TPDES PERMIT NO. WQ0002436000
[For TCEQ office use only -
EPA I.D. No. TX0085570]

03

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

This permit supersedes and replaces TPDES Permit No. WQ0002436000, issued on August 30, 2005.

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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Formosa Utility Venture, Ltd. and Formosa Plastics Corporation, Texas

whose mailing address is

P.O. Box 700
Point Comfort, Texas 77978-0700

is authorized to treat and discharge wastes from the Point Comfort Plant, a plastics and organic and inorganic chemicals manufacturing facility (SIC 2821, 2812, and 2869)

located at 201 Formosa Drive, one-mile north of the intersection of State Highway 35 and Farm-to-Market Road 1593, northeast of the City of Point Comfort, Calhoun County, Texas

via Outfall 001 and 011 directly to Lavaca Bay/Chocolate Bay in Segment 2453 of the Bays and Estuaries; via Outfalls 002, 003, 004, and 012 to unnamed ditches, thence to Cox Lake, thence to Cox Bay; via Outfalls 005, 006, 007, 008, 009, and 010 to Cox Lake, thence to Cox Bay; and via Outfall 013 directly to Cox Bay in Segment No. 2454 of the Bays and Estuaries

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

This permit shall expire at midnight on January 1, 2020.

ISSUED DATE: June 10, 2016

For the Commission

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge remediated groundwater, fire water, and treated previously monitored effluents (via Outfalls 101 and 201) subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 9.7 million gallons per day (MGD). The daily maximum flow shall not exceed 15.1 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	9.7 MGD		15.1 MGD		N/A	Continuous	Record
Temperature (°F)	N/A	N/A	N/A	95°F	N/A	Continuous [1]	Record
Carbonaceous Biochemical Oxygen Demand (5-day)	1102	14	2727	34	41	3/week	Composite [2]
Chemical Oxygen Demand	9000	200	16000	300	333	3/week	Composite [2]
Total Suspended Solids	3110	40	6476	80	115	3/week	Composite
Ammonia as Nitrogen	243	3	405	5	9	3/week	Composite
Hexavalent Chromium	3.7	Report	7.3	Report	0.10	3/week	Composite
Total Chromium	3.7	Report	7.3	Report	0.14	3/week	Composite
Total Copper	1.37	Report	3.11	Report	0.05	3/week	Composite [2]
Total Lead	6.5	Report	16.0	Report	0.24	3/week	Composite
Total Mercury	0.03	Report	0.06	Report	0.01	3/week	Composite [2]
Oil and Grease	222	N/A	332	15	15	2/week	Grab
Total Organic Carbon	5939	N/A	8484	N/A	333	2/week	Composite
Total Zinc	2.8	Report	5.5	Report	0.10	2/week	Composite [2]
Benzene	1.05	Report	3.85	Report	0.04	2/week	Composite [3]
1,2-Dichloroethane	1.92	Report	5.97	Report	0.07	3/week	Composite [3]
Phenol	0.42	Report	0.74	Report	0.02	2/week	Composite
Toluene	0.74	Report	2.26	Report	0.03	2/week	Composite [3]
Trichloroethylene	0.59	Report	1.53	Report	0.02	2/week	Composite [3]
Vinyl Chloride	2.94	Report	7.58	Report	0.11	2/week	Composite [3]
Dissolved Oxygen	N/A	2.0 min	N/A	Report	2.0 min	2/week	Grab
Fecal Coliform (CFU or MPN/100 mls) [4]	N/A	(140)	N/A	N/A	N/A	1/week	Grab
Enterococci (CFU or MPN/100 mls) [5]	N/A	(Report)	N/A	N/A	N/A	1/quarter	Grab
Enterococci (CFU or MPN/100 mls) [6]	N/A	(14)	N/A	N/A	N/A	1/week	Grab

1. Continued.

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
2,3,7,8-TCDD Equivalents [7]	352µg/day	9.57 ppq	744 µg/day	20.2 ppq	28.7 ppq	1/quarter	Composite [2]
2,3,7,8-TCDD Equivalents [8]	80.5µg/day	2.19 ppq	170 µg/day	4.63 ppq	10 ppq	1/quarter	Composite [2]
Whole Effluent Toxicity (WET) limit 10% [9]							
Mysidopsis bahia (7-day NOEC) [10]	10%		10%		N/A	1/quarter	24-hr Composite
Menidia beryllina (7-day NOEC) [10]	10%		10%		N/A	1/quarter	24-hr Composite
Whole Effluent Toxicity (WET) Limit >100% [11]							
Mysidopsis bahia (24-hour LC50) [12]	≥100% [12]		≥100% [9]		N/A	1/6 months	24-hr Composite

1 See Other Requirements, No. 10.
2 Samples shall be 24-hour composite samples collected in 12 or more individual portions, sized proportional to flow, equally spaced as reasonably practical throughout the operating day.
3 See Other Requirements, No. 18.
4 Effective beginning upon date of permit issuance and lasting for a period of three (3) years.
5 Effective beginning upon date of permit issuance and lasting for a period of three (3) years. See Other Requirements, No. 24.
6 Effective beginning three (3) years after permit issuance and lasting through date of permit expiration.
7 Effective beginning upon date of permit issuance and lasting for a period of six (6) months. See Other Requirements, No. 24.
8 Effective beginning six (6) months after permit issuance and lasting through date of permit expiration.
9 The WET limit No Observed Effect Concentration (NOEC) of not less than 10% is effective at the permit issue date.
10 The NOEC is defined as the greatest effluent dilution at which no significant lethality is demonstrated. Significant lethality is defined as a statistically significant difference, at the 95% confidence level, between a specified effluent dilution and the control.
11 The WET limit Lethal Concentration (LC) 50 of greater than 100% is effective at the permit issue date.
12 The LC50 is defined as the effluent dilution at which 50% of the organisms survive.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously and recorded. See Other Requirements, No. 9.

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, where effluent from Outfalls 101 and 201 commingle with remediated groundwater, at the TZT-07 mixing well. *Enterococci* shall be monitored at the exit of the sanitary treatment system.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge treated process wastewater, equipment/facility washdown, stormwater, firewater, and utility wastewaters (including pretreated sanitary wastewaters[1]) subject to the following effluent limitations:

The daily average flow of effluent shall not exceed 4.4 million gallons per day (MGD). The daily maximum flow shall not exceed 6.0 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	4.4 MGD		6.0 MGD		N/A	Continuous	Record
Biochemical Oxygen Demand (5-day)	731	Report	1959	Report	90	2/week	Composite [2]
Total Suspended Solids	1149	Report	3735	Report	160	2/week	Composite
Chemical Oxygen Demand	6676	Report	10,014	Report	350	2/week	Composite [2]
Benzene	Report	Report	Report	Report	0.174	2/week	Composite [3]
Carbon Tetrachloride	Report	N/A	Report	N/A	0.049	2/week	Composite [3]
Chlorobenzene	Report	N/A	Report	N/A	0.036	2/week	Composite [3]
Chloroform	Report	N/A	Report	N/A	0.059	2/week	Composite [3]
1,1-Dichloroethane	Report	N/A	Report	N/A	0.076	2/week	Composite [3]
1,2-Dichloroethane	Report	Report	Report	Report	0.271	3/week	Composite [3]
Methyl Chloride	Report	N/A	Report	N/A	0.244	2/week	Composite [3]
Methylene Chloride	Report	N/A	Report	N/A	0.114	2/week	Composite [3]
Phenol	Report	Report	Report	Report	0.033	2/week	Composite
Tetrachloroethylene	Report	N/A	Report	N/A	0.072	2/week	Composite [3]
1,1,1-Trichloroethane	Report	N/A	Report	N/A	0.069	2/week	Composite [3]
Acenaphthene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Acenaphthylene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Acrylonitrile	Report	N/A	Report	N/A	0.310	1/quarter	Composite [3]
Anthracene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Benzo(a)anthracene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Benzo(a)pyrene	Report	N/A	Report	N/A	0.078	1/quarter	Composite
3,4-Benzofluoranthene	Report	N/A	Report	N/A	0.078	1/quarter	Composite
Benzo(k)fluoranthene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Bis(2-ethylhexyl) phthalate	Report	N/A	Report	N/A	0.358	1/quarter	Composite

1. Continued.

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
Chloroethane	Report	N/A	Report	N/A	0.344	1/quarter	Composite [3]
2-Chlorophenol	Report	N/A	Report	N/A	0.126	1/quarter	Composite
Chrysene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
1,2-Dichlorobenzene	Report	N/A	Report	N/A	0.209	1/quarter	Composite
1,3-Dichlorobenzene	Report	N/A	Report	N/A	0.056	1/quarter	Composite
1,4-Dichlorobenzene	Report	N/A	Report	N/A	0.036	1/quarter	Composite
1,1-Dichloroethylene	Report	N/A	Report	N/A	0.032	1/quarter	Composite [3]
1,2-trans-Dichloroethylene	Report	N/A	Report	N/A	0.069	1/quarter	Composite [3]
2,4-Dichlorophenol	Report	N/A	Report	N/A	0.144	1/quarter	Composite
1,2-Dichloropropane	Report	N/A	Report	N/A	0.295	1/quarter	Composite [3]
1,3-Dichloropropylene	Report	N/A	Report	N/A	0.056	1/quarter	Composite [3]
Diethyl phthalate	Report	N/A	Report	N/A	0.260	1/quarter	Composite
2,4-Dimethylphenol	Report	N/A	Report	N/A	0.046	1/quarter	Composite
Dimethyl phthalate	Report	N/A	Report	N/A	0.060	1/quarter	Composite
Di-n-butyl phthalate	Report	N/A	Report	N/A	0.073	1/quarter	Composite
4,6-Dinitro-o-cresol	Report	N/A	Report	N/A	0.355	1/quarter	Composite
2,4-Dinitrophenol	Report	N/A	Report	N/A	0.158	1/quarter	Composite
2,4-Dinitrotoluene	Report	N/A	Report	N/A	0.366	1/quarter	Composite
2,6-Dinitrotoluene	Report	N/A	Report	N/A	0.822	1/quarter	Composite
Ethylbenzene	Report	N/A	Report	N/A	0.139	1/quarter	Composite [3]
Fluoranthene	Report	N/A	Report	N/A	0.087	1/quarter	Composite
Fluorene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Hexachlorobenzene	Report	N/A	Report	N/A	0.010	1/quarter	Composite
Hexachlorobutadiene	Report	N/A	Report	N/A	0.063	1/quarter	Composite
Hexachloroethane	Report	N/A	Report	N/A	0.069	1/quarter	Composite
Naphthalene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Nitrobenzene	Report	N/A	Report	N/A	0.087	1/quarter	Composite
2-Nitrophenol	Report	N/A	Report	N/A	0.089	1/quarter	Composite

1. Continued.

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
4-Nitrophenol	Report	N/A	Report	N/A	0.159	1/quarter	Composite
Phenanthrene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Pyrene	Report	N/A	Report	N/A	0.086	1/quarter	Composite
1,2,4-Trichlorobenzene	Report	N/A	Report	N/A	0.180	1/quarter	Composite
1,1,2-Trichloroethane	Report	N/A	Report	N/A	0.069	1/quarter	Composite [3]
Toluene	Report	N/A	Report	N/A	0.103	1/year	Composite [3]
Trichloroethylene	Report	N/A	Report	N/A	0.069	1/year	Composite [3]
Vinyl Chloride	Report	N/A	Report	N/A	0.150	1/year	Composite [3]

[1] See Other Requirements, No. 27.

[2] Samples shall be 24-hour composite samples collected in 12 or more individual portions, sized proportional to flow, equally spaced as reasonably practical throughout the operating day.

[3] See Other Requirements, No. 18.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously and recorded (See Other Requirements, No. 9).

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, at the exit of the final treatment unit of the Combined Waste Treatment Plant - Biological Treatment unit, prior to commingling with any other wastewaters.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge treated and combined Ion Exchange Membrane (IEM) wastewater streams, utility wastewaters (including pretreated sanitary wastewaters[1]), equipment/facility washdown, stormwater, fire water, and water treatment wastewaters on a continuous and flow variable basis subject to the following effluent limitations:

Effluent Characteristics	Discharge Limitations					Minimum Self-Monitoring Requirements	
	Daily Average		Daily Maximum		Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	mg/l	lbs/day	mg/l	mg/l	Measurement Frequency	Sample Type
Flow	Report (MGD)		Report (MGD)		N/A	Continuous	Record
Biochemical Oxygen Demand (5-day)	237	Report	474	Report	N/A	2/week	Composite [2]
Chemical Oxygen Demand	Report	Report	Report	Report	N/A	2/week	Composite [2]
Total Suspended Solids	1729	Report	3006	Report	N/A	2/week	Composite
Total Copper	Report	Report	Report	Report	N/A	2/week	Composite [2]
Total Lead	6.5	Report	16.0	Report	N/A	2/week	Composite
Total Nickel	6.89	Report	14.60	Report	N/A	2/week	Composite
Total Titanium	Report	Report	Report	Report	N/A	2/week	Composite
Total Residual Chlorine	26.3	Report	44.33	Report	N/A	2/week	Grab
Benzene	Report	Report	Report	Report	0.174	2/week	Composite [3]
Carbon Tetrachloride	Report	N/A	Report	N/A	0.049	2/week	Composite [3]
Chlorobenzene	Report	N/A	Report	N/A	0.036	2/week	Composite [3]
Chloroform	Report	N/A	Report	N/A	0.059	2/week	Composite [3]
1,1-Dichloroethane	Report	N/A	Report	N/A	0.076	2/week	Composite [3]
1,2-Dichloroethane	Report	Report	Report	Report	0.271	2/week	Composite [3]
Methyl Chloride	Report	N/A	Report	N/A	0.244	2/week	Composite [3]
Methylene Chloride	Report	N/A	Report	N/A	0.114	2/week	Composite [3]
Phenol	Report	Report	Report	Report	0.033	2/week	Composite
Tetrachloroethylene	Report	N/A	Report	N/A	0.072	2/week	Composite [3]
1,1,1-Trichloroethane	Report	N/A	Report	N/A	0.069	2/week	Composite [3]
Acenaphthene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Acenaphthylene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Acrylonitrile	Report	N/A	Report	N/A	0.310	1/quarter	Composite [3]
Anthracene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Benzo(a)anthracene	Report	N/A	Report	N/A	0.076	1/quarter	Composite

1. Continued.

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
Benzo(a)pyrene	Report	N/A	Report	N/A	0.078	1/quarter	Composite
3,4-Benzofluoranthene	Report	N/A	Report	N/A	0.078	1/quarter	Composite
Benzo(k)fluoranthene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Bis(2-ethylhexyl) phthalate	Report	N/A	Report	N/A	0.358	1/quarter	Composite
Chloroethane	Report	N/A	Report	N/A	0.344	1/quarter	Composite [3]
2-Chlorophenol	Report	N/A	Report	N/A	0.126	1/quarter	Composite
Chrysene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
1,2-Dichlorobenzene	Report	N/A	Report	N/A	0.209	1/quarter	Composite
1,3-Dichlorobenzene	Report	N/A	Report	N/A	0.056	1/quarter	Composite
1,4-Dichlorobenzene	Report	N/A	Report	N/A	0.036	1/quarter	Composite
1,1-Dichloroethylene	Report	N/A	Report	N/A	0.032	1/quarter	Composite [3]
1,2-trans-Dichloroethylene	Report	N/A	Report	N/A	0.069	1/quarter	Composite [3]
2,4-Dichlorophenol	Report	N/A	Report	N/A	0.144	1/quarter	Composite
1,2-Dichloropropane	Report	N/A	Report	N/A	0.295	1/quarter	Composite [3]
1,3-Dichloropropylene	Report	N/A	Report	N/A	0.056	1/quarter	Composite [3]
Diethyl phthalate	Report	N/A	Report	N/A	0.260	1/quarter	Composite
2,4-Dimethylphenol	Report	N/A	Report	N/A	0.046	1/quarter	Composite
Dimethyl phthalate	Report	N/A	Report	N/A	0.060	1/quarter	Composite
Di-n-butyl phthalate	Report	N/A	Report	N/A	0.073	1/quarter	Composite
4,6-Dinitro-o-cresol	Report	N/A	Report	N/A	0.355	1/quarter	Composite
2,4-Dinitrophenol	Report	N/A	Report	N/A	0.158	1/quarter	Composite
2,4-Dinitrotoluene	Report	N/A	Report	N/A	0.366	1/quarter	Composite
2,6-Dinitrotoluene	Report	N/A	Report	N/A	0.822	1/quarter	Composite
Ethylbenzene	Report	N/A	Report	N/A	0.139	1/quarter	Composite [3]
Fluoranthene	Report	N/A	Report	N/A	0.087	1/quarter	Composite
Fluorene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Hexachlorobenzene	Report	N/A	Report	N/A	0.010	1/quarter	Composite
Hexachlorobutadiene	Report	N/A	Report	N/A	0.063	1/quarter	Composite
Hexachloroethane	Report	N/A	Report	N/A	0.069	1/quarter	Composite
Naphthalene	Report	N/A	Report	N/A	0.076	1/quarter	Composite

1. Continued.

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
Nitrobenzene	Report	N/A	Report	N/A	0.087	1/quarter	Composite
2-Nitrophenol	Report	N/A	Report	N/A	0.089	1/quarter	Composite
4-Nitrophenol	Report	N/A	Report	N/A	0.159	1/quarter	Composite
Phenanthrene	Report	N/A	Report	N/A	0.076	1/quarter	Composite
Pyrene	Report	N/A	Report	N/A	0.086	1/quarter	Composite
1,2,4-Trichlorobenzene	Report	N/A	Report	N/A	0.180	1/quarter	Composite
1,1,2-Trichloroethane	Report	N/A	Report	N/A	0.069	1/quarter	Composite [3]
Toluene	Report	N/A	Report	N/A	0.103	1/year	Composite [3]
Trichloroethylene	Report	N/A	Report	N/A	0.069	1/year	Composite [3]
Vinyl Chloride	Report	N/A	Report	N/A	0.150	1/year	Composite [3]

[1] See Other Requirements, No. 27.

[2] Samples shall be 24-hour composite samples collected in 12 or more individual portions, sized proportional to flow, equally spaced as reasonably practical throughout the operating day.

[3] See Other Requirements, No. 18.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 2/week, 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 201, where authorized wastewaters commingle at the exit of their respective final treatment units of the Combined Waste Treatment Plant - Physical Treatment units, prior to commingling with any other wastewaters.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge previously monitored wastewaters from Outfalls 101 and 201 subject to the following effluent limitations:

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	lbs/day	mg/l	Measurement Frequency	Sample Type
Benzene	0.97	3.55	N/A	2/week	Summation [1]
Carbon Tetrachloride	0.47	0.99	N/A	2/week	Summation [1]
Chlorobenzene	0.39	0.73	N/A	2/week	Summation [1]
Chloroform	1.89	4.99	N/A	2/week	Summation [1]
1,1-Dichloroethane	0.57	1.54	N/A	2/week	Summation [1]
1,2-Dichloroethane	1.78	5.51	N/A	2/week	Summation [1]
Methyl Chloride	2.25	4.96	N/A	2/week	Summation [1]
Methylene Chloride	1.04	2.32	N/A	2/week	Summation [1]
Phenol	0.39	0.68	N/A	2/week	Summation [1]
Tetrachloroethylene	0.57	1.46	N/A	2/week	Summation [1]
1,1,1-Trichloroethane	0.55	1.41	N/A	2/week	Summation [1]
Acenaphthene	0.57	1.54	N/A	1/quarter	Summation [1]
Acenaphthylene	0.57	1.54	N/A	1/quarter	Summation [1]
Acrylonitrile	2.51	6.32	N/A	1/quarter	Summation [1]
Anthracene	0.57	1.54	N/A	1/quarter	Summation [1]
Benzo(a)anthracene	0.57	1.54	N/A	1/quarter	Summation [1]
Benzo(a)pyrene	0.60	1.59	N/A	1/quarter	Summation [1]
3,4-Benzofluoranthene	0.60	1.59	N/A	1/quarter	Summation [1]
Benzo(k)fluoranthene	0.57	1.54	N/A	1/quarter	Summation [1]
Bis(2-ethylhexyl) phthalate	2.69	7.29	N/A	1/quarter	Summation [1]
Chloroethane	2.72	7.00	N/A	1/quarter	Summation [1]
2-Chlorophenol	0.81	2.56	N/A	1/quarter	Summation [1]
Chrysene	0.57	1.54	N/A	1/quarter	Summation [1]
1,2-Dichlorobenzene	2.01	4.26	N/A	1/quarter	Summation [1]
1,3-Dichlorobenzene	0.81	1.15	N/A	1/quarter	Summation [1]
1,4-Dichlorobenzene	0.39	0.73	N/A	1/quarter	Summation [1]
1,1-Dichloroethylene	0.42	0.65	N/A	1/quarter	Summation [1]
1,2-trans-Dichloroethylene	0.55	1.41	N/A	1/quarter	Summation [1]
2,4-Dichlorophenol	1.02	2.93	N/A	1/quarter	Summation [1]

1. Continued.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	lbs/day	lbs/day	mg/l	Measurement Frequency	Sample Type
1,2-Dichloropropane	4.00	6.01	N/A	1/quarter	Summation [1]
1,3-Dichloropropylene	0.75	1.15	N/A	1/quarter	Summation [1]
Diethyl phthalate	2.12	5.30	N/A	1/quarter	Summation [1]
2,4-Dimethylphenol	0.47	0.94	N/A	1/quarter	Summation [1]
Dimethyl phthalate	0.50	1.23	N/A	1/quarter	Summation [1]
Di-n-butyl phthalate	0.71	1.49	N/A	1/quarter	Summation [1]
4,6-Dinitro-o-cresol	2.04	7.24	N/A	1/quarter	Summation [1]
2,4-Dinitrophenol	1.85	3.21	N/A	1/quarter	Summation [1]
2,4-Dinitrotoluene	2.95	7.44	N/A	1/quarter	Summation [1]
2,6-Dinitrotoluene	6.66	16.74	N/A	1/quarter	Summation [1]
Ethylbenzene	0.84	2.82	N/A	1/quarter	Summation [1]
Fluoranthene	0.65	1.78	N/A	1/quarter	Summation [1]
Fluorene	0.57	1.54	N/A	1/quarter	Summation [1]
Hexachlorobenzene	0.010	0.021	N/A	1/quarter	Summation [1]
Hexachlorobutadiene	0.52	1.28	N/A	1/quarter	Summation [1]
Hexachloroethane	0.55	1.41	N/A	1/quarter	Summation [1]
Naphthalene	0.57	1.54	N/A	1/quarter	Summation [1]
Nitrobenzene	0.71	1.78	N/A	1/quarter	Summation [1]
2-Nitrophenol	1.07	1.80	N/A	1/quarter	Summation [1]
4-Nitrophenol	1.88	3.24	N/A	1/quarter	Summation [1]
Phenanthrene	0.53	1.12	N/A	1/quarter	Summation [1]
Pyrene	0.65	1.75	N/A	1/quarter	Summation [1]
1,2,4-Trichlorobenzene	1.78	3.66	N/A	1/quarter	Summation [1]
1,1,2-Trichloroethane	0.55	1.41	N/A	1/quarter	Summation [1]
Toluene	0.68	2.09	N/A	1/year	Summation [1]
Trichloroethylene	0.55	1.41	N/A	1/year	Summation [1]
Vinyl Chloride	1.67	3.33	N/A	1/year	Summation [1]

[1] Summation of samples taken at Outfalls 101 and 201 as required on Pages 2c, 2d, 2e, 2f, 2g, and 2h of the permit.

2. Effluent monitoring samples shall be taken at the following locations: at Outfalls 101 and 201 as required on Pages 2c, 2d, 2e, 2f, 2g, and 2h of the permit. The resulting loadings determined for each outfall shall be added together with the resulting summation value reported for this outfall for compliance purposes.

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

Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/day[1]	Estimate
Total Dissolved Solids	N/A	Report	N/A	1/month[1]	Grab

[1] When routing cooling tower blowdown to the ALCOA mud pits for dust suppression.

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

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

4. Effluent monitoring samples shall be taken at the following locations: at Outfall 901, prior to routing to the ALCOA mud pits for dust suppression.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, and air conditioner unit condensate subject to the following effluent limitations:

Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/day [1]	Estimate
Total Organic Carbon	N/A	55	55	1/day [1]	Grab
Oil and Grease	N/A	15	15	1/day [1]	Grab
1,2-Dichloroethane	N/A	0.4	0.4	1/day [1]	Grab
Total Purgeable Hydrocarbons	Report	Report	N/A	1/day [1]	Grab

[1] When discharging, initial sample shall be collected within 15 minutes after a discharge begins. Discharges shall be monitored 1/day for the duration of the flow.

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

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

4. Effluent monitoring samples shall be taken at the following locations:

At Outfall 002: On the south side of the plant near State Highway 35 and Vinyl Chloride Monomer (VCM) sphere.
At Outfall 003: On the south side of the plant near utilities block.
At Outfall 004: On the south side of the plant near State Highway 35 and the wastewater treatment plant.
At Outfall 005: On the south side of the plant near State Highway 35 and the drying beds.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, and air conditioner unit condensate subject to the following effluent limitations:

Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/day [1]	Estimate
Total Organic Carbon	N/A	55	55	1/day [1]	Grab
Oil and Grease	N/A	15	15	1/day [1]	Grab

[1] When discharging, initial sample shall be collected within 15 minutes after a discharge begins. Discharges shall be monitored 1/day for the duration of the flow.

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

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

4. Effluent monitoring samples shall be taken at the following locations.

At Outfall 006: Approximately 200 feet north of State Highway 35 prior to entering Cox Creek.
At Outfall 007: Approximately 1,500 feet north of State Highway 35 prior to entering Cox Creek.
At Outfall 008: Approximately 3,000 feet north of State Highway 35, prior to entering Cox Creek.
At Outfall 009: Approximately 1.2 miles north of State Highway 35, prior to entering Cox Creek.
At Outfall 010: At the southern boundary of the Marine Tank Farm, approximately 2,300 feet south of the intersection of State Highway 35 and Farm-to-Market Road 1593.
At Outfall 011: At the boundary of the southeast corner of the Dock Tank Farm located 2.2 miles south of the intersection of State Highway 35 and Farm-to-Market Road 1593.
At Outfall 012: At the northeast corner of the plant property at Huisache Creek, approximately 6,250 feet north of State Highway 35.

1. During the period beginning upon the date of issuance and lasting through the date of expiration, the permittee is authorized to discharge non-process area storm water, hydrostatic test water, fire water, non-contact steam condensate, non-contact wash water, potable water, air conditioner unit condensate, and ash truck wash water subject to the following effluent limitations:

   Volume: Intermittent and flow variable.

Effluent Characteristics	Discharge Limitations			Minimum Self-Monitoring Requirements	
	Daily Average	Daily Maximum	Single Grab	Report Daily Average and Daily Maximum	
	mg/l	mg/l	mg/l	Measurement Frequency	Sample Type
Flow	Report (MGD)	Report (MGD)	N/A	1/day [1]	Estimate
Total Organic Carbon	N/A	55	55	1/day [1]	Grab
Oil and Grease	N/A	15	15	1/day [1]	Grab

[1] When discharging, initial sample shall be collected within 15 minutes after a discharge begins. Discharges shall be monitored 1/day for the duration of the flow.

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

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

4. Effluent monitoring samples shall be taken at the following locations.

   At Outfall 013: At the southeast corner of the CFB Plantsite.

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 of made in a calendar month. For any measurement of bacteria equaling zero, a substitute value of one shall 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 x Concentration, mg/l x 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 and/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; TCW 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 and/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 and/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;

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 and/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, and/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 and/or upgrading of the domestic wastewater treatment and/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 and/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 14, within 24 hours from the time the permittee becomes aware of the violation followed by a written report within five working days to TCEQ Region 14 and the Enforcement Division (MC 224):

Chromium (Hexavalent)	Tetrachloroethylene	Bis(2-Ethylhexyl) Phthalate
Chromium (Total)	Toluene	Chrysene
Copper (Total)	1,2-trans-Dichloroethylene	1,2-Dichlorobenzene
Lead (Total)	1,1,1-Trichloroethane	1,3-Dichlorobenzene
Mercury (Total)	1,1,2-Trichloroethane	1,4-Dichlorobenzene
Nickel (Total)	Trichloroethylene	Diethyl Phthalate
Zinc (Total)	Vinyl Chloride	Dimethyl Phthalate
2,3,7,8-TCDD Equivalents	2-Chlorophenol	Di-n-Butyl Phthalate
Acrylonitrile	2,4-Dichlorophenol	2,4-Dinitrotoluene
Benzene	2,4-Dimethylphenol	2,6-Dinitrotoluene
Carbon Tetrachloride	4,6-Dinitro-o-Cresol	Fluoranthene
Chlorobenzene	2,4-Dinitrophenol	Fluorene
Chloroethane	2-Nitrophenol	Hexachlorobenzene
Chloroform	4-Nitrophenol	Hexachlorobutadiene
1,1-Dichloroethane	Phenol	Hexachloroethane
1,2-Dichloroethane	Acenaphthene	Naphthalene
1,1-Dichloroethylene	Acenaphthylene	Nitrobenzene
1,2-Dichloropropane	Anthracene	Phenanthrene
1,3-Dichloropropylene	Benzo(a)anthracene	Pyrene
Ethylbenzene	Benzo(a)pyrene	1,2,4-Trichlorobenzene
Methyl Chloride	3,4-Benzofluoranthene	
Methylene Chloride	Benzo(k)fluoranthene	

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

POLLUTANT	MAL (mg/L)
Biochemical Oxygen Demand (5-day)	2.0
Oil & Grease	2.0
Total Residual Chlorine	0.2

2. Continued.

METALS	MAL (mg/L)
Chromium (Hexavalent)	0.010
Chromium (Total)	0.010
Copper (Total)	0.010
Lead (Total)	0.005
Mercury (Total)	0.0002
Nickel (Total)	0.010
Titanium (Total)	0.030
Zinc (Total)	0.005

DIOXINS/FURANS	MAL (picograms/L)
2,3,7,8-TCDD	10

VOLATILE COMPOUNDS	MAL (mg/L)
Acrylonitrile	0.050
Benzene	0.010
Carbon Tetrachloride	0.010
Chlorobenzene	0.010
Chloroethane	0.010
Chloroform	0.010
1,1-Dichloroethane	0.010
1,2-Dichloroethane	0.010
1,1-Dichloroethylene	0.010
1,2-Dichloropropane	0.010
1,3-Dichloropropylene	0.010
Ethylbenzene	0.010
Methyl Chloride	0.020
Methylene Chloride	0.020
Tetrachloroethylene	0.010
Toluene	0.010
1,2-trans-Dichloroethylene	0.010
1,1,1-Trichloroethane	0.010
1,1,2-Trichloroethane	0.010
Trichloroethylene	0.010
Vinyl Chloride	0.010

ACID COMPOUNDS	MAL (mg/L)
2-Chlorophenol	0.010
2,4-Dichlorophenol	0.010
2,4-Dimethylphenol	0.010
4,6-Dinitro-o-Cresol	0.050
2,4-Dinitrophenol	0.050
2-Nitrophenol	0.020
4-Nitrophenol	0.050
Phenol	0.010

2. Continued.

BASE/NEUTRAL COMPOUNDS	MAL (mg/L)
Acenaphthene	0.010
Acenaphthylene	0.010
Anthracene	0.010
Benzo(a)anthracene	0.010
Benzo(a)pyrene	0.010
3,4-Benzofluoranthene	0.010
Benzo(k)fluoranthene	0.010
Bis(2-Ethylhexyl) Phthalate	0.010
Chrysene	0.010
1,2-Dichlorobenzene	0.010
1,3-Dichlorobenzene	0.010
1,4-Dichlorobenzene	0.010
Diethyl Phthalate	0.010
Dimethyl Phthalate	0.010
Di-n-Butyl Phthalate	0.010
2,4-Dinitrotoluene	0.010
2,6-Dinitrotoluene	0.010
Fluoranthene	0.010
Fluorene	0.010
Hexachlorobenzene	0.010
Hexachlorobutadiene	0.010
Hexachloroethane	0.020
Naphthalene	0.010
Nitrobenzene	0.010
Phenanthrene	0.010
Pyrene	0.010
1,2,4-Trichlorobenzene	0.010

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. Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone for Outfall 001 is defined as a volume within a radius of 200 feet from the point of discharge.

4. All wastewater retention ponds shall be operated in such a manner as to maintain a minimum freeboard of two feet.

5. All process wastewater ponds shall be lined in compliance with one of the following requirements:

   A. Soil Liner: The soil liner shall contain at least 3 feet of clay-rich (liquid limit greater than or equal to 30 and plasticity index greater than or equal to 15) soil material along the sides and bottom of the pond compacted in lifts of no more than 9 inches, to 95% standard proctor density at the optimum moisture content to achieve a permeability equal to or less than 1 x 10-7 cm/sec.

   B. Plastic/Rubber Liner: The liner shall be either a plastic or rubber membrane liner at least 30 mils in thickness which completely covers the sides and the bottom of the pond and which is not subject to degradation due to reaction with wastewater with which it will come into contact. If this lining material is vulnerable to ozone or ultraviolet deterioration it should be covered with a protective layer of soil of at least 6 inches. A leak detection system is also required.

   C. Alternate Liner: The permittee shall submit plans for any other pond lining method. Pond liner plans must be approved in writing by the Executive Director of the Texas Commission on Environmental Quality prior to pond construction.

   The permittee shall notify the Texas Commission on Environmental Quality Regional Office upon completion of construction of the pond and at least a week prior to its use. Certification of the lining specifications shall be provided by a Texas licensed professional engineer and shall be available for inspection by TCEQ personnel upon request. For new construction, the certification and the test results of soils forming the bottom and sides of the pond shall be submitted to the TCEQ, Wastewater Permitting Section (MC-148) and Regional Office for review prior to discharging any wastewaters into the ponds. Permeability tests shall be made with material typical of the expected use.

6. The permittee shall monitor liquid levels in the leak detection systems for all operating surface impoundments monthly and sample quarterly. The permittee shall use the EPA approved method 624 to analyze for purgeable organics. Results of the analyses shall be recorded and reported quarterly to the TCEQ Wastewater Permitting Section (MC-148) Water Quality Division and to the TCEQ Region 14 Office.

7. If the permittee determines that any pond containing process wastewaters is leaking, the permittee shall remove the pond from service, inform the TCEQ Region 14 Office, and submit to the Region Office a plan for necessary remedial actions. After liner repairs are completed, the permittee shall describe in a report the specific location of the leak and what repairs were made and notify the Region Office at least ten days prior to putting the pond back into service.

8. The existing sixteen monitoring wells located adjacent to the VCM sphere, the EDC storage tanks, and the wastewater treatment system shall be monitored at least twice per year. For each well, the permittee shall measure the water level and obtain a sample for analysis. The water shall be analyzed for purgeable organics using EPA approved method 8260, for pH and for total organic carbon. The permittee shall record the sampling date, the water level, and the analytical data. The records shall be submitted to the TCEQ Office of Compliance and Enforcement (MC-224) and the TCEQ Region 14 Office during the month of September each year.

   As an alternative to the requirement above, the permittee may submit a copy of reports developed based on a more comprehensive groundwater monitoring program performed in conjunction with another TCEQ or EPA regulated activity, provided that the monitoring program is inclusive of the requirements listed above.

9. The permittee shall maintain the pH within the range specified on Pages 2b and 2e (for Outfalls 001 and 101) of this permit. Excursions from the range are permitted. An excursion is an unintentioned and temporary incident in which the pH value of the wastewater exceeds the range set forth on Pages 2b and 2e. A pH excursion is not a violation and a non-compliance report is not required for pH excursions provided:

   A. the excursion does not exceed the range of 5-11 standard pH units; and
   B. the individual excursion does not exceed 60 minutes; and
   C. the sum of all excursions does not exceed 7 hours and 26 minutes in any 31 day period.

10. For continuous temperature measurements taken in accordance with Page 2 of this permit, the reporting requirements in MONITORING AND REPORTING REQUIREMENT, Item 7 may be omitted if the continuously recorded temperature does not exceed the Daily Maximum temperature for more than 30 minutes for any single exceedance and not more than a total of 7 hours and 26 minutes in any 31 days period.

11. The wastewater treatment plant(s) shall be:

   A. located above the 100-year frequency flood level per Flood Insurance Rate Map, Calhoun County, prepared by the U.S. Department of Housing and Urban Development; or
   B. be protected (by berms or other appropriately designed flood control structures) against inundation that may occur during a 100–year flood event (i.e., the 100-year frequency flood level per Flood Insurance Rate Map, Calhoun County, prepared by the U.S. Department of Housing and Urban Development).

12. The permittee may process raw water clarifier sludge at this facility from the AMPTOPP Corporation plant located in Lolita, Texas. The sludge shall be processed via the solids treatment/belt and press system.

13. At times when the natural depth of the Upper Lavaca Bay at Channel Marker 22 is less than one foot deep, the permittee shall cease discharge until the water level at the Channel Marker 22 exceeds one foot in depth. The determination of the natural depth of the Upper Lavaca Bay at Channel Marker 22 shall be made according to the continued implementation of the Standard Operating Procedure (SOP) approved by the TCEQ by correspondence dated June 12, 2008, for the measurement of water depth in the vicinity of Channel Marker 22 of Upper Lavaca Bay under the terms of the this permit.

14. The permittee shall continue to implement the Receiving Water Monitoring Program as described on pages 22-25 of this permit and previously approved by the TCEQ.

15. Monitoring results shall be provided at the intervals specified in the permit. The following reporting schedule applies to the monitoring frequencies specified on Pages 2 – 2m of this permit. For pollutants which are monitored annually, effluent reports shall be submitted in the August Discharge Monitoring Reports (DMR) of each year. For pollutants which are monitored four times per year the permittee shall continue existing submittal time periods, i.e. the effluent reports shall be submitted at three month intervals, with the February, May, August, and November DMRs.

Report	Months Included	Submitted With	Due Date	Pollutant
1st Quarter	December, January and February	February DMR	March 20th	Dioxin and Priority
2nd Quarter	March, April and May	May DMR	June 20th	Dioxin and Priority
3rd Quarter	June, July and August	August DMR	September 20th	Dioxin and Priority
4th Quarter	September, October and November	November DMR	December 20th	Dioxin and Priority
Annual	September - August	August DMR	September 20th	Priority

16. The sludge from the treatment process shall be digested, dewatered, and disposed of in accordance with all the applicable rules of the TCEQ. The permittee shall ensure that the disposal of sludge does not cause any contamination of the ground or surface waters in the state. The permittee shall keep records of all sludges removed from the wastewater treatment plant site. Such records will include the following information:

A. Volume (dry weight basis) of sludge disposed
B. Date of disposal
C. Identity and registration number of hauler
D. Location and registration or permit number of disposal site
E. Method of final disposal.

The above records shall be maintained on a monthly basis and be available at the plant site for inspection by authorized representatives of the Texas Commission on Environmental Quality for at least five years.

17. The permittee shall maintain the diffuser installed at the Outfall 001 located in Lavaca Bay in order to enhance dilution at the point of discharge.

18. The following composite sampling techniques apply to volatile organic compounds. The permittee shall manually collect a minimum of four (4) aliquots (grab samples) in clean zero head-space containers at regular intervals during the actual hours of discharge during the 24-hour sampling period using sample collection, preservation, and handling techniques specified in the test method. These aliquots must be combined in the laboratory to represent the composite sample of the discharge. One of the following alternative methods shall be used to composite these aliquots.

A. Each aliquot is poured into a syringe. The plunger is added, and the volume in the syringe is adjusted to 1-1/4 ml. Each aliquot (1-1/4 ml) is injected into the purging chamber of the purge and trap system. After four (4) injections (total 5 ml), the chamber is purged. Only one analysis or run is required since the aliquots are combined prior to analysis.

B. Chill the four (4) aliquots to 0-6° Centigrade. These aliquots must be of equal volume. Carefully pour the contents of each of the four aliquots into a 250-500 ml. flask which is chilled in a wet ice bath. Stir the mixture gently with a clean glass rod while in the ice bath. Carefully fill two (2) or more clean 40 ml. zero head-space vials from the flask and dispose of the remainder of the mixture. Analyze one of the aliquots to determine the concentration of the composite sample. The remaining aliquot(s) are replicate composite samples that can be analyzed if desired or necessary.

C. Alternative sample compositing methods may be used following written approval by this Office.

The individual samples resulting from the application of these compositing methods shall be analyzed following the procedures specified for the selected test method. The resulting analysis shall be reported as the daily composite concentration.

As an option to the above compositing methods, the permittee may manually collect a minimum of four (4) aliquots (grab samples) in clean zero head-space containers at regular intervals during the actual hours of discharge during the 24-hour sampling period using sample collection, preservation, and handling techniques specified in the test method. A separate analysis shall be conducted for each discrete grab sample following the approved test methods. The determination of daily composite concentration shall be the arithmetic average (weighted by flow) of all grab samples collected during the 24-hour sampling period.

19. RECYCLE AND REUSE OF WASTEWATER

The recycling and reuse of wastewater is acknowledged in, but not limited to, the following:

A. Contact stormwater (including, but not limited to, contact storm water from the Olefins-I, Olefins-II, and Polyolefins plants) and non-contact stormwater may be reused for cooling tower make-up water.

B. Cooling tower blowdown may be diverted via Outfall 901 to the adjacent ALCOA mud pit area for the purpose of dust suppression. This permit does not authorize nor prohibit the land application of cooling tower blowdown to the adjacent ALCOA mud pit area for the purpose of dust suppression. This permit provides the permittee authorization to provide cooling tower blowdown to a 3rd party for the purpose of dust suppression of an off-site plot of land. Should authorization under TCEQ rules to land apply cooling tower blowdown to the adjacent ALCOA mud pit area for the purpose of dust suppression be required by the permittee or other 3rd party, it is the obligation of the permittee or other 3rd party to obtain such authorization from the appropriate regulatory authority.

C. Process wastewaters (including, but not limited to, process wastewater from the air separation plant, the polyolefins extruder plant, and the HDPE 1 plant) may be reused as cooling tower make-up water provided the final wastewater is discharged via either internal Outfall 101 or 201.

20. Non-process area storm water within the dikes of the Inland (Outfalls 006, 007 and 008) and Marine (Outfalls 010 and 011) Traffic Areas may be discharged via Outfalls 006, 007, 008, 010 and 011, provided the water is first tested for total organic carbon, oil and grease, 1,2-Dichloroethane (inland diked areas containing DT-403 and DT-404 and marine area FT-D10), and pH, and visually examined for floating solids, foam, and oil, <u>and</u> provided test results indicate total organic carbon is ≤55 mg/l, oil and grease is ≤15 mg/l, 1,2-Dichloroethane is ≤0.4 mg/l, pH is between 6.0-9.0 S.U., and there is no visible floating solids, foam, or oil. The permittee shall maintain records detailing monitoring performed, results, and where the sampled water was routed for discharge.

21. The permittee is hereby placed on notice that this permit may be reviewed by the Texas Commission on Environmental Quality after the completion of any new intensive water quality survey on Segment Nos. 2453 and 2454 of the Bays and Estuaries River Basin and any subsequent updating of the water quality model for Segment Nos. 2453 and 2454, 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 Sections 305.62, as a result of such review.

22. DIOXIN EFFLUENT MONITORING REQUIREMENTS

The method of analysis of the final effluent for 2,3,7,8-tetrachloro-dibenzo-p-dioxin (2378-TCDD) and 2378-TCDD equivalents (TEQ) shall be in accordance with the analytical protocol in U.S. Environmental Protection Agency Method 1613: Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution, July 1989, or most recent update thereof. The following MALs for 2378 congeners shall be achieved. The minimum analytical level (MAL) is defined as the level at which the entire analytical system shall give recognizable mass spectra and acceptable calibration points.

POLLUTANT	CASRN*	MAL (ppq**)	Suggested Method
Dioxins/Furans (TCDD Equivalents)			1613
2,3,7,8-TCDD	1746-01-6	10^{-5} or 10 ppq	
1,2,3,7,8-PeCDD	40321-76-4	50	
2,3,7,8-HxCDDs			
1,2,3,4,7,8-HxCDD	39227-28-6	50	
1,2,3,6,7,8-HxCDD	57653-85-7	50	
1,2,3,7,8,9-HxCDD	19408-74-3	50	
2,3,7,8-TCDF	51207-31-9	10	
1,2,3,7,8-PeCDF	57117-41-6	50	
2,3,4,7,8-PeCDF	57117-31-4	50	
2,3,7,8-HxCDFs			
1,2,3,4,7,8-HxCDF	70648-26-9	50	
1,2,3,6,7,8-HxCDF	57117-44-9	50	
1,2,3,7,8,9-HxCDF	72918-21-9	50	
2,3,4,6,7,8-HxCDF	60851-34-5	50	

* Chemical Abstracts Service Registry Number

** Part per quadrillion, ppq (i.e., 10^{-5}); 1 ppq = 1 pg/l (picograms/liter)

Dioxins/Furans limits are calculated as Toxicity Equivalent Concentrations as shown below:

Compound	Equivalent Factors	Concentration [1] (ppq)	Equivalents [2] (ppq)
2,3,7,8-TCDD	1		
2,3,7,8-PeCDD	0.5		
2,3,7,8-HxCDDs	0.1		
2,3,7,8-TCDF	0.1		
1,2,3,7,8-PeCDF	0.05		
2,3,4,7,8-PeCDF	0.5		
2,3,7,8-HxCDFs	0.1		

[1] Report the concentrations of the congeners in parts per quadrillion (ppq) for wastewater. The analyses should be made using EPA method 1613 or an equivalent method approved by the TCEQ.

[2] Equivalents (ppq) = Equivalent Factor × Concentration (ppq)

23. The permittee shall use an approved sampling method for the collection of grab and/or composite samples as approved in any of the following sources:

A. 40 CFR Part 136; or
B. As specified in this permit.

24. SCHEDULE OF COMPLIANCE FOR WATER QUALITY BASED EFFLUENT LIMITS

The permittee shall comply with the following schedule of activities for the attainment of water quality-based final effluent limitations for 2,3,7,8-TCDD Equivalent and Enterococci bacteria at Outfall 001 (at the monitoring locations specified on Page 2b for the respective parameters):

A. Determine exceedance cause(s);
B. Develop control options;
C. Evaluate and select control mechanisms;
D. Implement corrective action; and
E. Attain final effluent limitations no later than three years from the date of permit issuance.

The permittee shall submit quarterly progress reports in accordance with the following schedule. The requirement to submit quarterly progress reports shall expire three years from the date of permit issuance for Enterococci bacteria and six months from date of permit issuance for 2,3,7,8-TCDD Equivalents.

PROGRESS REPORT DATE
January 1
April 1
July 1
October 1

The quarterly progress reports shall include a discussion of the interim requirements that have been completed at the time of the report and shall address the progress towards attaining the water quality-based final effluent limitations for Entercocci bacteria at Outfall 001 no later than three years from the date of permit issuance and 2,3,7,8-TCDD Equivalents at Outfall 001 no later than six months from the date of permit issuance.

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

All reports shall be submitted to the Region 14 Office and to the Enforcement Division (MC 224), of the TCEQ.

25. DISCHARGE OF 3RD PARTY WASTES

This permit does not provide authorization for the permittee to accept wastewater from third party sources, neither does it prohibit acceptance of such wastewaters. This permit only provides the authorization to discharge these wastes. Should authorization to accept third party waste be required, it is the obligation of the permittee to obtain such authorization from the appropriate regulatory authority.

26. Self-reporting procedures specified in this permit may be superseded by updated procedures (including but not limited to NetDMR) that have been approved by the EPA and TCEQ for the TPDES permitting program.

27. Sanitary Wastewater

Sanitary wastewater generated at the facility shall be handled in one of the following methods:

A. routing to an approved on-site septic tank and drainfield system;
B. routing to an authorized third party for treatment and disposal; or
C. pretreated by an on-site package plant prior to re-use as cooling tower make-up water.

RECEIVING WATER MONITORING PROGRAM

1. Program Objectives:

The receiving water monitoring program objectives:

a. To establish baseline background conditions in Lavaca Bay in the area that will receive the Outfall 001 discharge.

b. To monitor the health and structure of the biological community in the vicinity of the Outfall 001 discharge.

c. To monitor the water and sediment quality in vicinity of the Outfall 001 discharge.

d. To evaluate compliance with the Texas Surface Water Quality Standards (TAC Chapter 307).

e. To monitor fish and shellfish tissue constituent concentrations for organisms in the vicinity of the Outfall 001 discharge to assess any potential human health risks.

2. Within 30 days of the effective permit date, the permittee shall submit a current Scope-of-Work document that includes specific technical details of the receiving water monitoring program to the TCEQ Executive Director for approval. At the same time, the permittee shall provide a copy of the current scope of work to the Texas Department of Health, Texas Parks and Wildlife Department, and the other parties to the evidentiary hearing, and make the scope of work available to the local citizens by filing it in the local library. The permittee shall initiate the monitoring program during the calendar quarter immediately following the Executive Director's approval of the Scope-of-Work. Subparagraphs a through k detail the minimum monitoring activities that shall be included in the Scope-of-Work.

a. Water Chemistry

The Scope-of-Work should specify that water chemistry laboratory analyses will include total suspended solids, total metals, dissolved metals, total dissolved solids, chlorides, turbidity, salinity, ammonia, nitrate, nitrite, total phosphate, orthophosphate, and total organic carbon. Priority pollutant chemical analysis shall also be conducted to include the metals, volatile organics, base neutral organics, pesticides, and PCBs. When any system component is sampled (i.e., water, sediment, tissue, biota), the sample collection shall be accompanied by water column field physiochemical measurements that include pH, conductivity or salinity, dissolved oxygen, and temperature. The Scope-of-Work shall identify the specific analytical method employed and defined minimum analytical level and method detection level for each analytical procedure utilized.

b. Data Management

The Scope-of-Work shall specify maintenance of a field logbook for sample collection. Sample identification number, data and time, location number, location description, water depth, tide stage and height, current speed and direction, field personnel, and general weather conditions should be recorded with each sampling event.

For tissue collections, species, sex, width of carapace or total length, weight, evidence of pathogens, parasites, or abnormalities shall be recorded. For all tissue collection and biological sampling, the sampling methodology, sampling equipment, compositing techniques, a description of the habitat(s) sampled, and volume, area, and duration of sampling should be recorded in the field logbook. Examples of field data forms to be used in a permanent field logbook shall be included with the Scope-of-Work.

c. Data Interpretation

The Scope-of-Work should specify statistical procedures for data analysis. These may include trend analysis, analysis of variance, cluster analysis, and regression analysis that will be employed. Data should be interpreted using a statistical approach to enable comparisons of the discharge area with background and/or reference control areas. Biological indices such as diversity, evenness, percent dominance, and percent similarity shall be calculated and used to evaluate the biological community data. The Scope-of-Work shall establish protocol to address constituent concentrations below detection levels.

d. Tissue Sampling and Analyses

The Scope-of-Work shall specify fish and shellfish tissue collection of both flesh and organ tissues such as liver and gonads. Tissue concentrations will be monitored to assess any accumulations that pose a risk to humans that consume organisms that may have been exposed to the discharge, and to evaluate the ecological affect of any bioaccumulation. Tissue sampling should include red drum, *Sciaenops ocellata* (14-20 total inches), Atlantic croaker, *Micropogon undulatus* (8-12 total inches), and hardhead catfish, *Arius felis* (at least 10 inches), as target finfish species. The Scope-of-Work shall specify collection of blue crab and oysters for tissue analysis. Tissue sample collection and preparation shall be in accordance with the guidelines set forth in Appendix 18 of the document titled Texas Water Commission Water Quality Monitoring Procedures Manual (October 1991). The Scope-of-Work shall detail the sample collection techniques, sample locations, sampling schedules, tissue handling and preparation methodology, anatomical part, sample size, and methods for chemical analyses. Constituent analyses shall be consistent with the test parameters specified for water and sediment. The Scope-of-Work shall specify that most metal concentrations be determined using Instrumental Neutron Activation Analysis.

e. Toxicity Testing

The Scope-of-Work shall specify the routine collection of ambient water for performance of chronic toxicity tests using the sheepshead minnow, the mysid shrimp, and red algae. Toxicity tests shall also be performed on bulk (solid-phase) sediment and on the sediment pore water. Test organisms selected for the bulk sediment toxicity tests shall demonstrate a broad salinity tolerance. The same tests species utilized for ambient water toxicity testing should be utilized for the pore water tests. The Scope-of-Work shall clearly define the sample collection and processing protocol, and the toxicity testing methodology, test organisms, protocol, and accompanying statistical analyses that will be employed for all toxicity testing.

f. Sediment Sampling and Analysis

In addition to toxicity testing, pore water and sediment samples shall be routinely collected and analyzed for grain size, organic content, iron, aluminum, total organic carbon, and priority pollutants to include heavy metals, volatile organics, base neutral organics, pesticides, and PCBs. The Scope-of-Work shall define a methodology for pore water sample collection and preparation as well as bulk sediment sample collection. The sediment sampling effort shall be performed during periods of quiescence within the bay system.

g. Sample Locations

The sample locations shall be clearly defined in the Scope-of-Work. The latitude and longitude should be determined for each routine sample location. The initial Scope-of-Work shall include a map defining routine and reference sampling locations, and the diffuser location. The Scope-of-Work shall also identify reference stations to be established somewhere in the Lavaca Bay system. The reference stations shall be located in areas unaffected by the discharge from Outfall 001. Sample locations shall be selected that will best characterize the receiving water area. Multiple sampling within a sample grid location for all water, sediment, tissue, and biota sampling should be defined. Water circulation patterns and plume mapping should be determined an considered prior to establishing of any monitoring locations.

h. Biological Assessment

The Scope-of-Work shall specify collection and characterization of benthic infaunal communities, nekton, ichthyoplankton including larval, postlarval, and early juvenile stages of finfish, shrimp, and crabs. The Scope-of-Work shall specify the collection methodology and equipment that will be utilized for all biota collections.

i. Quality Assurance/Quality Control

The Scope-of-Work shall include a quality assurance and quality control plan to ensure collection of reliable data. Provisions for field sample blanks and duplicates, sample preservative blanks, internal laboratory quality control checks such as laboratory blanks, spikes, and duplicates, field calibration procedures, and a mechanism to identify and treat outliers shall be included. The Scope-of-Work shall clearly define the sample collection, sample preservation, sample processing, chain-of-custody, sample storage, and sample analysis protocols and procedures. The Scope-of-Work shall also detail a procedure that ensures that 10% of all water chemistry, sediment, and tissue samples are submitted in duplicate to the analytical laboratories selected by the permittee, as well as to an independent laboratory for independent analyses and verification of the constituent concentrations in the various sample media. The results of the analyses determined at the independent laboratories shall be included with the annual report described in item 3.

j. Data Submittal

Data generated during this monitoring program shall be provided in a form that can be readily entered into the TCEQ Statewide Monitoring Network Database or other similar agency database. Station locations should be identified by latitude and longitude.

k. Frequency

The sampling frequency defined in the Scope-of-Work shall ensure that most system components (i.e., water, tissue, biota) are sampled minimally on a quarterly frequency. After submittal of the initial Scope-of-Work, the sampling frequency may be increased or decreased in accordance with items 4, 6, and 7. Reference stations should be established and monitored at some frequency during the life of the permit monitoring program.

3. The permittee shall submit a written annual report each year for the life of the permit. The annual report shall be submitted to the TCEQ Region 14 Office and the Standards and Assessment Section (MC-150) OF THE TCEQ each year on or before the anniversary date of the permit issue date. The annual report shall summarize the monitoring program data, summarize the analytical and biological methodology, discuss the significant findings, graphically display the data collected, and provide a hard copy of all data. The data shall also be provided in an easily retrievable personal computer database format.

   As an appendix to the written annual report, the permittee shall submit copies of the completed field logbooks as described in 2.b. As an additional appendix to the written annual report, the permittee shall submit copies of the raw data sheets for all water chemistry analyses, sediment analyses, tissue analyses, and toxicity tests.

4. Upon evaluation of each annual report, the permittee may request a modification of the monitoring program in accordance with Item 6 below. The Executive Director may request a modification of the monitoring program at any time.

5. During annual report review periods, there shall be no interruption of data collection. The permittee shall continue the monitoring program throughout the life of the permit in accordance with the most current Scope-of-Work that has been approved by the TCEQ.

6. Any request for revision of the receiving water monitoring program must be submitted to the TCEQ for review and approval. At the same time, the permittee shall provide a copy of the scope of work to the Texas Department of Health, Texas Parks and Wildlife Department, and the other parties to the evidentiary hearing, and make the scope of work available to the local citizens by filing it in the local library.

7. As a result of the findings of the receiving water monitoring program, the Executive Director may initiate the permit amendment process to require additional and/or modified effluent limits, to require additional effluent monitoring, and/or to require significant modifications to the receiving water monitoring program.

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 or its most recent update). 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 or its most recent update). 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, 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 4%, 6%, 8%, 10%, and 13% effluent. The critical dilution, defined as 10% 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.

e. The lethal No Observed Effect Concentration (NOEC) effluent limitation for survival of not less than 10% (see the EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS section) is effective at the permit issue date for both test species.

f. If a test fails to meet the lethal NOEC of 10%, the testing frequency for that species increases to monthly until compliance is demonstrated for three consecutive months, at which time the permittee may resume a quarterly testing frequency.

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 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 methods described in 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.

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) Upon approval, the permittee may substitute other appropriate 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. All Table 1 reports must include the information specified in the form.

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."

e. The permittee shall report the Whole Effluent Lethality values for the 30-day Average Minimum and the 7-day Minimum under Parameter No. 22414 for the appropriate reporting period. If more than one valid test was performed during the reporting period, the test NOECs will be averaged arithmetically and reported as the Daily Average Minimum NOEC for that reporting period. The data submitted should reflect the lowest survival results during the reporting period.

4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant sublethal (but not lethal) 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 sublethal (but not lethal) effect 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.

b. If neither retest demonstrates significant lethality, the permittee shall resume testing at the quarterly frequency.

c. No more than one retest per month is required for a test species.

5. Toxicity Reduction Evaluation

a. 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/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b. 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/or 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/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or 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/or 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/or substantiating documentation which identifies the pollutant(s) and/or 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/or 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/or 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/or 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%												
4%												
6%												
8%												
10%												
13%												

* Coefficient of Variation = standard deviation x 100/mean

DATA TABLE FOR GROWTH OF MYSID SHRIMP

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	4%	6%	8%	10%	13%
A						
B						
C						
D						
E						

TABLE 1 (SHEET 2 OF 4)

MYSID SHRIMP SURVIVAL AND GROWTH

DATA TABLE FOR GROWTH OF MYSID SHRIMP (Continued)

Replicate	Mean dry weight in milligrams in replicate chambers					
	0%	4%	6%	8%	10%	13%
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 (10%): _____ 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 (10%): _____ YES _____ NO

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

   a.) NOEC survival = _____% effluent

   b.) LOEC survival = _____% effluent

   c.) NOEC growth = _____% effluent

   d.) LOEC growth = _____% effluent

TABLE 1 (SHEET 3 OF 4)

INLAND SILVERSIDE MINNOW LARVAL SURVIVAL AND GROWTH TEST

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

Test initiated: _____am/pm _____date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

INLAND SILVERSIDE SURVIVAL

Percent Effluent	Percent Survival in Replicate Chambers					Mean Percent Survival			CV%*
	A	B	C	D	E	24h	48h	7 days	
0%									
4%									
6%									
8%									
10%									
13%									

* Coefficient of Variation = standard deviation x 100/mean

TABLE 1 (SHEET 4 OF 4)

INLAND SILVERSIDE LARVAL SURVIVAL AND GROWTH TEST

INLAND SILVERSIDE GROWTH

Percent Effluent	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight (mg)	CV%*
	A	B	C	D	E		
0%							
4%							
6%							
8%							
10%							
13%							
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 (10%): _____ 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 (10%): _____ 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. The control and/or dilution water shall consist of a standard, synthetic, reconstituted seawater.

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 to the inland silverside. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.

e. The Lethal Concentration (LC) 50 effluent limitation of greater than 100% (see the EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS section) for the mysid shrimp is effective at the permit issue date.

f. If a mysid shrimp test fails to meet an LC50 of greater than 100%, the testing frequency increases to monthly until compliance is demonstrated for three consecutive months, at which time the permittee may resume a quarterly testing frequency.

2. Required Toxicity Testing Conditions

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

b. Dilution Water - In accordance with item 1.c., the control and/or 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 required in Part 3 of this Section.

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. All Table 2 reports must include the information specified in the form.

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 inland silverside 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."

e. The permittee shall report the Whole Effluent Lethality values for the 30-day Average Minimum and the 7-day Minimum under Parameter No. 22414 for the mysid shrimp for the appropriate reporting period. If more than one valid test was performed during the reporting period, the test LC50s will be averaged arithmetically and reported as the 30-day Average Minimum for that reporting period. The 7-day Minimum should reflect the lowest LC50 during the reporting period.

4. Persistent Mortality

The requirements of this Part apply when a toxicity test demonstrates significant lethality, and only for the inland silverside, 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/or 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/or 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/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or 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/or 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/or substantiating documentation which identifies the pollutant(s) and/or 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/or 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/or 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. This exemption was previously granted in a letter dated September 28, 2007, and allows the permit to use an approved ion-adjustment protocol with the mysid shrimp.

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/or 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