retests only:

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

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

4. Persistent Toxicity

The requirements of this part apply only when a toxicity test demonstrates significant lethality. Significant lethality was defined in Part 2.b.

a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates significant lethality. 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 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.

c. 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 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 describe an approach for the reduction or elimination of lethality for both test species defined in item 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 reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:

1) results and interpretation of any chemical specific analyses for the identified and suspected pollutant performed during the quarter;

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

3) any data and substantiating documentation which identifies the pollutant and source of effluent toxicity;

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

5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and

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

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

f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant

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

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

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

g. The permittee shall complete the TRE and submit a final report on the TRE Activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond 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 on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.

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

TABLE 2 (SHEET 1 OF 2)

MYSID SHRIMP SURVIVAL

Dates and Times Composites Collected

Date Time Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	5%	7%	9%	12%	16%
24h	A						
	B						
	C						
	D						
	E						
48h	A						
	B						
	C						
	D						
	E						
Mean at test end							
CV%*							

*Coefficient of Variation = Standard Deviation x 100/mean

Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean survival at 48 hours significantly less than the control survival?

CRITICAL DILUTION (12%): _____ YES _____ NO

Enter percent effluent corresponding to the NOEC below:

1) NOEC survival = _____% effluent

2) LOEC survival = _____% effluent

TABLE 2 (SHEET 2 OF 2)

INLAND SILVERSIDE SURVIVAL

Dates and Times Composites Collected — Date Time / Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

PERCENT SURVIVAL

Time	Rep	Percent effluent (%)					
		0%	5%	7%	9%	12%	16%
24h	A						
	B						
	C						
	D						
	E						
48h	A						
	B						
	C						
	D						
	E						
Mean at test end							
CV%*							

* Coefficient of Variation = standard deviation x 100/mean

Dunnett's Procedure or Steel's Many-One Rank Test as appropriate:

Is the mean survival at 48 hours significantly less than the control survival?

CRITICAL DILUTION (12%): _____ YES _____ NO

Enter percent effluent corresponding to the NOEC below:

1) NOEC survival = _____% effluent

2) LOEC survival = _____% effluent

<u>24-HOUR ACUTE BIOMONITORING REQUIREMENTS: MARINE</u>

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 from Internal Outfall 101, the toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," fifth edition (EPA-821-R-02-012) or its most recent update:

1) Acute 24-hour static toxicity test using the mysid shrimp (*Mysidopsis bahia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

2) Acute 24-hour static toxicity test using the inland silverside (*Menidia beryllina*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

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

c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in Part 2.b., the control and dilution water shall consist of standard, synthetic, reconstituted seawater.

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

e. As the dilution series specified in the Chronic Biomonitoring Requirements (interim phase) includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in Part 1.a. The 50% survival in 100% effluent for a 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted to comply with the minimum testing frequency.

2. Required Toxicity Testing Conditions

a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.

b. Dilution Water - In accordance with Part 1.c., the control and dilution water shall consist of standard, synthetic, reconstituted seawater.

c. Samples and Composites

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

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

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

4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.

3. Reporting

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

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

b. The permittee shall routinely report the results of each biomonitoring test on the Table 3 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 3 (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 3 (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

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

Compliance History Report

Compliance History Report for CN603349820, RN100890235, Rating Year 2021 which includes Compliance History (CH) components from September 1, 2016, through August 31, 2021.

Customer, Respondent, or Owner/Operator: CN603349820, Clean Harbors San Leon, Inc. **Classification:** SATISFACTORY **Rating:** 0.14

Regulated Entity: RN100890235, CLEAN HARBORS SAN LEON **Classification:** SATISFACTORY **Rating:** 0.14

Complexity Points: 22 **Repeat Violator:** NO

CH Group: 11 - Waste Management (Excluding Landfills)

Location: 2700 AVENUE S SAN LEON, TX 77539-7285, GALVESTON COUNTY

TCEQ Region: REGION 12 - HOUSTON

ID Number(s):

AIR NEW SOURCE PERMITS REGISTRATION 14291
AIR NEW SOURCE PERMITS ACCOUNT NUMBER GB0101M
AIR NEW SOURCE PERMITS AFS NUM 4816700042
AIR NEW SOURCE PERMITS REGISTRATION 87443
AIR NEW SOURCE PERMITS REGISTRATION 85676
USED OIL REGISTRATION A86130
USED OIL EPA ID TXD981053770
STORMWATER PERMIT WQ0004086000
STORMWATER EPA ID TX0117757
AIR EMISSIONS INVENTORY ACCOUNT NUMBER GB0101M
POLLUTION PREVENTION PLANNING ID NUMBER P03840
INDUSTRIAL AND HAZARDOUS WASTE EPA ID TXD981053770
INDUSTRIAL AND HAZARDOUS WASTE SOLID WASTE REGISTRATION # (SWR) 34814
INDUSTRIAL AND HAZARDOUS WASTE PERMIT 50355

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

Date Compliance History Report Prepared: July 05, 2022

Agency Decision Requiring Compliance History: Enforcement

Component Period Selected: September 01, 2016 to August 31, 2021

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

Name: TCEQ Staff Member **Phone:** (512) 239-1000

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	September 22, 2016	(1374019)
Item 2	October 28, 2016	(1380170)
Item 3	December 02, 2016	(1386124)
Item 4	December 21, 2016	(1392271)
Item 5	January 26, 2017	(1398875)
Item 6	February 20, 2017	(1405792)

Item 7	March 21, 2017	(1419372)
Item 8	May 19, 2017	(1427011)
Item 9	June 21, 2017	(1433006)
Item 10	July 21, 2017	(1441571)
Item 11	August 21, 2017	(1445254)
Item 12	September 21, 2017	(1451842)
Item 13	October 17, 2017	(1457704)
Item 14	November 20, 2017	(1463142)
Item 15	November 30, 2017	(1454711)
Item 16	December 13, 2017	(1469569)
Item 17	January 19, 2018	(1476276)
Item 18	February 21, 2018	(1488446)
Item 19	April 19, 2018	(1492116)
Item 20	June 04, 2018	(1502332)
Item 21	June 21, 2018	(1509444)
Item 22	July 20, 2018	(1515769)
Item 23	August 28, 2018	(1521810)
Item 24	September 25, 2018	(1528991)
Item 25	October 19, 2018	(1535312)
Item 26	November 16, 2018	(1543171)
Item 27	December 17, 2018	(1465554)
Item 28	December 31, 2018	(1546905)
Item 29	January 21, 2019	(1564842)
Item 30	March 22, 2019	(1564841)
Item 31	April 22, 2019	(1573544)
Item 32	May 21, 2019	(1586684)
Item 33	June 21, 2019	(1586685)
Item 34	August 01, 2019	(1594884)
Item 35	August 20, 2019	(1601183)
Item 36	September 23, 2019	(1608095)
Item 37	October 23, 2019	(1614961)
Item 38	November 18, 2019	(1620748)
Item 40	December 31, 2019	(1628097)
Item 41	February 03, 2020	(1635727)
Item 42	February 27, 2020	(1642342)
Item 43	March 23, 2020	(1648852)
Item 44	April 22, 2020	(1655207)
Item 45	May 21, 2020	(1661765)
Item 46	June 16, 2020	(1668301)
Item 47	July 20, 2020	(1675247)
Item 48	August 20, 2020	(1682021)
Item 49	September 18, 2020	(1688592)
Item 50	October 20, 2020	(1694958)
Item 51	November 18, 2020	(1717457)
Item 52	December 21, 2020	(1717458)
Item 53	December 30, 2020	(1698090)
Item 54	January 20, 2021	(1717459)
Item 55	February 19, 2021	(1730530)
Item 56	March 08, 2021	(1730531)
Item 57	April 16, 2021	(1730532)
Item 58	May 17, 2021	(1742541)
Item 59	May 25, 2021	(1711455)
Item 60	June 18, 2021	(1748450)
Item 61	July 14, 2021	(1753352)
Item 62	August 19, 2021	(1758750)

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.

1 Date: 09/29/2020 (1677613)

Self Report? NO Classification: Moderate

Citation: 30 TAC Chapter 335, SubChapter A 335.9(a)(1)(A)
30 TAC Chapter 335, SubChapter R 335.513
Permit Provision II.C.1.h. PERMIT

Description: Failure to provide complete/adequate hazardous waste determination and waste classification documentation.

F. Environmental audits:

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