



REGION 6
1445 ROSS AVENUE
DALLAS, TEXAS 75202-2733

NPDES Permit No TX0134072

**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"),

Dan A. Hughes Company
Dilworth Discharge Pit
P.O. Drawer 669
Beeville, TX 78104

is authorized to discharge from a facility located at Tilden, McMullen County, Texas, from Outfall 001: Latitude 28° 27' 9" N; Longitude 98° 40' 1" W which discharge into the Frio River (Stream Segment No, 2117) in the Nueces River Basin.

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 is prepared by Jim Afghani, Environmental Engineer, Permitting Section (6WQ-PP).

This permit shall become effective on

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

Issued on

Charles W. Maguire
Director
Water Division

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PART I – REQUIREMENTS FOR NPDES PERMITS

SECTION A. LIMITATIONS AND MONITORING REQUIREMENTS

1. Outfall 001 – Produced Water – 0.21 MGD Maximum Flow

During the period beginning on the effective date of the permit and lasting through the expiration date, the permittee is authorized to discharge produced water from Outfall 001 to skimming Pit, then into stock pond, thence to Rockaway Creek, thence to the Frio River in Water Body Segment No. 2117 of the Nueces River Basin. Such discharges shall be limited and monitored by the permittee as specified below:

POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	FREQUENCY	TYPE
pH	00400	6.5	9.0	Twice/month ^{*1}	Grab

POLLUTANT	STORET CODE	MON AVG (lbs/day), unless noted	DAY MAX (lbs/day), unless noted	MON AVG (mg/L), unless noted	DAY MAX (mg/L), unless noted	FREQUENCY	TYPE
Flow	50050	Report MGD	Report MGD	N/A	N/A	Weekly	Record
Oil & Grease	00556	Report	Report	10	15	2/month ^{*1}	Grab
Chemical Oxygen Demand	00340	N/A	N/A	N/A	100	2/month ^{*1}	Grab
Total Dissolved Solids	70295	Report	Report	Report	Report	2/month ^{*1}	Grab
Dissolved Oxygen *2	00300	N/A	N/A	5.0	N/A	2/month ^{*1}	Grab
Dissolved Oxygen, Spring *3	00300	N/A	N/A	5.5	N/A	2/month ^{*1}	Grab
Total Sulfate	00945	Report	Report	Report	Report	2/month ^{*1}	Grab
Total Chloride	00940	Report	Report	Report	Report	2/month ^{*1}	Grab
Total Petroleum Hydrocarbon	82181	N/A	N/A	N/A	Report	1/ three months ^{*1}	Grab
Total Benzene	34030	N/A	N/A	N/A	Report	1/three months ^{*1}	Grab
Total BETX *4	30383	N/A	N/A	N/A	Report	1/three months ^{*1}	Grab
Total Radium 226, pCi/l	0950	N/A	N/A	N/A	Report	1/three months ^{*1}	Grab
Total Radium 228, pCi/l	11501	N/A	N/A	N/A	Report	1/three months ^{*1}	Grab
Ra 226+Ra 228, pCi/l	11503	N/A	N/A	N/A	Report	1/three months ^{*1}	Grab
Adjusted Gross Alpha, pCi/l	80029	N/A	N/A	N/A	Report	1/three months ^{*1}	Grab

WHOLE EFFLUENT TOXICITY TESTING (7-Day Chronic Static Renewal/ NOEC)	VALUE	FREQUENCY	TYPE
<i>Ceriodaphnia dubia</i>	Report	Once/Quarter	24-Hr Composite
<i>Pimephales promelas</i>	Report	Once/Quarter	24-Hr Composite

Whole Effluent Toxicity Testing (TX 24-Hr. LC50)	VALUE	FREQUENCY	TYPE
<i>Ceriodaphnia dubia</i>	Report	Once/6 Months	Grab
<i>Pimephales promelas</i>	Report	Once/6 Months	Grab

Footnotes:

- *1 For any monitoring period, samples shall be taken at least seven (7) days from the first sample of the previous monitoring period.
- *2 The minimum dissolved Oxygen limit shall be 3.0 mg/l, with a mean DO of 5.0 mg/l.
- *3 In the spring, the minimum dissolved oxygen limit shall be 4.5 mg/l, with a mean DO of 5.5 mg/l. Spring is from March 21 to June 20.
- *4 BETX is the sum of benzene, ethyl benzene, toluene and xylene.
- *5 Monitoring and reporting requirements begin on the effective date of this permit. See Part II, Whole Effluent Toxicity Testing Requirements for additional WET monitoring and reporting conditions.

SAMPLING LOCATION(S) AND OTHER REQUIREMENTS

Samples taken in compliance with the monitoring requirements 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° 27' 9" N; Longitude 98° 40' 1" W

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

None

SECTION C. MONITORING AND REPORTING (MINOR DISCHARGERS)

1. Discharge Monitoring Report (DMR) results shall be electronically reported to EPA per 40 CFR 127.16. To submit electronically, access the NetDMR website at <https://netdmr.epa.gov>. Until approved for Net DMR, the permittee shall request temporary or emergency waivers from electronic reporting. To obtain the waiver, please contact: U.S. EPA - Region 6, Water Enforcement Branch, Texas State Coordinator (6EN-WC), (214) 665-8582. If paper reporting is granted temporarily, 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 copies to Texas Railroad Commission as required (See Part III.D.IV of the permit).

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 months March, June, September, and December.
3. The first Discharge Monitoring Report(s) shall represent facility operations from the effective date of the permit through the last day of the current reporting period.
4. Thereafter, the permittee is required to submit regular quarterly reports as described above and shall submit those reports postmarked no later than the 28th day of the month following each reporting period.
5. 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.
6. 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.
7. 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.

The permittee shall effectively monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the treated discharge. In addition, all reports shall be sent both to EPA and the Texas Railroad Commission at the addresses shown in Part III of the permit.

WATER TREATMENT CHEMICAL PROHIBITION

Products containing chromium and zinc will be prohibited from use as additives to the utility waters.

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

The Permittees shall use sufficiently sensitive EPA-approved analytical methods (under 40 CFR part 136 and 40 CFR chapter I, subchapters N and O) when quantifying the presence of pollutants in a discharge for analyses of pollutants or pollutant parameters under the permit. In case the minimum quantification levels (MQLs) are not sufficiently sensitive to the limits, the actual detected values, instead of zeros, need to be reported. If there is a sensitive method with MDL (method detection limit) below the limit, but the MQL is above the limit, they cannot report zero based on MQL, but must report actual value.

If any individual analytical test result is less than the MQL listed in Appendix A, or the more sensitive MDL, a value of zero (0) may be used for that individual result for reporting purpose.

The Permittees may develop an effluent specific method detection limit (MDL) in accordance with Appendix B to 40 CFR 136. For any pollutant for which the Permittees determine an effluent specific MDL, the Permittees shall send to the EPA Region 6 NPDES Permits Branch (6WQ-P) a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent specific MDL was correctly calculated. An effluent specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

Upon written approval by the EPA Region 6 NPDES Permits Branch (6WQ-P), the effluent specific MQL may be utilized by the permittee for all future Discharge Monitoring Report (DMR) reporting requirements.

A method is "sufficiently sensitive" when (1) the method minimum level (ML) of quantification is at or below the level of the applicable effluent limit for the measured pollutant or pollutant parameter; or (2) if there is no EPA-approved analytical method with a published ML at or below the effluent limit, then the method that has the lowest published ML (is the most sensitive) of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or O, for the measured pollutant or pollutant parameter; or (3) the method is specified in this permit or has been otherwise approved in writing by the permitting authority (EPA Region 6) for the measured pollutant or pollutant parameter. The Permittee has the option of developing and submitting a report to justify the use of matrix or sample-specific MLs rather than the published levels. Upon written approval by EPA Region 6 the matrix or sample-specific MLs may be utilized by the Permittee for all future Discharge Monitoring Report (DMR) reporting requirements.

Current EPA Region 6 minimum quantification levels (MQLs) for reporting and compliance are provided in Appendix A of Part II of this permit.

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. 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.

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 (a) (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.

WHOLE EFFLUENT TOXICITY TESTING (7 DAY CHRONIC NOEC)

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	
REPORTED AS FINAL OUTFALL	001
CRITICAL DILUTION (%)	81%
EFFLUENT DILUTION SERIES (%)	34%, 46%, 61%, 81%, 100%
TEST SPECIES AND METHODS	Ceriodaphnia dubia / Method 1002.0 (EPA-821-R-02-013 or latest version)
	Pimephales promelas/ Method 1000.0 (EPA/821/R-02-013 or latest version)
TYPE	Defined in PART I

- b. The NOEC (No Observed Lethal Effect Concentration) is herein defined as the greatest effluent dilution at and below which lethality 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 WET limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

2. REQUIRED TEST ACCEPTABILITY CRITERIA AND TEST CONDITIONS

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:

Condition/Criteria	<i>Ceriodaphnia dubia</i>	<i>Pimephales promelas</i>
Test Duration	Until 60% or more of surviving control females have 3 broods (max 8 days)	7 days
# of replicates per concentration	10	5
# of organisms per replicate	1	8
# or organisms per concentration	10	40 (minimum)
# of test concentrations per effluent	5 and a control	5 and a control
Holding time *	36 hours for first use	36 hours for first use
Sampling Requirement *	Minimum of 3 samples	Minimum of 3 samples
Test Acceptability Criteria	≥80% survival of all control organisms.	≥80% survival of all control organisms.
	Average of 15 or more neonates per surviving control female.	Average dry weight per surviving organism in control must be ≥0.25mg.
	60% of surviving control females must produce 3 broods.	
Coefficient of Variation **	40% or less, unless significant effects are exhibited.	40% or less unless significant effects are exhibited.
Percent Minimum Significant Difference (PMSD range) for Sublethal Endpoint **	13 – 47	12 - 30

* 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 and the minimum number of effluent portions 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, and must meet the holding time between collection and first use of the sample. When possible, the effluent samples used for the toxicity tests shall be collected on separate 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 3 of this section.

**Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%, or a PMSD value greater than the higher value on the range provided.

a. Statistical Interpretation

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 the appropriate method manual listed in Part II or the most recent update thereof.

b. Dilution Water

1. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for;

- i. toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

- ii. toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

2. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria), 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:

- i. a synthetic dilution water control which fulfills the test acceptance requirements was run concurrently with the receiving water control;
- ii. the test indicating receiving water toxicity has been carried out to completion,
- iii. the permittee includes all test results indicating receiving water toxicity with the full report and information required; and
- iv. the synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

c. Samples and Composites

- 1. The permittee shall collect a minimum of three samples (flow-weighted composite if possible) from the outfall(s).
- 2. The permittee shall collect a second and third sample (composite samples if possible) for use during the 24-hour renewal of each dilution concentration for each test. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours for first use of the sample. 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. A holding time up to 72 hrs is allowed upon notification to EPA and NMED of the need for additional holding time.
- 3. The permittee must collect the composite samples such that the effluent samples are representative of the discharge duration, and of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

3. REPORTING

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this part in accordance with the Report Preparation Section of the most current publication of the method manual, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report and submit them 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 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. One set of biomonitoring data for each species is to be recorded on the DMR for each reporting period. Additional results are reported under the retest codes below.
- c. The permittee shall submit the results of each valid toxicity test on the subsequent monthly DMR for that reporting period 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.

Reporting Requirement	Parameter STORET CODE	
	<i>Ceriodaphnia dubia</i>	<i>Pimephales promelas</i>
Enter a "1" if the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, otherwise enter a "0".	TLP3B	TLP6C
Report the NOEC value for survival	TOP3B	TOP6C
Report the LOEC value for survival	TXP3B	TXP6C
Enter a "1" if the NOEC for growth or reproduction is less than the critical dilution, otherwise enter a "0".	TGP3B	TGP6C
Report the NOEC value for growth or reproduction	TPP3B	TPP6C
Report the LOEC value for growth	TYP3B	TYP6C
Report the highest (critical dilution or control) Coefficient of Variation	TQP3B	TQP6C
(If required) Retest 1 – Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	22418	22415
(If required) Retest 2- Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	22419	22416
(If required) Retest 3- Enter a "1" if the NOEC for survival, growth or reproduction is less than the critical dilution, otherwise enter "0".	51444	51443

4. MONITORING FREQUENCY REDUCTION

- a. The permittee may apply for a testing frequency reduction upon the successful completion of the first four consecutive quarters of testing for a test species, with no lethal or sub-lethal effects demonstrated at or below the critical dilution. If granted, the monitoring frequency for that test species may be reduced to not less than once per year for the less sensitive species (usually the vertebrate species) and not less than twice per year for the more sensitive test species (usually the invertebrate species).
- b. Certification - The permittee must certify in writing that no test failures have occurred and that all tests meet all test acceptability criteria above. In addition, the permittee must provide a list with each test performed including test initiation date, species, and NOECs. Upon review and acceptance of this information, the agency will issue a letter of confirmation of the monitoring frequency reduction. A copy of the letter will be forwarded to the agency's compliance section to update the permit reporting requirements.

- c. Failures - If any test demonstrates lethal or sub-lethal effects at or below the critical dilution at any time during the life of this permit, three monthly retests are required. If a frequency reduction had been granted, the monitoring frequency for the affected test species reverts to once per quarter until the permit is re-issued.
- d. This monitoring frequency reduction applies only until the expiration date of this permit, at which time the monitoring frequency for both test species reverts to once per quarter until the permit is re-issued.

5. PERSISTENT TOXICITY

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. Significant toxic effects are herein defined as a statistically significant difference at the 95% confidence level between the survival, growth or reproduction of the appropriate test organism in a specified effluent dilution and the control (0% effluent). If the initial WET test conducted fails, the permittee will conduct three retests. The purpose of retests 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 and/or sub-lethal effects to a test species at or below the critical dilution, the frequency of testing for this species is automatically increased to once per quarter with no option for frequency reduction.

a. Retest

The permittee shall conduct a total of three (3) additional tests for any species that demonstrates significant effects at or below the critical dilution. The three additional tests shall be conducted monthly during the next three consecutive months. 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 the reporting requirements previously outlined and available upon request from the Agency.

b. Requirement to Initiate a Toxicity Reduction Evaluation

If persistent lethality is demonstrated by failure of one or more retests, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements as specified in Part 6 of this section. If persistent sub-lethality is demonstrated by failure of two or more retests, the permittee shall initiate Toxicity Reduction Evaluation (TRE) requirements. The permittee shall notify EPA in writing within 5 days of notification of the failure of any retest, and the TRE initiation date will be the test completion date of the first failed retest for lethal TREs or second failed retest for sub-lethal TREs. A TRE may also be required due to a demonstration of intermittent effects at or below the critical dilution, or for failure to perform the required retests.

6. TOXICITY REDUCTION EVALUATION (TRE)

EPA Region 6 is currently addressing TREs as follows: A TRE is triggered following three sub-lethal test failures (a failure followed by two retest failures) or two test failures with lethal effects (a failure followed by one retest failure).

- a. Within ninety (90) days of confirming lethality and/or sub-lethality in the retests, the permittee shall submit a Toxicity Reduction Evaluation (TRE) Action Plan and Schedule for conducting a TRE to the EPA WET Coordinator at 6WQ-PO. The TRE Action Plan shall specify the approach and methodology to be used in performing the TRE. A TRE 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 TRE Action Plan shall lead to the successful elimination of effluent toxicity at the critical dilution and include the following:
1. Specific Activities. The plan shall detail the specific approach the permittee intends to utilize in conducting the TRE. The approach may include toxicity characterizations, a Toxicity Identification Evaluation (TIE) and confirmation activities, source evaluation, treatability studies, or alternative approaches. When the permittee conducts Toxicity Identification Evaluations to characterize the nature of the constituents causing toxicity, 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) 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.
 2. 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 toxicity was demonstrated within 24 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;
 1. Quality Assurance Plan (e.g., QA/QC implementation, corrective actions, etc.); and
 2. 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.

- c. The permittee shall submit a quarterly TRE Activities Report to the EPA WET Coordinator (6WQ-PO) in the months of January, April, July and October, containing information on toxicity reduction evaluation activities including:
1. Any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
 2. Any studies/evaluations and results on the treatability of the facility's effluent toxicity; and
 3. Any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant toxicity at the critical dilution. A copy of the TRE Activities Report shall also be submitted to the state agency.
 4. Any results and interpretation of any chemical specific analysis, and for any characterization, identification, and confirmation tests performed during the quarter.
 5. Any changes to the initial TRE plan and schedule that are believed necessary.
- d. Finalizing a TRE

The permittee shall submit (to EPA 6WQ-PO) a final report on TRE activities no later than twenty-eight (28) months from confirming toxicity 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 toxicity 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 TRE Activities shall also be submitted to the state agency.

A TRE may be stopped if there is no toxicity at the critical dilution for a period of 12 consecutive months (with at least monthly testing) following confirmation of toxicity in the retests. The permittee would submit a final report to EPA at that time.

- 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. WHOLE EFFLUENT TOXICITY TESTING (TEXAS 24-HOUR ACUTE LC50 FRESHWATER)

1. SCOPE AND METHODOLOGY

a. The provisions of this section shall apply individually and separately to the outfalls listed below. No samples or portions of samples from one outfall may be composited with samples or portions of samples from another outfall. The provisions of this section are in addition to other biomonitoring requirements in this permit.

APPLICABLE TO FINAL OUTFALL(S): 001

COMPOSITE SAMPLE TYPE: Defined at PART I

TEST SPECIES/METHODS: 40 CFR Part 136

Ceriodapnia dubia or Daphnia pulex acute static nonrenewal 24-hour toxicity test using EPA-821-R-02-012 or the latest 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.

Pimephales promelas acute static nonrenewal 24-hour toxicity test using EPA-821-R-02-012 or the latest 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.

24-HOUR ACUTE TEST SUBSTITUTIONS If any other tests conducted under biomonitoring requirements elsewhere in PART II of this permit include the 100% effluent concentration in the dilution series, the mean survival results at 24 hours from those tests, for each species, may be submitted to fulfill the requirements of this section. See Item 4.b of this section for acceptable test substitutions. The >50% survival in 100% effluent for 24-hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted for compliance with the minimum testing frequency.

- b. The permittee shall test the effluent for lethality in accordance with the provisions of this section. Such testing will determine if an effluent sample meets the Texas Surface Water Quality Standard listed at 30 TAC '307.6(e)(2)(B) of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- c. The permittee shall submit the results of these tests on the Discharge Monitoring Report (DMR) due in the month following the test.
- d. Five (5) dilutions in addition to an appropriate control (0% effluent) shall be used in the tests. These effluent concentrations shall be 34%, 46%, 61%, 81%, 100%
- e. 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.

2. PERSISTENT LETHALITY

a. If any toxicity test at the 100% effluent concentration demonstrates 50% or greater mortality, the permittee shall conduct two (2) additional tests (retests) for each species that demonstrates mortality and report these results as required in Item 4 of this section. The two additional retests shall be conducted monthly during the next two consecutive months. Five (5) dilutions in addition to an appropriate control (0% effluent) shall be used in the two (2) retests. If one of the retests indicates 50% or greater mortality at the 100% effluent concentration, the permittee shall notify the EPA in writing within five (5) days. If none of the retests indicates 50% or greater mortality at the 100% effluent concentration, the permittee shall continue testing at the original frequency.

b. Within thirty (30) days after submitting the original and retest results which demonstrate 50% or greater mortality at the 100% effluent concentration, the permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with the procedures stated Item 5 below and substituting the timetable given in Item 2.c, below.

The permittee shall continue biomonitoring quarterly (as a minimum) during the TRE, using the affected species, unless otherwise authorized by the permitting authority. All information related to the TRE shall be directed to the Environmental Protection Agency, Region 6 office, Toxicity Coordinator.

c. Within eighteen (18) months from the date of completion of the test confirming 50% or greater mortality at the 100% effluent concentration, the permittee shall submit a Final Report on Toxicity Reduction Activities detailing the specific actions and control mechanism(s) and necessary to achieve greater than 50% survival in 100% effluent for a period of 24 hours. The final report shall also contain a corrective action schedule for implementing the control measures outlined.

3. REQUIRED TOXICITY TESTING CONDITIONS

a. Control/Dilution Water

Control and/or dilution water used in the test shall normally consist of a standard, synthetic, moderately hard, reconstituted water of similar pH and alkalinity to the closest downstream perennial water. If the permittee is utilizing the results of a 48-hour acute test or 7-day chronic test to satisfy these 24-hour acute biomonitoring requirements in accordance with Item 1.a, the permittee may use receiving water as the control and dilution water if the control meets the requirements of Item 3.b.

b. Control Survival

If more than 10% of the test organisms in any control die within 24 hours, that test including the control and all effluent dilution(s) shall be repeated with all results from both tests reported as per Item 4 of this section.

c. Repeat Test

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and test acceptability criteria requirements defined in the test methods or in this permit are not satisfied. A repeat test shall be conducted within the required reporting period of any test determined to be invalid, in accordance with Item 3.b of this section.

d. Samples and Composites

GRAB samples are authorized for this test. The samples shall be collected at a point following the last treatment unit. One grab sample representative of normal operating flows will be collected from each outfall, and a discrete test will be run on each grab sample.

Samples shall be chilled to 4 degrees Centigrade during collection, shipping, and/or storage. The toxicity tests must be initiated within 36 hours after collection of the grab sample. The grab sample must be collected such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.

4. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation section of EPA-821-R-02-012 for every valid or

invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report and shall submit the information contained in any full report upon the specific request of the Agency.

b. The permittee shall report the following results of each toxicity test on the subsequent monthly DMR for that reporting period in accordance with PART III.D.4 of this permit:

i. *Ceriodaphnia dubia*

- Enter the following codes on the DMR for Parameter No. TIE3D:
- "0" if mean survival at 24 hrs. is greater than 50% in 100% effluent;
- "1" if the mean survival at 24 hrs. is less than or equal to 50% in 100% effluent.

In cases of test substitution (See 24 HOUR ACUTE TEST SUBSTITUTIONS, Item 1.a, above), mean survival results in 100% effluent from the 48 hr. *Daphnia pulex* or *Ceriodaphnia dubia* acute test, determined at 24 hrs., shall be reported on the DMR under Parameter No. TIE3D.

ii. *Pimephales promelas*

- Enter the following codes on the DMR for Parameter No. TIE6C:
- "0" if mean survival at 24 hrs. is greater than 50% in 100% effluent;
- "1" if the mean survival at 24 hrs. is less than or equal to 50% in 100% effluent.

In cases of test substitution (See 24 HOUR ACUTE TEST SUBSTITUTIONS, Item 1.a, above), mean survival results in 100% effluent from the 48 hr *Pimephales promelas* acute test, determined at 24 hrs., shall be reported on the DMR under Parameter No. TIE6C.

iii. Enter the following codes for retests only:

- For retest number 1, Parameter 22415, enter "0" if mean survival at 24 hrs. is greater than 50% in 100% effluent dilution; or "1" if the mean survival at 24 hrs. is less than or equal to 50% in 100% effluent.
- For retest number 2, Parameter 22416, enter "0" if mean survival at 24 hrs. is greater than 50% in 100% effluent dilution; or "1" if the mean survival at 24 hrs. is less than or equal to 50% in 100% effluent.

5. TEXAS 24- HOUR LC-50 TOXICITY REDUCTION EVALUATION (TRE)

a. The requirements for carrying out a TRE can be found in the previous section for chronic WET testing, Section 6 of this permit.

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
Chlorodibromomethane	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	MQL µg/l	POLLUTANTS	MQL 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
Alpha-BHC	0.05
Beta-BHC	0.05
Gamma-BHC	0.05
Chlordane	0.20
4,4'-DDT and derivatives	0.02
Dieldrin	0.02
Alpha-Endosulfan	0.01
Beta-Endosulfan	0.02
Endosulfan sulfate	0.02
Endrin	0.02
Endrin Aldehyde	0.10
Heptachlor	0.01
Heptachlor Epoxide	0.01
PCBs	0.20
Toxaphene	0.30

(MQL's Revised November 1, 2007)

Footnotes:

*1. Default MQL 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 MQL shall be 0.0005.

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