TPDES PERMIT NO. WQ0002097000
[For TCEQ office use only -
EPA I.D. No. TX0070416]

03

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

This is permit supersedes and replaces TPDES Permit No. WQ0002097000 issued on September 23, 2009.

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

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PLANNING & ANALYSIS BRANCH

Oxy Vinyls, LP

whose mailing address is

P.O. Box 500
Deer Park, Texas 77536

is authorized to treat and discharge wastes from La Porte VCM Site, a chemical plant manufacturing vinyl chloride monomer (SIC 2869)

located at 2400 Miller Cut Off Road in the City of La Porte, Harris County, Texas 77571

via Outfall 001 through an eight-inch pipe to a diffuser located in the Houston Ship Channel (San Jacinto River Tidal); via Outfall 002 to Phillips Ditch; thence to Santa Anna Bayou; via Outfall 003 to an unnamed ditch; thence to Santa Anna Bayou; thence to Houston Ship Channel (San Jacinto River Tidal) in Segment No. 1005 of the San Jacinto River Basin

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

This permit shall expire at midnight on July 1, 2018.

ISSUED DATE: August 11, 2015

For the Commission

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 001

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

The daily average flow of effluent shall not exceed 1.57 million gallons per day (MGD). The daily maximum flow shall not exceed 2.25 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	1.57 MGD		2.25 MGD		N/A	Continuous	Record
Carbonaceous Biochemical Oxygen Demand (5-day)	171	N/A	443	N/A	70	1/week	Composite
Ammonia Nitrogen	N/A	N/A	N/A	5.0	5.0	1/month	Grab
Total Suspended Solids	277	N/A	775	N/A	115	1/week	Composite
Total Organic Carbon	352	N/A	569	N/A	105	1/month	Composite
Chromium, Total	2.20	N/A	4.30	N/A	0.805	1/month	Composite
Copper, Total	1.58	N/A	3.35	N/A	0.444	1/week	Composite
Dioxins/Furans (TCDD Equivalents) (*1)	2.6×10^{-8}	N/A	5.5×10^{-8}	N/A	9.0×10^{-8}	1/quarter	Composite
Temperature	N/A		140°F (*2)		140 °F	1/week	In-Situ
Acenaphthene	0.11	N/A	0.29	N/A	0.042	1/year	Composite
Acenaphthylene	0.11	N/A	0.29	N/A	0.042	1/year	Composite
Acrylonitrile	0.48	N/A	1.2	N/A	0.174	1/year	Composite
Anthracene	0.11	N/A	0.29	N/A	0.042	1/year	Composite
Benzene	0.18	N/A	0.68	N/A	0.098	1/year	Composite
Benzo(a)anthracene	0.11	N/A	0.29	N/A	0.042	1/year	Composite
3,4-Benzofluoranthene	0.11	N/A	0.30	N/A	0.044	1/year	Composite
Benzo(k)fluoranthene	0.11	N/A	0.29	N/A	0.042	1/year	Composite
Benzo(a)pyrene	0.11	N/A	0.30	N/A	0.044	1/year	Composite
Bis(2-ethylhexyl) phthalate	0.51	N/A	1.39	N/A	0.201	1/year	Composite
Carbon Tetrachloride	0.09	N/A	0.19	N/A	0.027	1/year	Composite

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS-continued

Outfall Number 001

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
Chlorobenzene	0.07	N/A	0.14	N/A	0.020	1/year	Composite
Chloroethane	0.57	N/A	1.33	N/A	0.193	1/year	Composite
Chloroform	0.15	N/A	0.29	N/A	0.033	1/year	Composite
2-Chlorophenol	0.15	N/A	0.49	N/A	0.071	1/year	Composite
Chrysene	0.11	N/A	0.29	N/A	0.042	1/year	Composite
Di-n-butyl phthalate	0.13	N/A	0.28	N/A	0.041	1/year	Composite
1,2-Dichlorobenzene	0.38	N/A	0.81	N/A	0.117	1/year	Composite
1,3-Dichlorobenzene	0.15	N/A	0.22	N/A	0.032	1/year	Composite
1,4-Dichlorobenzene	0.07	N/A	0.14	N/A	0.020	1/year	Composite
1,1-Dichloroethane	0.11	N/A	0.29	N/A	0.042	1/year	Composite
1,2-Dichloroethane	0.34	N/A	1.05	N/A	0.152	1/year	Composite
1,1-Dichloroethylene	0.08	N/A	0.12	N/A	0.018	1/year	Composite
1,2-trans-Dichloroethylene	0.10	N/A	0.27	N/A	0.039	1/year	Composite
2,4-Dichlorophenol	0.19	N/A	0.56	N/A	0.081	1/year	Composite
1,2-Dichloropropane	0.76	N/A	1.15	N/A	0.166	1/year	Composite
1,3-Dichloropropylene	0.14	N/A	0.22	N/A	0.032	1/year	Composite
Diethyl phthalate	0.40	N/A	1.01	N/A	0.146	1/year	Composite
2,4-Dimethylphenol	0.09	N/A	0.18	N/A	0.026	1/year	Composite
Dimethyl phthalate	0.09	N/A	0.23	N/A	0.034	1/year	Composite
4,6-Dinitro-o-cresol	0.39	N/A	1.33	N/A	0.199	1/year	Composite
2,4-Dinitrophenol	0.35	N/A	0.61	N/A	0.089	1/year	Composite
2,4-Dinitrotoluene	0.56	N/A	1.42	N/A	0.205	1/year	Composite
2,6-Dinitrotoluene	1.27	N/A	3.19	N/A	0.462	1/year	Composite
Ethylbenzene	0.16	N/A	0.54	N/A	0.078	1/year	Composite
Fluoranthene	0.12	N/A	0.34	N/A	0.049	1/year	Composite
Fluorene	0.11	N/A	0.29	N/A	0.042	1/year	Composite
Hexachlorobenzene (*3)	0.004	N/A	0.008	N/A	0.0013	1/year	Composite

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
Hexachlorobenzene (*4)	0.002	N/A	0.004	N/A	0.0013	1/year	Composite
Hexachlorobutadiene	0.10	N/A	0.24	N/A	0.035	1/year	Composite
Hexachloroethane	0.10	N/A	0.27	N/A	0.039	1/year	Composite
Methyl Chloride	0.43	N/A	0.95	N/A	0.137	1/year	Composite
Methylene Chloride	0.20	N/A	0.44	N/A	0.064	1/year	Composite
Naphthalene	0.11	N/A	0.29	N/A	0.042	1/year	Composite
Nitrobenzene	0.13	N/A	0.34	N/A	0.049	1/year	Composite
2-Nitrophenol	0.20	N/A	0.34	N/A	0.050	1/year	Composite
4-Nitrophenol	0.36	N/A	0.62	N/A	0.089	1/year	Composite
Phenanthrene	0.11	N/A	0.29	N/A	0.042	1/year	Composite
Phenol	0.070	N/A	0.13	N/A	0.019	1/year	Composite
Pyrene	0.12	N/A	0.33	N/A	0.048	1/year	Composite
Tetrachloroethylene	0.11	N/A	0.28	N/A	0.040	1/year	Composite
Toluene	0.13	N/A	0.40	N/A	0.058	1/year	Composite
1,2,4-Trichlorobenzene	0.34	N/A	0.7	N/A	0.101	1/year	Composite
1,1,1-Trichloroethane	0.10	N/A	0.27	N/A	0.039	1/year	Composite
1,1,2-Trichloroethane	0.10	N/A	0.27	N/A	0.039	1/year	Composite
Trichloroethylene	0.10	N/A	0.27	N/A	0.039	1/year	Composite
Vinyl Chloride	0.52	N/A	1.33	N/A	0.193	1/year	Composite

(*1) See Other Requirement Nos. 3, 4, and 5.
(*2) See Other Requirement No. 12.
(*3) Beginning from date of permit issuance and lasting 364 days from date of permit issuance.
(*4) Beginning 365 days from date of permit issuance.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/day, by grab sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
4. Effluent monitoring samples shall be taken at the following location: At Outfall 001, at the sample composite analyzer, connected to a tap on the effluent force main to the diffuser located downstream of all treatment systems and prior to going underground and exiting the plant site.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 101

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

Volume: Intermittent and flow-variable basis.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/L	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/day	Estimate
Biochemical Oxygen Demand (5-day)	N/A	65	65	1/month	Grab
Total Suspended Solids	N/A	65	65	1/month	Grab
Enterococci (*1)(*3)	Report	Report	N/A	1/month	Grab
Enterococci (*2)(*3)	350	540	540	1/month	Grab

(*1) Beginning from date of permit issuance and lasting 364 days from date of permit issuance.
(*2) Beginning 365 days from date of permit issuance.
(*3) Colony Forming Units (CFU) or Most Probable Number (MPN) per 100 mL.

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

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 101, following the final treatment unit prior to commingling with any other wastewater.

EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 002

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge stormwater, steam condensate, air conditioning condensate, cooling tower blowdown, and wash down water (and occasional discharges of wastewater diverted from Outfall 001 (*1)) subject to the following effluent limitations:

Volume: Intermittent and flow-variable basis.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/L	mg/L	mg/L	Measurement Frequency	Sample Type
Flow	Report, MGD	Report, MGD	N/A	1/week (*2)	Estimate
Total Organic Carbon	N/A	75	75	1/week (*2)	Grab
Oil and Grease	N/A	15	15	1/week (*2)	Grab
Copper, Total	N/A	0.092	0.184	1/day (*3)	Composite
Zinc, Total	N/A	Report	N/A	1/week (*2)	Grab

(*1) See Other Requirement No. 7.
(*2) When discharging. When the discharge occurs preference shall be given to monitor stormwater. During storm events, a sample shall be taken within two hours of the initial discharge.
(*3) When discharging treated wastewater diverted from Outfall 001. Samples shall be collected at the sample composite analyzer used to collect samples for Outfall 001 monitoring.

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/week (*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 002, at the outlet weir prior to entering Phillips Ditch.

FFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Number 003

1. During the period beginning upon date of issuance and lasting through date of expiration, the permittee is authorized to discharge stormwater, steam condensate, air conditioning condensate, cooling tower blowdown, and wash down water subject to the following effluent limitations:

Volume: Intermittent and flow-variable basis.

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

(*1) When discharging. When the discharge occurs preference shall be given to monitor stormwater. During storm events, a sample shall be taken within two hours of initial discharge.

2. The pH shall not be less than 6.0 standard units nor greater than 10.0 standard units and shall be monitored 1/week (*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 Outfall 003, at the outlet weir prior to entering the unnamed drainage ditch.

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, a monthly effluent report 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 reported on an approved self-report form that is 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. 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 Publicly Owned Treatment Works (POTWs) must provide adequate notice to the Executive Director of the following:

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

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

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

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

PERMIT CONDITIONS

1. General

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

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

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

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

2. Compliance

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

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

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

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

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

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

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

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

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

3. Inspections and Entry

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

b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit, or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive

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

4. Permit Amendment or Renewal

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

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

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

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

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

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

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

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

f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA §307(a) for a toxic pollutant that is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition. The permittee shall comply

with effluent standards or prohibitions established under CWA §307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

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

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

6. Relationship to Hazardous Waste Activities

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

7. Relationship to Water Rights

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

8. Property Rights

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

9. Permit Enforceability

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

10. Relationship to Permit Application

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

11. Notice of Bankruptcy.

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

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

    b. This notification must indicate:

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

OPERATIONAL REQUIREMENTS

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

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

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

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

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

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

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

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

7. Documentation

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

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

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

      If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 149) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

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

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

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

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

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

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

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

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

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

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

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

   i. volume of waste and date(s) generated from treatment process;
   ii. volume of waste disposed of on-site or shipped off-site;
   iii. date(s) of disposal;
   iv. identity of hauler or transporter;
   v. location of disposal site; and
   vi. method of final disposal.

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

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

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OTHER REQUIREMENTS

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

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

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

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

*Minimum analytical level

DIOXINS/FURANS

Pollutant	MAL
2,3,7,8-TCDD	See Other Requirement No. 3

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

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

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

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

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

3. DIOXIN EFFLUENT MONITORING REQUIREMENTS

The method of analysis of the final effluent for 2, 3, 7, 8-tetrachloro-dibenzo-p-dioxin (2, 3, 7, 8-TCDD) and 2, 3, 7, 8-TCDD Equivalents (TEQ) shall be in accordance with the analytical protocol in U.S. Environmental Protection Agency Method 1613: Tetra-through Octa-Chlorinated Dioxin and Furans by Isotope Dilution, as found in 40 CFR Part 136 [Other analytical methods may be used provided the permittee obtains written approval from the Executive Director]. The following "minimum levels" (ML) for 2, 3, 7, 8 congeners shall be achieved. The minimum level is defined as the level at which the entire analytical system shall give recognizable mass spectra and acceptable calibration points.

Minimum Levels for TCDD/TCDF Congeners

Dioxin Congener	ML (ppq)	Dibenzofuran Congener	ML (ppq)
2,3,7,8-TCDD	10	2,3,7,8-TCDF	10
1,2,3,7,8-PeCDD	50	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF	50 50
1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD	50 50 50	1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8, 9-HxCDF 2,3,4,6, 7,8-HxCDF	50 50 50 50

4. COMPLIANCE WITH DIOXIN EFFLUENT LIMITATIONS

Permit compliance/noncompliance determination shall be based on the above "minimum levels" for EPA Method 1613 [or other method approved by the executive director] for the daily average and daily maximum effluent limitations for 2,3,7,8-tetrachloro-dibenzo-p-dioxin (2,3,7,8-TCDD) and 2,3,7,8-TCDD Equivalents (TEQs). If an analysis for any 2,3,7,8-congener results in a measurement of "less than minimum levels", a value of zero (0) will be used for that congener for calculation of the TEQ. The following Toxicity Equivalence Factors (TEF) shall be used in the calculation of the TCDD Equivalents.

Toxicity Equivalence Factors (TEF) for TCDD/TCDF Congeners

Dioxin Congener	TEF	Dibenzofuran Congener	TEF
2,3,7,8-TCDD	1	2,3,7,8-TCDF	0.1
1,2,3,7,8-PeCDD	0.5	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF	0.05 0.5
1,2,3,4,7,8-HxCDD 1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD	0.10 0.10 0.10	1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 1,2,3,7,8, 9-HxCDF 2,3,4,6, 7,8-HxCDF	0.10 0.10 0.10 0.10

TEF is the assigned relative toxicity to 2,3,7,8-TCDD. The TEFs for congeners not listed above is zero (0). The TEFs are from the Texas Surface Water Quality Standards, 30 TAC 307, Table 3.

5. DIOXIN SLUDGE MONITORING REQUIREMENTS

The permittee shall monitor the wastewater treatment plant sludge for 2,3,7,8-TCDD Equivalents (TEQ) once per year. Sludge samples shall be analyzed and reported for all congeners of chlorinated dibenzo-p-dioxins and dibenzofurans and also reported as toxicity equivalence based on the relative toxicity equivalent factors provided in *Interim Procedures for Estimating Risks Associated With Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans (CDD's and CDF's) and 1989 Update*, (EPA/625/3-89/016), U.S. Environmental Protection Agency, March 1989.

The method of analysis shall be in accordance with the analytical method 8290A: Tetra-through Octa-Chlorinated Dioxins and Furans by Isotope Dilutions, July 1989.

The target analytical detection level for 2,3,7,8-TCDD in sludge samples shall be 10.0 parts per trillion (ppt). Other analytical methods may be used provided the permittee obtains written approval from the Executive Director.

6. MIXING ZONE DEFINITIONS

Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone for Outfall 001 is defined as a 407-foot by 309-foot rectangle centered on the diffuser. This area is approximately equivalent to the area of a 200 foot radius circle.

At Outfall 002, there is no mixing zone established for the discharge to an intermittent stream. Acute toxic criteria apply at the point of discharge.

At Outfall 003, there is no mixing zone established for the discharge to an intermittent stream. Acute toxic criteria apply at the point of discharge.

7. The permittee may divert treated wastewater from Outfall 001 to Outfall 002 when routine cleaning and maintenance of Outfall 001 force main and diffuser is performed. This diverted treated wastewater may not last more than 24 hours per discharge event. The volume of treated wastewater from Outfall 001 during each diversion event shall not exceed 0.36 million gallons. The permittee shall notify TCEQ Region 12 Office 24 hours before diverting the treated wastewater from Outfall 001 to Outfall 002.

   The permittee shall monitor the following parameters at a frequency of once per day when routing treated wastewater from Outfall 001 to Outfall 002: carbonaceous biochemical oxygen demand (5-day), ammonia-nitrogen, total suspended solids, total organic carbon, total chromium, total copper, temperature, and hexachlorobenzene. Samples shall be collected at the sample composite analyzer used to collect samples for Outfall 001 monitoring. The permittee shall maintain a record of the duration, volume of treated wastewater diverted from Outfall 001, and number of days the treated wastewater from Outfall 001 is diverted to Outfall 002.

   This information shall be provided in the application for renewal/amendment of this permit. The TCEQ may reopen or amend this permit to include additional limits or monitoring requirements if the frequency of effluent diversion exceeds normal maintenance requirements. This provision does not authorize the diversion or discharge of untreated wastewater from Outfall 001.

8. The permittee is hereby placed on notice that this permit may be reviewed by the TCEQ after the completion of any new intensive water quality survey on Segment No. 1005 of the San Jacinto River Basin and any subsequent updating of the water quality model for Segment No. 1005, in order to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC Section 305.62, as a result of such review.

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

10. The permittee shall maintain the diffuser at Outfall 001 to achieve a dilution of at least 5.3 percent effluent at the edge of the zone of initial dilution.

11. The permittee must develop and implement a stormwater pollution prevention 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:

    1. 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 (e.g. Waste Processing and Drum Storage Unit, unloading dock areas, Waste Confirmation Unit, and truck tire wash areas) 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.

    2. 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. A record of employee training shall be maintained on a minimum frequency of once per year, maintained on site, and be made readily available for inspection by authorized TCEQ personnel upon request.

    3. Maintenance Program for Stormwater Control Structures - A maintenance program must be developed and implemented to maintain the effectiveness of stormwater structural controls, including but not limited to the stormwater sedimentation/detention basin and the potentially contaminated stormwater basins. The SWP3 must identify specific activities, techniques, and schedules for maintenance of stormwater structural controls that ensure continued effective operation of these controls. Maintenance activities must be recorded at a minimum frequency of once per quarter, 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, shall 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, Maintenance Program for Structural Controls, 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.

12. The permittee shall develop and submit to the TCEQ, within one year of the permit effective date, a plan to characterize the thermal plume in the receiving water through either the use of a model, mass balance, or via collected or existing in-stream temperature data. The permittee would then be required to implement the plan following its approval by the TCEQ.

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

13. Wastewater discharged via Outfalls 002 and 003 must be sampled and analyzed as directed below for those parameters listed in Tables 1, 2, and 3 of Attachment A of this permit. Analytical testing for Outfalls 002 and 003 must be completed within 60 days of initial cooling tower blowdown discharge. Results of the analytical testing must be submitted within 90 days of initial cooling tower blowdown discharge to the TCEQ Industrials Permits Team (MC-148). Based on a technical review of the submitted analytical results, an amendment may be initiated by TCEQ staff to include additional effluent limitations, monitoring requirements, or both.

    Table 1: Analysis is required for all pollutants. Wastewater must be sampled and analyzed for those parameters listed in Table 1 for a minimum of one sampling event.

    Table 2: Analysis is required for those pollutants in Table 2 that are used at the facility that could in any way contribute to contamination in the Outfalls 002 and 003 discharge. Sampling and analysis must be conducted for a minimum of one sampling event.

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

    The permittee shall report the flow at Outfalls 002 and 003 in million gallons per day (MGD) in the attachment. The permittee shall indicate on each table whether the samples are composite (C) or grab (G) by checking the appropriate box.

ATTACHMENT A

Table 1

Outfall No.: ☐C ☐G	Effluent Concentration (mg/L)					
Pollutants	Samp.	Samp.	Samp.	Samp.	Average	
BOD (5-day)						
CBOD (5-day)						
Chemical Oxygen Demand						
Total Organic Carbon						
Dissolved Oxygen						
Ammonia Nitrogen						
Total Suspended Solids						
Nitrate Nitrogen						
Total Organic Nitrogen						
Total Phosphorus						
Oil and Grease						
Total Residual Chlorine						
Total Dissolved Solids						
Sulfate						
Chloride						
Fluoride						
Temperature (°F)						
Total Alkalinity (mg/L as CaCO3)						
pH (Standard Units; min/max)						

	Effluent Concentration (µg/L)					MAL[1] (µg/L)
Total Aluminum						30
Total Antimony						60
Total Arsenic						10
Total Barium						10
Total Beryllium						5
Total Cadmium						1
Total Chromium						10
Trivalent Chromium						N/A
Hexavalent Chromium						10
Total Copper						10
Cyanide						20
Total Lead						5
Total Mercury						0.2
Total Nickel						10
Total Selenium						10
Total Silver						2
Total Thallium						10
Total Zinc						5

[1]Minimum Analytical Level

ATTACHMENT A

Table 2

Outfall No.: ☐C ☐G Pollutant	Samp. 1 (µg/L)*	Samp. 2 (µg/L)*	Samp. 3 (µg/L)*	Samp. 4 (µg/L)*	Avg. (µg/L)*	MAL (µg/L)
Acrylonitrile						50
Anthracene						10
Benzene						10
Benzidine						50
Benzo(*a*)anthracene						10
Benzo(*a*)pyrene						10
Bis(2-chloroethyl)ether						10
Bis(2-ethylhexyl)phthalate						10
Bromodichloromethane						10
Bromoform						10
Carbon Tetrachloride						10
Chlorobenzene						10
Chlorodibromomethane						10
Chloroform						10
Chrysene						10
Cresols						10
1,2-Dibromoethane						10
m-Dichlorobenzene						10
o-Dichlorobenzene						10
p-Dichlorobenzene						10
3,3'-Dichlorobenzidine						10
1,2-Dichloroethane						10
1,1-Dichloroethylene						10
Dichloromethane						20
1,2-Dichloropropane						10
2,4-Dimethylphenol						10
Di-*n*-Butyl Phthalate						10
Ethylbenzene						10
Fluoride						500
Hexachlorobenzene						10
Hexachlorobutadiene						10
Hexachlorocyclopentadiene						10
Hexachloroethane						20
Methyl Ethyl Ketone						50
Nitrobenzene						10
N-Nitrosodiethylamine						20
N-Nitroso-di-*n*-Butylamine						20
Nonylphenol						333
Pentachlorobenzene						20
Pentachlorophenol						50

Outfall No.: ☐C ☐G Pollutant	Samp. 1 (µg/L)*	Samp. 2 (µg/L)*	Samp. 3 (µg/L)*	Samp. 4 (µg/L)*	Avg. (µg/L)*	MAL (µg/L)
Phenanthrene						10
Polychlorinated Biphenyls (PCBs) (**)						1.0
Pyridine						20
1,2,4,5-Tetrachlorobenzene						20
1,1,2,2-Tetrachloroethane						10
Tetrachloroethylene						10
Toluene						10
1,1,1-Trichloroethane						10
1,1,2-Trichloroethane						10
Trichloroethylene						10
2,4,5-Trichlorophenol						50
TTHM (Total Trihalomethanes)						10
Vinyl Chloride						10

(*) Indicate units if different from µg/L.
(**) Total PCB-1242, PCB-1254, PCB-1221, PCB-1232, PCB-1248, PCB-1260, PCB-1016

Table 3

Outfall No.: ☐C ☐G Pollutants	Believed Present	Believed Absent	Effluent Concentration (mg/L)		No. of Samples
			Average	Maximum	
Bromide					
Color (PCU)					
Nitrate-Nitrite (as N)					
Sulfide (as S)					
Sulfite (as SO_3)					
Surfactants					
Total Antimony					
Total Beryllium					
Total Boron					
Total Cobalt					
Total Iron					
Total Magnesium					
Total Molybdenum					
Total Manganese					
Total Thallium					
Total Tin					
Total Titanium					

CHRONIC BIOMONITORING REQUIREMENTS: MARINE

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

1. Scope, Frequency and Methodology

a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival or growth of the test organisms.

b. The permittee shall conduct the following toxicity tests utilizing 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 herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit. All test results, valid or invalid, must be submitted as described below.

c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These additional effluent concentrations are 2.1%, 2.8%, 3.8%, 5%, and 6.7% effluent. The critical dilution, defined as 5% 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 (CS) limit, a Best Management Practice (BMP), or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.

e. Testing Frequency Reduction

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

2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until the permit is reissued. If a testing frequency reduction had been previously granted and a

subsequent test demonstrates significant toxicity, the permittee will resume a quarterly testing frequency for that species until the permit is reissued.

2. Required Toxicity Testing Conditions

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

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

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

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

4) a control Coefficient of Variation percent (CV%) between replicates of 40 or less in the growth and survival tests.

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

6) a Percent Minimum Significant Difference of 37 or less for mysid shrimp growth;

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 above, or its most recent update.

2) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The EPA manual, AMethod 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 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 at the 95% confidence level between the survival, reproduction, or growth of the test organism(s) in a specified effluent dilution compared to the survival, reproduction, or growth of the test organism(s) in the control (0% effluent).

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

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 above-referenced guidance manual will be used when making a determination of test acceptability.

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

c. Dilution Water

1) Dilution water used in the toxicity tests shall 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 item 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 item 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 of this Section.

3) The synthetic dilution water shall consist of a 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 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 numbers of effluent portions, and the sample holding time, are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part 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 above, or its most recent update, for every valid and invalid toxicity test initiated whether carried to completion or not.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

d. Enter the following codes for retests only:

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

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

4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. A significant effect is defined as a statistically significant difference, at the 95% confidence level, between a specified endpoint (survival or growth) of the test organism in a specified effluent dilution when compared to the specified endpoint of the test organism in the control. Significant lethality is defined as a statistically significant difference in survival at the critical dilution when compared to the survival of the test organism in the control. 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 item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of item 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 item 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in item 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 Toxicity Reduction Evaluation (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 lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:

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

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

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(s) 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(s) and source(s) of effluent toxicity;

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

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

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

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

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 (herein as defined below) 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. The permittee may only apply the "cessation of lethality" provision once.

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 which 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 their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall provide information pertaining to the specific control mechanism(s) selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and to specify CS limits.

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%												
2.1%												
2.8%												
3.8%												
5%												
6.7%												

* 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%	2.1%	2.8%	3.8%	5%	6.7%
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%	2.1%	2.8%	3.8%	5%	6.7%
F						
G						
H						
Mean Dry Weight (mg)						
CV%*						
PMSD						

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

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

   CRITICAL DILUTION (5%): _____ 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 (5%): _____ 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%									
2.1%									
2.8%									
3.8%									
5%									
6.7%									

* Coefficient of Variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)

INLAND SILVERSIDE LARVAL SURVIVAL AND GROWTH TEST

INLAND SILVERSIDE GROWTH

Percent Effluent	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight (mg)	CV%*
	A	B	C	D	E		
0%							
2.1%							
2.8%							
3.8%							
5%							
6.7%							
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 (5%): _____ 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 (5%): _____ YES _____ NO

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

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC growth = _____% effluent

   d.) LOEC growth = _____% effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: MARINE

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

1. Scope, Frequency and Methodology

a. The permittee shall test the effluent for lethality in accordance with the provisions in this Section. Such testing will determine compliance with the Surface Water Quality Standard, 307.6(e)(2)(B), of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.

b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests utilizing 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 in 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 in 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 herein 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 item 2.b., the control and dilution water shall consist of standard, synthetic, reconstituted seawater.

d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Best Management Practice (BMP), a Chemical-Specific (CS) limit, additional toxicity testing, and other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.

e. To conduct the biomonitoring testing required in this section, the permittee shall follow the Ion Adjustment Protocol approved on November 7, 1995.

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 item 1.c., the control and dilution water shall consist of a 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 samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

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

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

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part 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 above, or its most recent update, for every valid and invalid toxicity test initiated.

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

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

2) Quarterly biomonitoring test results are due on or before January 20th, April 20th, July 20th, and October 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 Toxicity Reduction Evaluation (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 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 lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:

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

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

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(s) 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(s) and source(s) of effluent toxicity;

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

5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to 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.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

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 (herein as defined below) 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. The permittee may only apply the "cessation of lethality" provision once.

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 which 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 their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity as specified in item 5.g. The report will also specify a corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 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 their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE.

The requirement to comply with 307.6.(e)(2)(B) may be exempted upon proof 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, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and to specify a CS limit.

TABLE 2 (SHEET 1 OF 2)

MYSID SHRIMP SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

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

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent

TABLE 2 (SHEET 2 OF 2)

INLAND SILVERSIDE SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

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

Enter percent effluent corresponding to the LC50 below:

24 hour LC50 = _____% effluent