# DRAFT GENERAL PERMIT FOR DISCHARGES FROM THE OIL AND GAS EXTRACTION POINT SOURCE CATEGORY

## STRIPPER SUBCATEGORY IN TEXAS

(Permit No. TXG350000)

U.S. Environmental Protection Agency Region 6 1445 Ross Ave. Dallas, TX 75202

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

In compliance with the provisions of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq: the "Act"), this permit regulates discharges from existing and new oil and gas wells under the Stripper Subcategory (40 CFR 435, Subpart F) to waters of Texas. The discharges are regulated in accordance with effluent limitations and other conditions set forth in Parts I and II of this permit.

In order for discharges to be authorized by this permit, operators must submit either a written or an electronic notification to the Regional Administrator that they intend to be covered (See Part I.A.2). Operators who fail to notify the Regional Administrator of intent to be covered are not authorized to discharge under this general permit.

Facilities which may adversely affect properties listed or eligible for listing in the National Register of Historic Places are not authorized to discharge under this permit, unless such effects have been addressed in a written agreement with the State Historic Preservation Officer (SHPO).

This permit replaces the section of Stripper Subcategory in previously issued General Permit (TXG330000) and shall become effective at midnight, Central Time on

This permit and the authorization to discharge shall expire at midnight, Central Time, xxxx.

Signed this date:

William K. Honker, P.E. Director Water Division EPA Region 6

## PART I.

## SECTION A. PERMIT APPLICABILITY AND COVERAGE CONDITIONS

## 1. DISCHARGES COVERED

This permit authorizes discharges, including produced water, from Stripper Subcategory of the Oil and Gas Extraction Point Source Category (40 CFR 435, Subpart F) wells to waters of the U.S. in Texas. Stripper wells are defined as oil wells that produce ten barrels or less per day.

## 2. NOTICE OF INTENT (NOI) TO BE COVERED

Operators desiring authorization to discharge under this general NPDES permit must submit a Notice of Intent (NOI) to be covered. Each facility is required to file an NOI. A facility means any structure used for oil or gas extraction purpose (i.e., production activity) and meets NPDES "point source" or any structure or activity that is subject to regulation under the NPDES program. Facilities which do not discharge are not required to file an NOI for coverage and consequently are not covered by this permit.

"Operator" - for the purpose of this permit and only in the context of production activities regulated by this permit, means any party that meets any of the following criteria:

- a. The party possesses the lease for the block where the production activity will take place and has operational control over production activities, including the ability to hire or fire contactors who conduct the actual work that results in discharges regulated by the permit; or
- b. The party has day-to-day operational control of those activities at a production project which are necessary to ensure compliance with permit.

An NOI shall include all discharges from the facility. EPA may deny an NOI within 45 days after the filing. All NOIs shall include, but not limited to, the following information:

- a) the legal names and contact information of the lessee or designated operator registered with the state of Texas;
- b) the legal name and contact information of the operator who files the eNOI;
- c) the permit number (if any) previously assigned to the operator;
- d) the lease (including state tract) code and number assigned by the State;
- e) the name and/or identification and location including geographic coordinates (latitude and longitude) of each oil/water separation facility operated by the operator;
- f) the types of discharges, estimated volumes, associated sources (facilities or wells) under the control of the operator, and the name of receiving water;
- g) geographic coordinates of well locations; and

h) whether or not the NOI is being submitted to transfer coverage due to a merger or acquisition and if so, the identification of the affected parties, timing of the transfer of operational control, and confirmation that notice had been submitted to EPA;

For operators that determine they have a discharge to an impaired water (e.g., via http://www.epa.gov/waters/ir/index.html), the permit requires that the permittee provide the following supplemental information on the NOI:

- i) a list of all impaired waters in the lease block for which the NOI is submitted;
- j) the pollutant(s) for which the water is impaired;

k) whether a TMDL has been approved or established by EPA for the pollutant(s) thought to be the cause of the impairment; and

1) if so, the title or reference of the TMDL document.

For facilities covered under the 2012 general permit (TXG330000), a new NOI must be submitted within 60 days of the effective date of this permit for continued coverage under this permit. For leases obtained subsequent to the effective date of this permit, or for which the operator did not have coverage under the 2012 general permit TXG330000, the NOI must be submitted prior to the commencement of any discharge.

If an owner or operator who was covered under the 2012 general permit TXG330000 does not file the NOI within 90 days from the permit effective date, that owner or operator is not authorized to discharge under this new permit and is required to file a new NOI before discharges will be authorized.

After submission of a complete NOI, operators requesting coverage are authorized to discharge under this general permit. However, EPA has up to 45 days to deny coverage for new NOIs.

Should this permit not be reissued prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedure Act and remain in force and effect for discharges that were covered prior to expiration. Permittees that are granted permit coverage prior to the expiration date remain automatically covered by this permit until the earliest of:

- Submittal of a Notice of Termination;
- Issuance or denial of an individual permit for the discharges; or
- A final permit decision by EPA not to reissue this general permit, at which time EPA will identify a reasonable time period for covered dischargers to seek coverage under an alternative general permit or an individual permit. Coverage under this permit will terminate at the end of this time period.

During the any administrative continuance period, existing coverage may be transferred in accordance with item 4(b) below, but new discharge that were not previously covered by the administratively continued permit cannot be authorized until a new permit is issued.

## 3. TERMINATION OF PERMIT COVERAGE BY A PERMITTEE

Permittees shall notify EPA, by submission of a Notice of Termination (NOT), within 60 days after the permanent termination of permit coverage for the facility/well.

## 4. TRANSFERS DUE TO MERGER AND/OR ACQUISITION

Owner/operators who are involved in merger or acquisition shall transfer coverage in the following manner during the term of this permit, including any administrative continuance should the permit not be reissued prior to expiration.

- a) During the initial term of permit: New operator shall submit an NOI prior to taking operational control and old operator shall submit an NOT within 60 days of terminating operational control.
- b) During any 'administratively continued" term of the permit following the indicated expiration date: New operator shall submit an NOI to transfer coverage at least 30 days prior to taking operational control and old operator shall submit an NOT within 60 days of terminating operational control. The new operator shall submit a written agreement between the new and old permittees concerning the date of the transfer of permit responsibility, coverage, and liability between themselves.

## 5. PAPER REPORTING

Paper NOIs, NOTs, transfer documentation and any subsequent reports shall be sent to the following address:

U.S. Environmental Protection Agency Region 6 Water Enforcement Branch ATTN: Ms. Sharon Angove (6EN-WC) 1445 Ross Avenue Dallas, TX 75202

## 6. ELECTRONIC FILING AND REPORTING

The operator is required to file an electronic NOI when the electronic filing system becomes available on-line. Operators are required to file paper NOIs before the electronic filing system is available on-line. Once an electronic NOI form becomes available on-line, EPA will notify existing operators and operators must file an electronic NOI to be covered without being interrupted. EPA will provide instructions and training to assist operators to comply with the electronic filing requirement when the electronic filing become available on-line.

Part II.D. of this permit specifies electronic Discharge Monitoring Report requirements.

### SECTION B. GENERAL PERMIT LIMITS

Permittees shall not discharge nor shall they cause or allow the discharge of pollutants regulated under this permit except in compliance with its limitations and terms. Permittees of facilities generating pollutants regulated under this permit shall take reasonable positive steps to assure pollutants are not unlawfully discharged to waters of the United States by third parties and shall maintain documentation of those steps for no less than three years.

(Note: EPA published the final rule "Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting" on Federal Register, Vol. 79, No. 160, August 29, 2014. The permittee may use test methods which are sensitive enough to detect the minimum quantification levels (MQLs) as provided in Appendix A of the permit Part I to demonstrate "sufficiently sensitive" when monitoring of pollutants listed in the MQLs Table is performed.)

Authorized Discharges and Effluent limitations of this permit include (See also the limitations summary in Table 1):

## 1. PRODUCED WATER

(A) Produced water from Stripper Subcategory wells located east of the 98<sup>th</sup> meridian is authorized to be discharged if it originates from the Carrizo/Wilcox, Reklaw or Bartosh formations in Texas (Note: the final permit may expand the permit coverage to all stripper wells in Texas) and its total dissolved solids concentration does not exceed 3000 mg/l. The following limits and conditions must be met.

(1) Monitor flow once per month and report an estimate of the flow in MGD (million gallons per day).

(2) Monitor total dissolved solids once per year and report as the daily maximum (mg/l). The sample type may be either grab, or a 24-hour composite consisting of the arithmetic average of the results of 4 grab samples taken over a 24-hour period. Discharges of produced water are not authorized if the daily maximum total dissolved solids exceed 3000 mg/l.

(3) Oil and grease shall not exceed 25 mg/l monthly average and 35 mg/l daily maximum. Monitor oil and grease once per month by grab sample.

(4) No Discharge of free oil, as determined by the presence of a film or sheen upon or a discoloration of the surface of the receiving water (visual sheen). Visual inspection once per month.

(5) An acute toxicity test of 100% effluent shall be performed once per year as described below. Failure to meet 50% or more organism survival in 100% effluent, shall be a violation of this permit limit.

For Existing Facilities Discharging to Freshwaters: The existing stripper well a. facility must conduct the first 24-hour acute toxicity test (see Section C below for details) within 60 days from the effective date of permit coverage for each existing produced water discharge outfall. If a facility collects produced waters from varied wells and disposes the combined waste at one outfall, only one toxicity test is required. If an existing facility which discharges to freshwater waterbodies fails the acute toxicity test as defined in Section C-2, then monthly toxicity tests must be conducted until the facility passes three consecutive months. If the facility fails two tests in any three month period, the facility shall initiate a Toxicity Reduction Evaluation (TRE) within sixty (60) days of the second failure; to identify, confirm, and reduce the source of the toxicity. An initial action plan specifying the approach and methodology to be used in performing the TRE shall be submitted to the EPA Region 6 WET Coordinator (6WQ-PO) at 1445 Ross Avenue, Suite 1200. Dallas, TX 75202. The action plan shall be initiated within thirty (30) days of the plan submittal and quarterly TRE Activity Reports shall be submitted to EPA. The facility shall submit a Final Report on TRE Activities no later than twenty eight (28) months from the second failure. Discharges of produced water may not be authorized if the facility does not identify and reduce the toxicity within this time frame.

b. For New Facilities Discharging to Freshwaters: New stripper wells must pass the 24-hour toxicity test (see Section C-2 below for details) prior to discharging produced waters. For the purposes of this limitation, a new stripper well is one that either did not previously meet the definition of a stripper well or has not discharged produced water prior to July 31, 2012. If new facility which discharges to freshwater waterbodies fails the acute toxicity test as defined in Section C, then monthly toxicity tests must be conducted until the facility passes three consecutive months. If the facility fails two tests in any three month period, the facility shall initiate a Toxicity Reduction Evaluation (TRE) within sixty (60) days of the second failure; to identify, confirm, and reduce the source of the toxicity. An initial action plan specifying the approach and methodology to be used in performing the TRE shall be submitted to the EPA Region 6 WET Coordinator (6WQ-PO) at 1445 Ross Avenue, Suite 1200. Dallas, TX 75202. The action plan shall be initiated within thirty (30) days of the plan submittal and quarterly TRE Activity Reports shall be submitted to EPA. The facility shall submit a Final Report on TRE Activities no later than twenty eight (28) months from the second failure. Discharges of produced water may not be authorized if the facility does not identify and reduce the toxicity within this time frame.

c. The sample type for 24-hour acute toxicity tests may be either grab, or a 24-hour composite consisting of four grab samples taken over a 24-hour period.

d. For produced water discharged to impaired waters, additional conditions are established below.

(1) For authorized discharges to a waterbody that is impaired for zinc, the produced water discharges must also be monitored once per month for total zinc. The sample type for above tests may be either grab, or a 24-hour composite

consisting of 4 grab samples taken over a 24-hour period. The analytical method used for zinc analyses must be sufficiently sensitive to detect  $20 \mu g/l$  or below.

(2) For authorized discharges to a waterbody that is impaired for mercury, the produced water discharges must also be monitored once per month for total mercury. The sample type for above tests may be either grab, or a 24-hour composite consisting of 4 grab samples taken over a 24-hour period. The analytical method used for mercury analyses must be sufficiently sensitive to detect 0.005  $\mu$ g/l or below.

(3) For authorized discharges to a waterbody that is impaired for metals other than mercury or zinc, the produced water discharges must also be monitored once per month for that (those) metal(s). The sample type for above tests may be either grab, or a 24-hour composite consisting of 4 grab samples taken over a 24-hour period.

(4) New stripper wells are prohibited from discharging produced waters to a waterbody that is impaired for dissolved oxygen. For the purposes of this limitation, a new stripper well is one that either did not previously meet the definition of a stripper well or has not discharged produced water prior to July 31, 2012.

(B) Produced water discharges that do not meet the requirements established under this subsection B.3 are violations of the permit.

2. WELL FIELD DRAINAGE - No free oil as determined by the static sheen test. Monitoring shall be once per day.

3. MISCELLANEOUS DISCHARGES – No chemicals. No free oil as determined by the static sheen test. Monitoring shall be once per day.

## 4. OTHER DISCHARGE CONDITIONS

Halogenated Phenol Compounds - There shall be no discharge of Halogenated Phenol Compounds.

Rubbish, Trash and Other Refuse - The discharge of any solid material not authorized in the permit (as described above) is prohibited.

Floating Solids or Visible Foam - There shall be no discharge of floating solids or visible foam.

Surfactants, Dispersants and Detergents - The discharge of surfactants, dispersants, and detergents used to wash working areas shall be minimized except as necessary to comply with applicable State and Federal safety requirements.

## 5. TABLE - SUMMARY OF EFFLUENT LIMITATIONS, PROHIBITIONS AND MONITORING REQUIREMENTS FOR STRIPPER SUBCATEGORY

| Discharge   | Regulated &<br>Monitored<br>Discharged<br>Parameter                                  | Discharge<br>Limitation/<br>Prohibition   | Measurement<br>Frequency       | Sample<br>Type/Method                                    |
|---|--|---|--------------------------------|--|
| Drilling Fluid  |  | No Discharge  |                                |  |
| Drill Cuttings  |  | No Discharge  |                                |  |
| Produced Water<br>(*1)  | Oil and grease   | 35 mg/l daily max.,<br>25 mg/l monthly<br>average   | Once/month                     | Grab   |
|   | Free Oil   | No Free Oil   | Once/month                     | Visual Sheen   |
|   | Total Dissolved Solids   | Monitor & Report.<br>No discharge if TDS ><br>3000 mg/l                                     | Once/year                      | Grab or 24-hr<br>composite                               |
|   | Acute Toxicity   | 24-hour LC50<br>Freshwater Limit at<br>100% effluent for<br>discharges to inland<br>waters. | Once/year                      | Grab or 24-hr<br>composite                               |
|   | Flow   | Report  | Once/month                     | Estimate   |
|   | Total Zinc (Only for<br>Discharges to Zinc<br>Impaired Waterbodies<br>)              | Report  | Once/month                     | Grab or 24-hr<br>composite                               |
|   | Total Mercury (Only<br>for discharges to<br>mercury impaired<br>waterbodies )        | Report  | Once/month                     | Grab or 24-hr<br>composite                               |
|   | Total Metal (Only for<br>discharges to specified<br>metals impaired<br>waterbodies ) | Report  | Once/month                     | Grab or 24-hr<br>composite                               |
|   | Only for Discharges to<br>dissolved oxygen<br>impaired waterbodies                   | No Discharge for new stripper wells   | Once/month                     | Grab or 24-hr<br>composite                               |
| Well Field Drainage   | Free Oil   | No Free Oil – report<br>number of days sheen<br>observed                                    | Once/day(*3)                   | Visual Sheen   |
| Formation Test Fluid  |  | No Discharge  |                                |  |
| Well treatment fluids,<br>completion fluids, and<br>workover fluids |  | No Discharge  |                                |  |
| Domestic Waste  |  | No discharge  |                                |  |
| Sanitary Waste  |  | No Discharge  |                                |  |
| Miscellaneous<br>discharges   | Free Oil   | No Free Oil   | Once/day when discharge occurs | Visual Sheen– report<br>number of days sheen<br>observed |
|   | Chemicals  | No Chemical Additives   |                                |  |

## 6. REQUIRING AN INDIVIDUAL PERMIT OR ADDITIONAL LIMITATIONS

A permittee who discharges to impaired waters may be informed if coverage under an individual permit is required in accordance with new information available.

# SECTION C. 24-HOUR ACUTE TOXICITY TESTING REQUIREMENTS (24-HOUR ACUTE LC-50 FRESHWATER LIMITS)

The approved test methods for permit compliance are identified in 40 CFR Part 136.

## SCOPE, FREQUENCY AND METHODOLOGY

a) The permittee shall utilize the <u>water flea (*Ceriodaphnia dubia*)</u> acute static nonrenewal 24-hour toxicity test 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 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 permittee shall utilize the <u>fathead minnow (*Pimephales promelas*</u>) acute static nonrenewal 24-hour definitive toxicity test 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 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.

c) If any other acute test conducted under biomonitoring requirements elsewhere in this permit includes the 100% effluent concentration in the dilution series, the mean survival results at 24 hours from that test, for each species, may be submitted to fulfill the requirements of this section. See Reporting of this section for acceptable test substitutions. The >50% survival in 100% effluent for a 24 hour period standard applies to all tests utilizing a 100% effluent dilution, regardless of whether the results are submitted for compliance with the minimum testing frequency.

d) 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.

e) The permittee shall submit the results of each test on the Discharge Monitoring Report (DMR) due at the end of the reporting period.

f) In addition to an appropriate control (0% effluent), and a 100% effluent concentration, dilutions of 6%, 13%, 25%, and 50% shall be used in the toxicity tests.

g) This permit may be reopened to require chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

## CONTROL/DILUTION WATER

Control and/or dilution water used in the test shall normally consist of a standard, synthetic, reconstituted water. If the permittee is utilizing the results of a 48-hour acute test to satisfy these 24-hour acute biomonitoring requirements in accordance with Item c above, the permittee may use receiving water as the control and dilution water if the control meets the requirements of subsection Control Survival below.

## 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 <u>both</u> tests reported as per subsection Reporting below.

### Repeat Test

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. A repeat test shall be conducted within the required reporting period of any test determined to be invalid, in accordance with this section.

## Samples

The samples shall be collected at a point following the last treatment unit.

A grab sample representative of normal operating flows will be collected from each outfall, and a discrete test will be run on each 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 sample. The 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.

### 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, or the most recent update thereof: 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 II.D.4 of this permit. A copy of the full report for any test failure must be submitted to Environmental Protection Agency (EPA) within 30 (thirty) days of receipt from the lab that performed the test. The permittee shall submit the information contained in any full report upon the specific request of the EPA.

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 II.D.4 of this permit.

The LC50 for each WET test must be reported under Parameter No.51710 (for *Ceriodaphnia dubia*), and No.51714 (for *Pimephales promelas*). Additionally, the following shall be reported:

i. <u>Ceriodaphnia dubia</u> (Water flea)

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.

ii. <u>*Pimephales promelas*</u> (Fathead minnow)

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.

## PERSISTENT MORTALITY

The requirements of this Part apply only when a toxicity test demonstrates significant lethality, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 24-hours.

a) The permittee shall conduct monthly toxicity tests for each species that demonstrates significant lethality in a test. The monthly test must be conducted until the permittee passes three consecutive months. The results for each WET test must be independently reported in the DMR as instructed by the Reporting requirements under C-1 or C-2 of this permit.

b). If the facility fails two tests in any three month period, the facility shall initiate a Toxicity Reduction Evaluation (TRE) within sixty (60) days of the second failure.

### TOXICITY REDUCTION EVALUATION

a) Within forty five (45) days of second failure, the permittee shall develop a General Outline for initiating a Toxicity Reduction Evaluation (TRE). The outline shall include, but not be limited to, a description of project personnel, a schedule for obtaining consultants (if needed), a discussion of influent and effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.

b) Within sixty (60) days of the second failure, the permittee shall submit to the EPA Region 6 WET Coordinator (6WQ-PO) at 1445 Ross Avenue, Suite 1200. Dallas, TX 75202 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 above. As a minimum, the TRE Action Plan shall include the following:

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

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

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

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

c) Within 30 days of submittal of the TRE Action Plan and Schedule, the permittee shall implement the TRE with due diligence.

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

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

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

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

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

5. any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and

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

e) The requirements of a full TRE with a schedule and quarterly reporting does not apply if the source is identified and immediately mitigated. This exemption also applies to toxicity testing failure caused by operational errors, upsets, spills, sampling errors, or 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 technology or housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment. A one-time report indicating the source of toxicity and corrective action is sufficient.

f) The permittee shall complete the TRE and submit a Final Report on the TRE Activities no later than eighteen (18) months from the date of the second failure. The permittee may petition the 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 TRE and must prove that circumstances beyond their control stalled the TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity. 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 Railroad Commission of Texas.

g) If the discharge still fails the Toxicity LC-50 Freshwater Limit after 3 years from the effective date of the permit, an individual permit may be issued to modify the biomonitoring requirements where necessary, to require a compliance schedule for implementation of corrective

actions, to specify an additional WET limit, to specify a BMP, and/or to specify a chemical-specific limit.

## **APPENDIX A**

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  | POLLUTANTS | MQL  |
|------------|------|------------|------|
|            | μg/l |            | μg/l |

|          | METALS, RADIOACTIVIT | <b>IVITY, CYANIDE and CHLORINE</b> |  |
|----------|----------------------|------------------------------------|--|
| Aluminum | 2.5                  | Molybdenum                         |  |
| Antimony | 60                   | Nickel                             |  |

| Aluminum   | 2.5    | Molybdenum                     | 10  |
|------------|--------|--------------------------------|-----|
| Antimony   | 60     | Nickel                         | 0.5 |
| Arsenic    | 0.5    | Selenium                       | 5   |
| Barium     | 100    | Silver                         | 0.5 |
| Beryllium  | 0.5    | Thalllium                      | 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

0.00001

2,3,7,8-TCDD

## **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 |                            |    |

| MQL<br>µg/l      | POLLUTANTS  | MQL<br>µg/l  |
|------------------|---|--|
| ACID COMPO       | UNDS  |  |
| 10               | 2,4-Dinitrophenol   | 50   |
| 10               | Pentachlorophenol   | 5  |
| 10               | Phenol  | 10   |
| 50               | 2,4,6-Trichlorophenol   | 10   |
| <b>BASE/NEUT</b> | <b>`RAL</b>   |  |
| 10               | Dimethyl Phthalate  | 10   |
| 10               | Di-n-Butyl Phthalate  | 10   |
| 50               | 2,4-Dinitrotoluene  | 10   |
| 5                | 1,2-Diphenylhydrazine   | 20   |
| 5                | Fluoranthene  | 10   |
| 10               | Fluorene  | 10   |
| 5                | Hexachlorobenzene   | 5  |
| 10               | Hexachlorobutadiene   | 10   |
| 10               | Hexachlorocyclopentadiene   | 10   |
| 10               | Hexachloroethane  | 20   |
| 10               | Indeno(1,2,3-cd)Pyrene  | 5  |
| 10               | Isophorone  | 10   |
| 5                | Nitrobenzene  | 10   |
| 5                | n-Nitrosodimethylamine  | 50   |
| 10               | n-Nitrosodi-n-Propylamine   | 20   |
| 10               | n-Nitrosodiphenylamine  | 20   |
| 10               | Pyrene  | 10   |
| 5                | 1,2,4-Trichlorobenzene  | 10   |
| 10               |   |  |
|                  | $\begin{array}{c} \mathbf{MQL}\\ \mathbf{\mu g/l}\\ \mathbf{ACID} \ \mathbf{COMPO'}\\ 10\\ 10\\ 10\\ 50\\ \mathbf{BASE/NEUT}\\ 10\\ 10\\ 5\\ 5\\ 5\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 5\\ 5\\ 5\\ 10\\ 10\\ 10\\ 10\\ 5\\ 5\\ 10\\ 10\\ 10\\ 5\\ 5\\ 10\\ 10\\ 10\\ 5\\ 5\\ 10\\ 10\\ 10\\ 5\\ 5\\ 10\\ 10\\ 10\\ 5\\ 10\\ 10\\ 10\\ 5\\ 10\\ 10\\ 10\\ 10\\ 5\\ 10\\ 10\\ 10\\ 10\\ 5\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10$ | MQLPOLLUTANTS $\mu g / l$ POLLUTANTSACID COMPOUNDS10102,4-Dinitrophenol10Pentachlorophenol10Phenol502,4,6-Trichlorophenol <b>BASE/NEUTRAL</b> 010Dinethyl Phthalate10Din-Butyl Phthalate102,4-Dinitrotoluene51,2-Diphenylhydrazine5Fluoranthene10Fluorene5Hexachlorobenzene10Hexachlorocyclopentadiene10Hexachloroethane10Indeno(1,2,3-cd)Pyrene10Isophorone5Nitrobenzene5n-Nitrosodimethylamine10n-Nitrosodimethylamine10Pyrene51,2,4-Trichlorobenzene10Pyrene51,2,4-Trichlorobenzene |

# 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  |
|                          |      |                    |      |

(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.