



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No TX0007587

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Chevron Phillips Chemical
Clemens Terminal
P.O. Box 1000
Sweeny, TX 77480

is authorized to discharge from a facility located at 2611 County Road 314, Brazoria, Brazoria County, Texas, to San Bernard River Tidal in Waterbody Segment Code No. 1301 of the Brazos-Colorado Coastal Basin and to the Brazos River Tidal in Waterbody Segment Code No. 1201 of the Brazos River Basin from:

Outfall 001: Latitude 28° 59' 01"N; Longitude 95° 34' 03"W
Outfall 004: Latitude 28° 56' 30"; Longitude 95° 22' 50"

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II and Part III hereof.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Issued on

Prepared by

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PART I – REQUIREMENTS FOR NPDES PERMITS**SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS**

1. Outfall 001

During the period beginning on the effective date of the permit and lasting through the expiration date, the permittee is authorized to discharge brine production water from Outfall 001 to the San Bernard River, of the Brazos-Colorado Coastal Basin, in Water Body Segment No. 1301. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Standard Units			
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.5	9.0	once/Week (*1)	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		lbs/day, unless noted		mg/l, unless noted			
POLLUTANT	STORET CODE	MONTHLY AVG	DAILY MAX	MONTHLY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	50050	Report, MGD	Report, MGD	N/A	N/A	Once/Day (*1)	Measure
Oil & Grease	00556	N/A	N/A	10	15	Once/Week (*1)	Grab
Total Organic Carbon	00680	N/A	N/A	20	30	Once/Week (*1)	Grab
Stream Flow Rate(*2)	00058	Report MGD	Report MGD	N/A	N/A	Once/Day (*3)	Measure
Discharge Percent of Stream Flow (*4)	01352	N/A	N/A	5%	5%	Once/Day (*3)	Calculate
Mercury	71900	N/A	N/A		1.81	Once/Month (*1)	Grab
Benzidine	39120	N/A	N/A		.145	Once/Month (*1)	Grab
Thallium	01059	N/A	N/A		Report	Once/Month (*1)	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	30-Day AVG MINIMUM	7-Day MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY (WET) LIMIT				
<i>Mysidopsis bahia</i> (7-day chronic NOEC ³) (Parameter 22414 *5, 6, 7)	5%	5%	Once/ Quarter(*1, 4, 5, 6)	24-Hr Composite
<i>Menidia beryllina</i> (7-day static renewal) (*6,7)	Report	Report	Once/Quarter (*1, 4, 6)	24-Hr Composite

Footnotes:

- *1 When discharging.
- *2 Stream flow shall be the arithmetic 24-hour flow rate measured in MGD based on the upstream flow station.
- *3 Stream flow shall be measured every day, even if there is no (zero) discharge from Outfall 001.
- *4 Discharge Percent of Stream Flow is the effluent discharge flow rate from Outfall 001 divided by the stream flow rate measured during the previous 24 hour period.
- *5 The WET limit NOEC of not less than 5% for *Mysidopsis bahia* becomes effective thirty-six (36) months from the permit issue date, or one day before the permit expiration date, whichever comes first. See Part II.C, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.
- *6 Monitoring and reporting requirements begin on the effective date of this permit. See Part II.C, Whole Effluent Toxicity Texting Requirements for additional WET monitoring and reporting conditions.
- *7 Monthly testing is required for ALL months, when the ratio of ANY single day's discharge rate to stream flow rate is greater than 4%. See additional requirements in Part II.F, Monthly Whole Effluent Toxicity Testing Requirements of the permit.

2. Outfall 004: Discharges from outfall 004 is only authorized when Phillips 66 Company, Sweeny Complex is discharging

During the period beginning on the effective date of the permit and lasting through the expiration date, the permittee is authorized to discharge brine production water from Outfall 004 to the Brazos River Tidal in Waterbody Segment Code No. 1201 of the Brazos River Basin. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
		Standard Units			
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.5	9.0	once/Week (*8)	Grab

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		lbs/day, unless noted		mg/l, unless noted			
POLLUTANT	STORET CODE	MONTHLY AVG	DAILY MAX	MONTHLY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow (*9)	50050	Report, MGD	Report, MGD	N/A	N/A	Once/Day (*8)	Measure
Oil & Grease	00556	N/A	N/A	10	15	Once/Week (*8)	Grab
Total Organic Carbon	00680	N/A	N/A	20	30	Once/Week (*8)	Grab
Discharge Percent of Effluent Flow (*10)	01352	N/A	N/A	50%	50%	Once/Day (*10)	Calculate
Copper	01042	N/A	N/A	N/A	50.83	Once/month (*8)	Grab
Mercury	71900	N/A	N/A	N/A	1.81	Once/month (*8)	Grab
Benzidine	39120	N/A	N/A	N/A	.14	Once/month (*8)	Grab
Thallium	01059	N/A	N/A	N/A	Report	Once/month (*8)	Grab

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
	30-Day AVG MINIMUM	7-Day MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
WHOLE EFFLUENT TOXICITY (7-Day Static Renewal) (*6,8)				
<i>Mysidopsis bahia</i>	Report	Report	Once/ Quarter(*8, 9)	24-Hr Composite
<i>Menidia beryllina</i>	Report	Report	Once/Quarter (*8, 9)	24-Hr Composite

Footnotes:

- *6 Monitoring and reporting requirements begin on the effective date of this permit. See Part II.C, whole Effluent Toxicity Texting Requirements for additional WET monitoring and reporting conditions.
- *8 When discharging.
- *9 Outfall 004 flow rate should be equal to or less than the Phillips 66 Company, Sweeny Complex discharge rate. Flow samples from Outfall 004 and the Sweeny Complex Outfall 011 shall be collected combined on a flow weighted basis for WET testing at a critical dilution of 8% in accordance with Part II.C of this permit. Flow reading from Phillips 66 Company, Sweeny Complex Outfall 011 must be maintained on site. The current TPDES permit No. WQ0000721000, EPA ID No. TX0007536, Phillips 66 Company, Sweeny Complex established a daily average flow limit of 9.0 MGD and a daily maximum flow rate of 12.5 MGD.
- *10 Flow from Clemens Terminal shall not be more than 50% of the commingled flow. The permittee must also report the percentage of the Clements Terminal effluent in the Outfall 004 commingled discharge. If Phillips 66 Company, Sweeny Complex is not discharging, neither shall the permittee discharge from outfall 004.

SAMPLING LOCATION(S) AND OTHER REQUIREMENTS

Samples taken in compliance with monitoring requirements for Outfall 001, specified above shall be taken at the discharge from the final treatment unit prior to the receiving stream from the following approximate location:

Outfall 001: Latitude 28° 59' 01"; Longitude 95° 34' 03"

Samples taken in compliance with the monitoring requirements for Outfall 004, specified above shall be taken prior to the tie-in point on the pipeline and prior to the discharge co-mingling with ConocoPhillips pipeline from the following approximate location:

Outfall 004: Latitude 28° 56' 30"; Longitude 95° 22' 50"

FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

SECTION B. SCHEDULE OF COMPLIANCE

The permittee shall comply with the following schedule of activities for the attainment of state water quality standards-based final effluent limitations for copper, thallium, mercury and benzidine, at Final Outfalls 001 and 004, where applicable.

- a. Determine exceedance cause(s);
- b. Develop control options, if needed;
- c. Evaluate and select control mechanisms;
- d. Implement corrective action; and
- e. Attain final effluent limitations no later than three (3) years from the permit effective date.

The permittee shall submit quarterly progress reports, to both EPA and Texas Rail Road Commission, in accordance with the following schedule. The requirement to submit quarterly progress reports shall expire three (3) years from the permit effective date. No later than 14-days after the date compliance with the copper final limits have been met, the permittee shall submit a written final report both to EPA and the State, stating that compliance has been completed. If at any time during the three-year compliance period the permittee determines that full compliance will not be met within the time allowed, a separate report shall be sent to both EPA and the State stating the explanation for this delay and proposed remedial actions.

PROGRESS REPORT DUE DATES

January 1
April 1
July 1
October 1

The permittee shall comply with the following schedule of activities for the attainment of the Whole Effluent Toxicity (WET) limitation(s) on Page 4 for Outfall 001:

- A. Within 90 days of permit issuance- The permittee shall develop a WET compliance schedule plan (Plan) that details the progress of the ongoing Toxicity Reduction Evaluation (TRE) and specifies the future actions. The permittee shall submit the plan to the EPA (6WQ-PO) and provide a copy to the Railroad Commission of Texas.
- B. The permittee shall comply with the final WET limit(s) within 36 months from the date of permit issuance or one day before the permit expires, whichever comes first.
- C. The permittee shall submit quarterly progress reports in accordance with the following compliance schedule.

PROGRESS REPORT DUE DATES

January 1
April 1
July 1
October 1

Any quarterly TRE Activities Report may be submitted as part of the compliance schedule progress reports. All reports shall be submitted to the Whole Effluent Toxicity Coordinator (6WQ-PO), U.S. Environmental Protection Agency, 1445 Ross Avenue, Dallas, TX 75202, and a copy to the Texas Rail Road Commission.

SECTION C. MONITORING AND REPORTING

1. The EPA published the electronic reporting rule in the federal register (80 FR 64063) on October 22, 2015. The rule became effective on December 21, 2015. One year after the effective date of the final rule, NPDES regulated entities that are required to submit DMRs (including majors and non-majors, individually permitted facilities and facilities covered by general permits) must do so electronically. All DMRs shall be electronically reported effective December 21, 2016, per 40 CFR 127.16. If you are submitting on paper before December 21, 2016, you must report on the Discharge Monitoring Report (DMR) Form EPA No. 3320-1 in accordance with the "General Instructions" provided on the form. No additional copies are needed if reporting electronically, however when submitting paper form EPA No. 3320-1, the permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA and other agencies as required. (See Part III.D.IV of the permit.). To submit electronically, access the NetDMR website at www.epa.gov/netdmr and contact the R6NetDMR@epa.gov in-box for further instructions. PA and authorized NPDES programs will begin electronically receiving these DMRs from all DMR filers and start sharing these data with each other.

Discharge Monitoring Report Form(s) shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

2. Reporting periods shall end on the last day of the month.
3. The permittee is required to submit regular monthly reports as described above and shall submit those reports postmarked no later than the 25th day of the month following each reporting period.
4. NO DISCHARGE REPORTING - If there is no discharge from any outfall during the sampling month, place an "X" in the NO DISCHARGE box located in the upper right corner of the Discharge Monitoring Report.
5. If any daily maximum or monthly average value exceeds the effluent limitations specified in Part I. A, the permittee shall report the excursion in accordance with the requirements of Part III. D.
6. Any daily maximum or monthly average value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I. A shall constitute evidence of violation of such effluent limitation and of this permit.
7. The permittee shall effectively monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the treated discharge.
8. All reports shall be sent both to EPA and the Texas Railroad Commission at the addresses shown in Part III of the permit.

PART II - OTHER REQUIREMENTS**GENERAL:****A. MINIMUM QUANTIFICATION LEVEL (MQL)**

See list of MQL's at Appendix A of Part II below. For pollutants listed on Appendix A of Part II with MQL's, analyses must be performed to the listed MQL. If any individual analytical test result is less than the MQL listed, a value of zero (0) may be used for that pollutant result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

In addition, any additional pollutant sampling for purposes of this permit, including renewal applications or any other reporting, shall be tested to the MQL shown on the attached Appendix A of Part II. Results of analyses that are less than the listed MQL may be reported as "non detect" (ND).

B. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, at (214) 665-6595, and concurrently to Railroad Commission of Texas, at (512) 463-6804, within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

None

C. 40 CFR PART 136 ANALYTICAL REQUIREMENTS

Unless otherwise specified in this permit, monitoring shall be conducted according to the analytical, apparatus and materials, sample collection, preservation, handling, etc., procedures listed at 40 CFR Part 136 in effect on the effective date of this permit. Appendices A, B, and C to 40 CFR Part 136 are specifically referenced as part of this requirement. Amendments to 40 CFR Part 136 promulgated after the effective date of this permit shall supersede these requirements as applicable.

Sufficiently Sensitive Analytical Methods (SSM)

The permittee must use sufficiently sensitive EPA-approved analytical methods (SSM) (under 40 CFR part 136 or required under 40 CFR chapter I, subchapters N or O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the approved methods are not sufficiently sensitive to the limits, the most SSM with the lowest method detection limit (MDL) must be used as defined under 40 CFR 122.44(i)(1)(iv)(A). If no analytical laboratory is able to perform a test satisfying the SSM in the region, the most SSM with the lowest MDL must be used after adequate demonstrations by the permittee and EPA approval.

D. REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of the Texas Commission on Environmental Quality (TCEQ) Water Quality Standards for Interstate and Intrastate Streams are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the Water Quality Standards are either revised or promulgated by the TCEQ. Should the State adopt a State water quality standard, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard in accordance with 40CFR122.44 (d). Modification of the permit is subject to the provisions of 40CFR124.5.

If a new or revised TMDL is determined for the receiving stream, the permit may be reopened, and new limitations based on the TMDL may be incorporated into the permit. Additionally, in accordance with 40 CFR Part 122.62 (s) (2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

E. WHOLE EFFLUENT TOXICITY LIMITATIONS/TESTING (7-DAY CHRONIC NOEC MARINE)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

- a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S):	001	004
REPORTED ON DMR AS FINAL OUTFALL:	001	004
CRITICAL DILUTION (%):	5%	8%
EFFLUENT DILUTION SERIES (%):	2%, 4%, 5%, 7%, 9%	3%, 5%, 6%, 8%, 11%
COMPOSITE SAMPLE TYPE:	Defined at PART I	Defined at PART I
TEST SPECIES/METHODS:	40 CFR Part 136 <i>Mysidopsis bahia</i> (LIMIT) <i>Menidia beryllina</i> (TESTING)	40 CFR Part 136 <i>Mysidopsis bahia</i> (TESTING) <i>Menidia beryllina</i> (TESTING)

Mysidopsis bahia (Mysid shrimp) chronic static renewal 7-day survival and growth test using Method 1007.0, EPA-821-R-02-014, or the most recent update thereof.

Menidia beryllina (Inland Silverside minnow) chronic static renewal 7-day larval survival and growth test, Method 1006.0, EPA-821-R-02-014, or the most recent update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

- b. The NOEC (No Observed Lethal Effect Concentration) is herein defined as the greatest effluent dilution at and below which toxicity that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Chronic lethal test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution. Chronic sub-lethal test failure is defined as a demonstration of a statistically significant sub-lethal effect (i.e., growth or reproduction) at test completion to a test species at or below the critical dilution.
- c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.
- d. “Thirty six (36) months from the permit issue date, the NOEC effluent limitation of no less than 5% is effective for the *Mysidopsis bahia* at Outfall 001.”
- e. “At the permit issue date, if a WET test fails to pass the NOEC effluent limitation of no less than 5% effluent dilution at Outfall 001, the testing frequency will increase to monthly until compliance with the NOEC effluent limitation is demonstrated for a period of three consecutive months, at which time the quarterly testing frequency may be resumed.”

2. PERSISTENT LETHAL and/or SUB LETHAL EFFECTS

The requirements of this subsection apply only when a toxicity test demonstrates significant lethal and/or sub-lethal effects at or below the critical dilution. The purpose of additional tests (also referred to as ‘retests’ or confirmation tests) is to determine the duration of a toxic event. A test that meets all test acceptability criteria and demonstrates significant toxic effects does not need additional confirmation. Such testing cannot confirm or disprove a previous test result.

If any valid test demonstrates significant lethal or sublethal effects to a test species at or below the critical dilution, the frequency of testing for that species is automatically increased to once per quarter for the life of the permit.

- a. Part I Testing Frequency Other Than Monthly
- i. The permittee shall conduct a total of three (3) additional tests for *Menidia beryllina* (Outfall 001 and Outfall 004) and *Mysidopsis bahia* (Outfall 004) when the species demonstrates significant toxic effects at or below the critical dilution. These retests shall be conducted monthly until three (3) monthly retests have been performed as a discharge occurs. If testing on a quarterly basis, the permittee may substitute one of the additional tests in lieu of one routine toxicity test. A full report shall be prepared for each test required by this section in accordance with procedures outlined in Item 4 of this section and submitted with the period discharge monitoring report (DMR) to the permitting authority for review.
 - ii. **IF LETHAL EFFECTS HAVE BEEN DEMONSTRATED**
If any of the additional retests for *Menidia beryllina* (Outfall 001 and Outfall 004) and *Mysidopsis bahia* (Outfall 004), or any two tests for *Mysidopsis bahia* (Outfall 001) in a quarter demonstrates significant lethal effects at or below the critical dilution, the permittee shall initiate the Toxicity Reduction Evaluation (TRE) requirements as specified in Item 5 of this section. The permittee shall notify EPA in writing within 5 days of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest for *Menidia beryllina* (Outfall 001 and Outfall 004) and *Mysidopsis bahia* (Outfall 004) or the second failed test for *Mysidopsis bahia* in a quarter. A TRE may be also be required due to a demonstration of intermittent lethal effects at or below the critical dilution, or for failure to perform the required retests.
 - iii. **IF ONLY SUB-LETHAL EFFECTS HAVE BEEN DEMONSTRATED**
If any two of the three additional *Menidia beryllina* (Outfall 001 and Outfall 004) and *Mysidopsis bahia* (Outfall 004) retests demonstrates significant sub-lethal effects at or below the critical dilution, the permittee shall initiate the Sub-Lethal Toxicity Reduction Evaluation (TRE_{SL}) requirements as specified in Item 5 of this section. The permittee shall notify EPA in writing within 5 days of the failure of any retest, and the Sub-Lethal Effects TRE initiation date will be the test completion date of the first failed retest. A TRE may be also be required for failure to perform the required retests.
 - iv. The provisions of Item 2.a.i. are suspended upon submittal of the TRE Action Plan.

3. REQUIRED TOXICITY TESTING CONDITIONS

- a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

- i. The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- ii. The mean dry weight of surviving Mysid shrimp at the end of the 7 days in the control (0% effluent) must be 0.20 mg per mysid or greater.

Should the mean dry weight in the control be less than 0.20 mg per mysid, the toxicity test, including the control and all effluent dilutions shall be repeated.
- iii. The mean dry weight of surviving unpreserved Inland Silverside minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.50 mg per larva or greater. The mean dry weight of surviving preserved Inland Silverside minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.43 mg per larva or greater.
- iv. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the growth and survival endpoints in the Mysid shrimp test; and the growth and survival endpoints of the Inland Silverside minnow test.
- v. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal or nonlethal effects are exhibited for: the growth and survival endpoints in the Mysid shrimp test; and the growth and survival endpoints of the Inland Silverside minnow test.
- vi. A Percent Minimum Significant Difference (PMSD) range of 11 - 37 for *Mysidopsis bahia* growth;
- vii. A PMSD range of 11 - 28 for *Menidia beryllina* growth.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Mysid shrimp and the Inland Silverside minnow larval survival and growth test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA-821-R-02-014 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 3.a above and the percent survival of the test organism is equal to or greater than 80% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report a survival NOEC of not less than the critical dilution for the DMR reporting requirements found in Item 4 below.

c. Dilution Water

- i. Dilution water used in the toxicity tests will be synthetic laboratory dilution water of similar pH, hardness, and salinity to the closest downstream perennial water. The permittee shall substitute synthetic dilution water for the receiving water in all subsequent tests.

d. Samples and Composites

- i. The permittee shall collect a minimum of three flow-weighted composite samples from the outfall(s) listed at Item 1.a above.
- ii. The permittee shall collect second and third composite samples for use during 24-hour renewals of each dilution concentration for each test. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.
- iii. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 72 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.
- iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of 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 effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 4 of this section.

- v. MULTIPLE OUTFALLS: If the provisions of this section are applicable to multiple outfalls, the permittee shall combine the composite effluent samples in proportion to the average flow from the outfalls listed in Item 1.a above for the day the sample was collected. The permittee shall perform the toxicity test on the flow-weighted composite of the outfall samples.

4. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this section in accordance with the Report Preparation Section of EPA-821-R-02-014, or the most current publication, for every valid or invalid toxicity test initiated whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.
- b. A valid test for each species must be reported on the DMR during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. The data submitted should reflect the LOWEST lethal and sub-lethal results for each species during the reporting period. All invalid tests, repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached to the DMR for EPA review.
- c. The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit, as follows below. Submit retest information clearly marked as such with the following month's DMR. Only results of valid tests are to be reported on the DMR.
 - i. *Menidia beryllina* (Inland Silverside minnow)
 - A. If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0". Parameter No. TLP6B
 - B. Report the NOEC value for survival, Parameter No. TOP6B
 - C. Report the Lowest Observed Effect Concentration (LOEC) value for survival, Parameter No. TXP6B
 - D. Report the NOEC value for growth, Parameter No. TPP6B
 - E. Report the LOEC value for growth, Parameter No. TYP6B

- F. If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP6B
- G. Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP6B
- ii. *Mysidopsis bahia* (Mysid shrimp)
 - A. If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0". Parameter No. TLP3EB.
 - B. Report the NOEC value for survival, Parameter No. TOP3E
 - C. Report the LOEC value for survival, Parameter No. TXP3E
 - D. Report the NOEC value for growth, Parameter No. TPP3E
 - E. Report the LOEC value for growth, Parameter No. TYP3E
 - F. If the No Observed Effect Concentration (NOEC) for growth is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TGP3E
 - G. Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQP3E
- d. Enter the following codes on the DMR for retests only:
 - i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival and/or sub-lethal effects is less than the critical dilution; otherwise, enter a "0."
 - ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival and/or sub-lethal effects is less than the critical dilution; otherwise, enter a "0."
 - iii. For retest number 3, Parameter 51443, enter a '1' if the NOEC for survival and/or sub-lethal effects is less than the critical dilution; otherwise, enter a '0'
- e. The permittee shall report the Whole Effluent Toxicity values for the 30-day average and the 7-day minimum limit under parameter No. 22414 for the appropriate reporting period for *Mysidopsis bahia* (Outfall 001). 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 NOEC for that

reporting period. The data submitted should reflect the lowest lethal NOEC during the reporting period.

5. TOXICITY REDUCTION EVALUATIONS (TREs)

TREs for lethal and sub-lethal effects are performed in a very similar manner. EPA Region 6 is currently addressing TREs as follows: a sub-lethal TRE (TRE_{SL}) is triggered

based on three sub-lethal test failures while a lethal effects TRE (TRE_L) is triggered based on only two test failures for lethality. In addition, EPA Region 6 will consider the magnitude of toxicity and use flexibility when considering a TRE_{SL} where there are no effects at effluent dilutions of less than 76% effluent.

- a. Within ninety (90) days of confirming persistent toxicity, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A Toxicity Reduction Evaluation is an investigation intended to determine those actions necessary to achieve compliance with water quality-based effluent limits by reducing an effluent's toxicity to an acceptable level. A TRE is defined as a step-wise process which combines toxicity testing and analyses of the physical and chemical characteristics of a toxic effluent to identify the constituents causing effluent toxicity and/or treatment methods which will reduce the effluent toxicity.-The goal of the TRE is to maximally reduce the toxic effects of effluent at the critical dilution and include the following:

- i. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, identifications and confirmation activities, source evaluation, treatability studies, or alternative

approaches. When the permittee conducts Toxicity Characterization Procedures the permittee shall perform multiple characterizations and follow the procedures specified in the documents "Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures" (EPA-600/6-91/003) and "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA-600/6-91/005F), or alternate procedures. When the permittee conducts Toxicity Identification Evaluations and Confirmations, the permittee shall perform multiple identifications and follow the methods specified in the documents "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), as appropriate.

The documents referenced above may be obtained through the National Technical Information Service (NTIS) by phone at (703) 487-4650, or by writing:

U.S. Department of Commerce
National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161

- ii. Sampling Plan (e.g., locations, methods, holding times, chain of custody, preservation, etc.). The effluent sample volume collected for all tests shall be adequate to perform the toxicity test, toxicity characterization, identification and confirmation procedures, and conduct chemical specific analyses when a probable toxicant has been identified;

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. Where lethality was demonstrated within 48 hours of test initiation, each composite sample shall be analyzed independently. Otherwise the permittee may substitute a composite sample, comprised of equal portions of the individual composite samples, for the chemical specific analysis;

- iii. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
 - iv. Project Organization (e.g., project staff, project manager, consulting services, etc.).
- b. The permittee shall initiate the TRE Action Plan within thirty (30) days of plan and schedule submittal. The permittee shall assume all risks for failure to achieve the required toxicity reduction.
 - c. The permittee shall submit a quarterly TRE Activities Report, with the Discharge Monitoring Report in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
 - i. any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
 - ii. any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
 - iii. 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.

A copy of the TRE Activities Report shall also be submitted to the state agency.

- d. The permittee shall submit a Final Report on Toxicity Reduction Evaluation Activities no later than twenty-eight (28) months from confirming lethality in the retests, which provides information pertaining to the specific control mechanism 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.

A copy of the Final Report on Toxicity Reduction Evaluation Activities shall also be submitted to the state agency.

- e. Quarterly testing during the TRE is a minimum monitoring requirement. EPA recommends that permittees required to perform a TRE not rely on quarterly testing alone to ensure success in the TRE, and that additional screening tests be performed to capture toxic samples for identification of toxicants. Failure to identify the specific chemical compound causing toxicity test failure will normally result in a permit limit for whole effluent toxicity limits per federal regulations at 40 CFR 122.44(d)(1)(v).

F. MONTHLY WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

When the discharge rate from Outfall 001 is greater than 4% of the flow of the San Bernard River for any day, the facility will perform a whole effluent toxicity test for that month. The sampling for the test shall be initiated within 24-hours of the day that the 4% discharge percent occurred. EPA acknowledges that this sampling initiating requirement may push the actual sampling into the next month, or even into the next quarterly reporting period, and in that event, report the sample results no later than the next month's DMR report. Make note on the DMR form, however, the month that the 4% exceedance occurred. Additionally, in the event that during ANY quarterly reporting period such a monthly test has occurred, that test may be used to satisfy the required quarterly test. However, if the quarterly test has been performed, and an exceedance of the 4% rate occurs, then an additional test shall be required for each and any month that the 4% is exceeded. Once a 4% dilution test has been performed, any additional discharges during that SAME month that exceeds the 4% threshold do not need additional testing. A single monthly test is all that the permit requires, except in those occurrences when a test for the quarterly requirement has been performed, and then later in the same month a 4% test is required.

APPENDIX A of PART II

The following Minimum Quantification Levels (MQL's) are to be used for reporting pollutant data for NPDES permit applications and/or compliance reporting.

POLLUTANTS	MQL µg/l	POLLUTANTS	MQL µg/l
METALS, RADIOACTIVITY, CYANIDE and CHLORINE			
Aluminum	2.5	Molybdenum	10
Antimony	60	Nickel	0.5
Arsenic	0.5	Selenium	5
Barium	100	Silver	0.5
Beryllium	0.5	Thallium	0.5
Boron	100	Uranium	0.1
Cadmium	1	Vanadium	50
Chromium	10	Zinc	20
Cobalt	50	Cyanide	10
Copper	0.5	Cyanide, weak acid dissociable	10
Lead	0.5	Total Residual Chlorine	33
Mercury *1	0.0005 0.005		
DIOXIN			
2,3,7,8-TCDD	0.00001		
VOLATILE COMPOUNDS			
Acrolein	50	1,3-Dichloropropylene	10
Acrylonitrile	20	Ethylbenzene	10
Benzene	10	Methyl Bromide	50
Bromoform	10	Methylene Chloride	20
Carbon Tetrachloride	2	1,1,2,2-Tetrachloroethane	10
Chlorobenzene	10	Tetrachloroethylene	10
Clorodibromomethane	10	Toluene	10
Chloroform	50	1,2-trans-Dichloroethylene	10
Dichlorobromomethane	10	1,1,2-Trichloroethane	10
1,2-Dichloroethane	10	Trichloroethylene	10
1,1-Dichloroethylene	10	Vinyl Chloride	10
1,2-Dichloropropane	10		
ACID COMPOUNDS			
2-Chlorophenol	10	2,4-Dinitrophenol	50
2,4-Dichlorophenol	10	Pentachlorophenol	5
2,4-Dimethylphenol	10	Phenol	10
4,6-Dinitro-o-Cresol	50	2,4,6-Trichlorophenol	10

POLLUTANTS	MLQ µg/l	POLLUTANTS	MLQ µg/l
BASE/NEUTRAL			
Acenaphthene	10	Dimethyl Phthalate	10
Anthracene	10	Di-n-Butyl Phthalate	10
Benzidine	50	2,4-Dinitrotoluene	10
Benzo(a)anthracene	5	1,2-Diphenylhydrazine	20
Benzo(a)pyrene	5	Fluoranthene	10
3,4-Benzofluoranthene	10	Fluorene	10
Benzo(k)fluoranthene	5	Hexachlorobenzene	5
Bis(2-chloroethyl)Ether	10	Hexachlorobutadiene	10
Bis(2-chloroisopropyl)Ether	10	Hexachlorocyclopentadiene	10
Bis(2-ethylhexyl)Phthalate	10	Hexachloroethane	20
Butyl Benzyl Phthalate	10	Indeno(1,2,3-cd)Pyrene	5
2-Chloronaphthalene	10	Isophorone	10
Chrysene	5	Nitrobenzene	10
Dibenzo(a,h)anthracene	5	n-Nitrosodimethylamine	50
1,2-Dichlorobenzene	10	n-Nitrosodi-n-Propylamine	20
1,3-Dichlorobenzene	10	n-Nitrosodiphenylamine	20
1,4-Dichlorobenzene	10	Pyrene	10
3,3'-Dichlorobenzidine	5	1,2,4-Trichlorobenzene	10
Diethyl Phthalate	10		
PESTICIDES AND PCBS			
Aldrin	0.01	Beta-Endosulfan	0.02
Alpha-BHC	0.05	Endosulfan sulfate	0.02
Beta-BHC	0.05	Endrin	0.02
Gamma-BHC	0.05	Endrin Aldehyde	0.1
Chlordane	0.2	Heptachlor	0.01
4,4'-DDT and derivatives	0.02	Heptachlor Epoxide	0.01
Dieldrin	0.02	PCBs	0.2
Alpha-Endosulfan	0.01	Toxaphene	0.3

(MLQ's Revised November 1, 2007)

Footnotes:

*1 Default MLQ for Mercury is 0.005 unless Part I of your permit requires the more sensitive Method 1631 (Oxidation / Purge and Trap / Cold vapor Atomic Fluorescence Spectrometry), then the MLQ shall be 0.0005.