



REGION 6
1201 ELM STREET, Suite 500
DALLAS, TEXAS 75270

NPDES Permit No TX0067687

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"),

XTO Energy, Inc.
P.O. Box 2789
Kilgore, TX 75663

is authorized to discharge from a facility located at FM 1795 Street, in Wood County, TX to Rogers Creek, thence to the Sabine River, Segment No. 0506 of the Sabine River Basin from approximately:

Outfall 001: Latitude 32° 36' 25" N and Longitude 95° 11' 54" W

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

This permit supersedes and replaces NPDES Permit No. TX0067687 with an effective date of December 1, 2014.

This permit prepared by Quang Nguyen, Environmental Engineer, Permitting Section (6WQ-PE) shall become effective on

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

Issued on

Charles W. Maguire
Director
Water Division (6WQ)

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

BAT	Best Available Technology Economically Achievable
BOD5	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
F&WS	United States Fish and Wildlife Service
GPD	Gallon per day
IP	Procedures to Implement the Texas Surface Water Quality Standards
µg/l	Micrograms per liter (one part per billion)
mg/l	Milligrams per liter (one part per million)
MMCFD	Million cubic feet per day
MGD	Million gallons per day
MSGP	Multi-Sector General Permit
NPDES	National Pollutant Discharge Elimination System
MQL	Minimum quantification level
O&G	Oil and grease
RRC	Railroad Commission of Texas
RP	Reasonable potential
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
TDS	Total dissolved solids
TMDL	Total maximum daily load
TOC	Total Organic Carbon
TRC	Total residual chlorine
TSS	Total suspended solids
TSWQS	Texas Surface Water Quality Standards
WET	Whole effluent toxicity
WQMP	Water Quality Management Plan
WQS	Water Quality Standard

PART I – REQUIREMENTS FOR NPDES PERMITS**A. LIMITATIONS AND MONITORING REQUIREMENTS****1. OUTFALL 001 (0.84 MGD) - FINAL Effluent Limits**

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated industrial wastewater, including non-contact cooling water and cooling tower blowdown from Outfall 001. Discharge of stormwater runoff from this outfall is prohibited. Such discharges shall be limited and monitored by the permittee and reported as specified below:

POLLUTANT	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	6.0 s.u.	8.5 s.u.	2/month	Instantaneous Grab (*3)

POLLUTANT (*1)	MONTHLY AVG.	DAILY MAX.	MONTHLY AVG.	DAILY MAX.	MEASUREMENT FREQUENCY (*2)	SAMPLE TYPE
Flow	Report MGD	Report MGD	***	***	Daily	Totalized Meter
BOD	140.2 lbs/day	210.3 lbs/day	20 mg/l	30 mg/l	1/month	3-hour Composite
TSS	210.3 lbs/day	315.4 lbs/day	30 mg/l	45 mg/l	1/month	3-hour Composite
TRC	N/A	N/A	N/A	0.011 mg/l	2/month	Instantaneous Grab (*3)
Copper, total	0.137 lbs/day	0.29 lbs/day	0.0195 mg/l	0.0413 mg/l	2/month	3-hour Composite
Mercury, total	Report	Report	Report	Report	Quarterly	3-hour Composite

WET Limits (7-day Chronic Renewal) (*4)	VALUE	Frequency	Type
Ceriodaphnia dubia	96%	Quarterly	24-hr Composite
Pimephales promelas	96%	Quarterly	24-hr Composite

Footnotes:

*1 See **Appendix A of Part II** of the permit for minimum quantification limits.

*2 For any reporting period, samples shall be taken at least 10 days apart, except daily or weekly basis.

*3 For instantaneous grab, sample shall be analyzed within 15 minutes of collection.

*4 Compliance with the limit begins on the effective date of this permit. See Part II of the permit for WET testing requirements for additional WET monitoring and reporting conditions.

2. 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; related residue will not cause toxicity to man, aquatic life, or terrestrial life.

3. 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. The sample point(s) shall be clearly marked by the facility if it is not at the final outfall location. There shall be no flow from any source into the piping system after the sample point and prior to the final outfalls.

B. SCHEDULES OF COMPLIANCE

None

C. MONITORING AND REPORTING

- 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 a waiver, please contact: U.S. EPA-Region 6, Water Enforcement Branch, (214) 665-7179. 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, 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.
- Reporting periods shall end on the last day of the months March, June, September, and December.
- 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.
- 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.
- 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.
- 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.
- 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.
- All reports shall be sent both to EPA and the Texas Railroad Commission at the addresses shown in Part III of the permit.

D. WATER TREATMENT CHEMICAL PROHIBITION

Products containing chromium and zinc will be prohibited from use as additives to raw water from wells.

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

The permittee 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 approved methods are not sufficiently sensitive to the limits, the most sufficiently sensitive methods must be used.

For pollutants listed on Appendix A of Part II with MQL's, analyses may 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, may 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) 463-6788, within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

Copper

C. PERMIT MODIFICATION AND 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 40 CFR 122.44 (d). Modification of the permit is subject to the provisions of 40 CFR 124.5.

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.

D. WHOLE EFFLUENT TOXICITY LIMITS (7-DAY CHRONIC NOEC FRESHWATER)

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 (%)	96%
EFFLUENT DILUTION SERIES (%)	30%, 41%, 54%, 72% and 96%
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)
SAMPLE 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 chemical specific effluent limits, additional testing, a Toxicity Reduction Evaluation, and/or other appropriate actions to address toxicity.
- d. The conditions of this item are effective beginning with the effective date of the WET limit. When the effluent fails the lethal or sub-lethal endpoint at or below the critical dilution, the permittee shall be considered in violation of this permit limit and the frequency for the affected species will increase to monthly until compliance with the No Observed Effect Concentration (NOEC) effluent limitation is demonstrated for a period of three consecutive months, at which time the permittee may return to the testing frequency stated in PART I of this permit. The purpose of the increased frequency for WET testing after a violation 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.

1. 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:

- The toxicity test control (0% effluent) must have survival equal to or greater than 80%.
- The mean number of *Ceriodaphnia dubia* neonates produced per surviving female in the control (0% effluent) must be 15 or more.
- 60% of the surviving control females must produce three broods.
- The mean dry weight of surviving Fathead minnow larvae at the end of the 7 days in the control (0% effluent) must be 0.25 mg per larva or greater.
- The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: the young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test.
- 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 young of surviving females in the *Ceriodaphnia dubia* reproduction test; the growth and survival endpoints of the Fathead minnow test.
- A PMSD range of 13 - 47 for *Ceriodaphnia dubia* reproduction;
- A PMSD range of 12 - 30 for Fathead minnow 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 *Ceriodaphnia dubia* survival test, the statistical analyses used to determine if there is a significant difference between the control and the critical dilution shall be Fisher's Exact Test as described in EPA/821/R-02-013 or the most recent update thereof.
- For the *Ceriodaphnia dubia* reproduction test and the Fathead 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-02-013 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

- 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;
 - toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and
 - toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.
- If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
 - a synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control;
 - the test indicating receiving water toxicity has been carried out to completion (i.e., 7 days);
 - the permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and
 - 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.

d. Samples and Composites

- The permittee shall collect a minimum of three flow-weighted composite samples from the outfall(s) listed at Item 1.a above.
- 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.
- 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.

- 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.

4. REPORTING

- 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.
- A valid test for each species must be reported during each reporting period specified in PART I of this permit. One set of biomonitoring data for each species is to be recorded on the DMR for each reporting period.
- The permittee shall submit the results of each valid toxicity test on the DMR for that reporting period in accordance with PART I of this permit, as follows below. Any WET test conducted outside of the stipulated frequency in Part I (results of a testing frequency increase) shall be reported under Unscheduled Events for the COMPLIANCE CODE, in the DMR. Only results of valid tests are to be reported.

Reporting Requirement	Parameter STORET CODE	
	Ceriodaphnia dubia	Pimephales promelas
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
Report the lowest NOEC value (survival, reproduction, or growth)	51710	51714
COMPLIANCE CODE		