

Texas Commission on Environmental Quality

INTEROFFICE MEMORANDUM

To: Office of Chief Clerk

DATE: June 7, 2023

From: Kathy Humphreys
Staff Attorney
Environmental Law Division

Subject: Backup Documents Filed for Consideration of Hearing Requests at
Agenda

Applicant:	City of Ennis
Proposed Permit No.	WQ0010443002
Program:	Water
Docket No.:	TCEQ Docket No. 2023-0557-MWD

Enclosed please find a copy of the following documents for inclusion in the background material for this permit application:

- Fact sheet and ED's preliminary decision
- Draft permit
- Compliance history report

FACT SHEET AND EXECUTIVE DIRECTOR'S PRELIMINARY DECISION

For draft Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0010443002, EPA I.D. No. TX0047261, to discharge to water in the state.

Issuing Office: Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Applicant: City of Ennis
107 N Sherman Street
Ennis, Texas 75119

Prepared By: Gordon R. Cooper
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Wastewater Permitting Section (MC 148)
Water Quality Division
(512) 239-1963

Date: June 15, 2022

Permit Action: Major Amendment

1. EXECUTIVE DIRECTOR RECOMMENDATION

The Executive Director has made a preliminary decision that this permit, if issued, meets all statutory and regulatory requirements. The draft permit includes an expiration date of **five years from the date of issuance**.

2. APPLICANT ACTIVITY

The applicant has applied to the Texas Commission on Environmental Quality (TCEQ) for an amendment of the existing permit to authorize adding Outfall 002 to the permit. The current permit authorizes the discharge of treated domestic wastewater at an annual average flow not to exceed 4,000,000 gallons per day. The existing wastewater treatment facility serves the City of Ennis, surrounding areas, and the City of Garret and the City of Alma.

3. FACILITY AND DISCHARGE LOCATION

The plant site is located at 401 West Plant Road, Ennis, in Ellis County, Texas 75119.

Outfall Location:

Outfall Number	Latitude	Longitude
001	32.310457 N	96.61677 W
002	32.273501 N	96.642964 W

The treated effluent is discharged to via Outfall 001 to Cummins Creek, thence to Chambers Creek Above Richland-Chamber Reservoir in Segment 0814 of the Trinity River Basin; and via proposed Outfall 002 and pipe to an unnamed tributary, thence to Bardwell Reservoir in Segment No. 0815 of the Trinity River Basin. The unclassified

receiving water use is limited aquatic life use for Cummins Creek and minimal aquatic life use for the unnamed tributary. The designated uses for Segment No. 0815 are primary contact recreation, public water supply, and high aquatic life use.

4. TREATMENT PROCESS DESCRIPTION AND SEWAGE SLUDGE DISPOSAL

The Oak Grove Wastewater Treatment Facility is an activated sludge process plant operated in the extended aeration mode. Treatment units include two mechanical bar screens with washer compactor, one influent wet well, four primary clarifiers, four aeration basins, three secondary clarifiers, a sludge thickener, an aerobic sludge digester, sludge dewatering, sludge drying beds, two chlorine contact chambers, and one dechlorination chamber. The facility is currently operating in the Interim phase.

Sludge generated from the treatment facility is hauled by a registered transporter and disposed of at a TCEQ-permitted landfill, Ellis County Landfill, Permit No. 1745B, in Ellis County. The draft permit also authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

5. INDUSTRIAL WASTE CONTRIBUTION

The draft permit includes pretreatment requirements that are appropriate for a facility of this size and complexity. The facility receives significant industrial wastewater contributions.

6. SUMMARY OF SELF-REPORTED EFFLUENT ANALYSES

The following is a summary of the applicant's effluent monitoring data for the period February 2020 through February 2022. The average of Daily Average value is computed by the averaging of all 30-day average values for the reporting period for each parameter: annual average flow (flow), five-day carbonaceous biochemical oxygen demand (CBOD₅), total suspended solids (TSS), ammonia nitrogen (NH₃-N), and chloride. The average of Daily Average value for *Escherichia coli* (*E. coli*) in colony-forming units (CFU) or most probable number (MPN) per 100 ml is calculated via geometric mean.

<u>Parameter</u>	<u>Average of Daily Avg</u>
Flow, MGD	1.73
CBOD ₅ , mg/l	3.6
TSS, mg/l	3.6
NH ₃ -N, mg/l	0.16
Chloride, mg/l	107.4
<i>E. coli</i> , CFU or MPN per 100 ml	4

7. DRAFT PERMIT CONDITIONS AND MONITORING REQUIREMENTS

The effluent limitations and monitoring requirements for those parameters that are limited in the draft permit are as follows:

A. INTERIM PHASE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS – OUTFALLS 001 AND 002

The annual average flow of effluent shall not exceed 3.1 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 5,764 gallons per minute (gpm). The combined annual average flow of effluent via Outfalls 001 and 002 shall not exceed 3.1 MGD

<u>Parameter</u>	<u>30-Day Average</u>		<u>7-Day Average</u>	<u>Daily Maximum</u>
	<u>mg/l</u>	<u>lbs/day</u>	<u>mg/l</u>	<u>mg/l</u>
CBOD ₅	7	181*	12	22
TSS	15	388*	25	40
NH ₃ -N	2	52*	5	10
TDS**	Report	Report	N/A	Report
Chloride**	Report	Report	N/A	Report
DO (minimum)	6.0	N/A	N/A	N/A
<i>E. coli</i> , CFU or MPN per 100 ml	126	N/A	N/A	399

*The combined 30-day average lbs/day effluent limit for Outfalls 001 and 002.

**Applicable only to discharges made via Outfall 001.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

<u>Parameter</u>	<u>Monitoring Requirement</u>
Flow, MGD	Continuous
CBOD ₅	Two/week
TSS	Two/week
NH ₃ -N	Two/week
TDS	One/week
Chloride	One/week
DO	Two/week
<i>E. coli</i>	One/week

B. FINAL PHASE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS – OUTFALLS 001 AND 002

The annual average flow of effluent shall not exceed 4.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 5,764 gpm. The combined annual average flow of effluent via Outfalls 001 and 002 shall not exceed 4.0 MGD.

<u>Parameter</u>	<u>30-Day Average</u>		<u>7-Day</u>	<u>Daily</u>
	<u>mg/l</u>	<u>lbs/day</u>	<u>Average</u>	<u>Maximum</u>
CBOD ₅	5	167*	10	20
TSS	12	400*	20	40
NH ₃ -N	2	67*	5	10
TDS**	Report	Report	N/A	Report
Chloride**	Report	Report	N/A	Report
DO (minimum)	6.0	N/A	N/A	N/A
<i>E. coli</i> , CFU or MPN/100 ml	126	N/A	N/A	399

*The combined 30-day average lbs/day limit for Outfalls 001 and 002.

**Applicable only to discharges made via Outfall 001.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.

The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.

<u>Parameter</u>	<u>Monitoring Requirement</u>
Flow, MGD	Continuous
CBOD ₅	Two/week
TSS	Two/week
NH ₃ -N	Two/week
TDS	One/week
Chloride	One/week
DO	Two/week
<i>E. coli</i>	One/week

C. SEWAGE SLUDGE REQUIREMENTS

The draft permit includes Sludge Provisions according to the requirements of 30 TAC Chapter 312, Sludge Use, Disposal, and Transportation. Sludge generated from the treatment facility is hauled by a registered transporter and disposed of at a TCEQ-permitted landfill, Ellis County Landfill, Permit No. 1745B, in Ellis County. The draft permit also authorizes the disposal of sludge at a TCEQ-authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge.

D. PRETREATMENT REQUIREMENTS

Permit requirements for pretreatment are based on TPDES regulations contained

in 30 TAC Chapter 315 which references 40 CFR Part 403, General Pretreatment Regulations for Existing and New Sources of Pollution [rev. *Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*]. The permit includes specific requirements that establish responsibilities of local government, industry, and the public to implement the standards to control pollutants which pass through or interfere with treatment processes in publicly owned treatment works or which may contaminate the sewage sludge. This permit has appropriate pretreatment language for a facility of this size and complexity.

The permittee has a pretreatment program which was approved by the U.S. Environmental Protection Agency (EPA) on **December 1, 1983** and modified on **December 4, 1992, December 22, 2011**, and on **July 29, 2020 (nonsubstantial Streamlining Rule)**. The permittee is required, under the conditions of the approved pretreatment program, to prepare annually a list of industrial users which during the preceding twelve months were in significant noncompliance with applicable pretreatment requirements for those facilities covered under the program. This list is to be published annually during the month of **December** in a newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW.

Effective December 21, 2025, the permittee must submit the pretreatment program annual status report electronically using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. [rev. *Federal Register/ Vol. 80/ No. 204/ Friday, October 22, 2015/ Rules and Regulations, pages 64064-64158*].

The permittee is under a continuing duty to: establish and enforce specific local limits to implement the provisions of 40 CFR §403.5, to develop and enforce local limits as necessary, and to modify the approved POTW pretreatment program as necessary to comply with federal, state, and local law, as amended. The permittee is required to effectively enforce such limits and to modify their pretreatment program, including the Legal Authority, Enforcement Response Plan, and/or Standard Operating Procedures, if required by the Executive Director to reflect changing conditions at the POTW.

The permittee is required to redevelop the existing technically based local limits (TBLLs) and modify additional components of the pretreatment program as applicable. The permittee shall submit to the TCEQ Pretreatment Team (MC148) of the Water Quality Division, **within twelve (12) months of commencement of discharge from Outfall 002**. The permittee shall demonstrate and certify that the revised TBLLs will attain the Texas Surface Water Quality Standards [30 TAC Chapter 307] in water in the state, prevent pass through of pollutants and inhibition of or interference with the treatment facility, prevent worker health and safety problems, and prevent sludge contamination. If applicable, the POTW is required to evaluate the enforceable best management practices (BMP) loadings during the redevelopment of the current TBLLs. The permittee shall submit a TBLLs package, draft legal authority, which incorporates such revisions, and any additional modifications to the pretreatment program that reflect changing conditions at the POTW. In order to ensure that the permittee has a program to assure compliance with such pretreatment standards

and requirements, the permittee will include the Legal Authority, Enforcement Response Plan, Standard Operating Procedures (including forms). This package shall be submitted **within twelve (12) months of commencement of discharge from Outfall 002.**

E. WHOLE EFFLUENT TOXICITY (BIOMONITORING) REQUIREMENTS

- (1) The draft permit includes chronic freshwater biomonitoring requirements as follows. The permit requires five dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 32%, 42%, 56%, 75%, and 100%. The low-flow effluent concentration (critical dilution) is defined as 100% effluent. The critical dilution is in accordance with the "Aquatic Life Criteria" section of the "Water Quality Based Effluent Limitations/Conditions" section.
 - (a) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*). The frequency of the testing is once per quarter for at least the first year of testing, after which the permittee may apply for a testing frequency reduction.
 - (b) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*). The frequency of the testing is once per quarter for at least the first year of testing, after which the permittee may apply for a testing frequency reduction.
- (2) The draft permit includes the following minimum 24-hour acute freshwater biomonitoring requirements at a frequency of once per six months:
 - (a) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*).
 - (b) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*).

F. SUMMARY OF CHANGES FROM APPLICATION

The applicant requested an amendment of the existing permit to add Outfall 002 to its permit without other changes; however, the following limits and requirements have been placed in the draft permit:

- combined annual average flow limits for Outfalls 001 and 002;
- combined 30-day average lbs/day effluent limits and requirements in the Interim and Final phases of the draft permit for the for CBOD₅, TSS, and NH₃-N for discharges made via Outfalls 001 and 002; and
- monitoring and reporting limits at Outfall 001 for TDS and Chloride.

The draft permit also includes monitoring and reporting requirements for TDS and chloride in the Interim and Final phases at Outfall 001, based on recommendations of the WQ Standards Implementation Team.

G. SUMMARY OF CHANGES FROM EXISTING PERMIT

The draft permit includes Outfall 002 in the Interim and Final phases of the draft permit, per the permittee's amendment request.

The Standard Permit Conditions, Sludge Provisions, Other Requirements, Pretreatment, and Biomonitoring sections of the draft permit have been updated. Pretreatment requirements have been included in the draft permit.

The existing permit authorizes an annual average flow of 3.1 MGD in the Interim phase and 4.0 MGD in the Final phase. The combined annual average flows of Outfalls 001 and 002 shall not exceed 3.1 MGD in the Interim phase and 4.0 MGD in the Final phase. The permittee is currently operating in the Interim phase.

The effluent limitations in the Interim phase of the draft permit, based on a 30-day average, at Outfall 001 are 7 mg/l CBOD₅, 15 mg/l TSS, 2 mg/l NH₃-N, Report mg/l TDS, Report mg/l Chloride, 126 CFU or MPN of *E. coli* per 100 ml and 6.0 mg/l minimum DO. The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes based on peak flow and shall be dechlorinated to less than 0.1 mg/l total chlorine residual. The effluent limitations in the Interim phase of the draft permit does not include monitoring and reporting requirements for TDS and Chloride at Outfall 002.

The effluent limitations in the Final phase of the draft permit, based on a 30-day average, at Outfall 001 are 5 mg/l CBOD₅, 12 mg/l TSS, 2 mg/l NH₃-N, Report mg/l TDS, Report mg/l Chloride, 126 CFU or MPN of *E. coli* per 100 ml and 6.0 mg/l minimum DO. The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes based on peak flow and shall be dechlorinated to less than 0.1 mg/l total chlorine residual. The effluent limitations in the Final phase of the draft permit does not include monitoring and reporting for TDS and Chloride at Outfall 002.

The draft permit contains combined 30-day average effluent limits for lbs/day of CBOD₅, TSS, and NH₃-N for the combined flows made via Outfalls 001 and 002.

For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

Certain accidental discharges or spills of treated or untreated wastewater from wastewater treatment facilities or collection systems owned or operated by a local government may be reported on a monthly basis in accordance with 30 TAC § 305.132.

The draft permit includes all updates based on the 30 TAC § 312 rule change effective April 23, 2020.

Requirements for monitoring and reporting levels of total dissolved solids and chloride have been placed in the draft permit for discharges made via Outfall 001, based on recommendations by the Water Quality Standards Team.

Other Requirement No. 6 has been updated to include the summary transmittal approval information for the Interim (3.1 MGD) phase.

Other Requirement No. 8 has been placed in the draft permit, which requires the permittee to submit notification when commencing operations in the Final phase of the permit.

8. DRAFT PERMIT RATIONALE

A. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

Regulations promulgated in Title 40 of the CFR require that technology-based limitations be placed in wastewater discharge permits based on effluent limitations guidelines, where applicable, or on best professional judgment (BPJ) in the absence of guidelines.

Effluent limitations for maximum and minimum pH are in accordance with 40 CFR § 133.102(c) and 30 TAC § 309.1(b).

B. WATER QUALITY SUMMARY AND COASTAL MANAGEMENT PLAN

(1) WATER QUALITY SUMMARY

The treated effluent is discharged via Outfall 001 to Cummins Creek, thence to Chambers Creek Above Richland-Chamber Reservoir in Segment 0814 of the Trinity River Basin; and via proposed Outfall 002 and pipe to an unnamed tributary, thence to Bardwell Reservoir in Segment No. 0815 of the Trinity River Basin. The unclassified receiving water use is limited aquatic life use for Cummins Creek and minimal aquatic life use for the unnamed tributary. The designated uses for Segments Nos. 0814 and 0815 are primary contact recreation, public water supply, and high aquatic life use for both segments. The effluent limitations in the draft permit will maintain and protect the existing instream uses. In accordance with 30 Texas Administrative Code Section 307.5 and the TCEQ's Procedures to Implement the Texas Surface Water Quality Standards (June 2010), an antidegradation review of the receiving waters was performed. A Tier 1 antidegradation review has preliminarily determined that existing water quality uses will not be impaired by this permit action. Numerical and narrative criteria to protect existing uses will be maintained. A Tier 2 review has preliminarily determined that no significant degradation of water quality is expected in Bardwell Reservoir, which has been identified as high aquatic life use. Existing uses will be maintained and protected. The preliminary determination can be reexamined and may be modified if new information is received.

The discharge from this permit action is not expected to have an effect on any federal endangered or threatened aquatic or aquatic-dependent

species or proposed species or their critical habitat. This determination is based on the United States Fish and Wildlife Service's (USFWS's) biological opinion on the State of Texas authorization of the TPDES (September 14, 1998; October 21, 1998, update). To make this determination for TPDES permits, TCEQ and EPA only considered aquatic or aquatic-dependent species occurring in watersheds of critical concern or high priority as listed in Appendix A of the USFWS biological opinion. The determination is subject to reevaluation due to subsequent updates or amendments to the biological opinion. The permit does not require EPA review with respect to the presence of endangered or threatened species.

Segment No. 0814 is currently listed in the State's inventory of impaired and threatened waters (the 2020 Clean Water Act Section 303(d) list). The listing is specifically for bacteria in water (recreation use) from just above the confluence with Cummins Creek upstream to just above the confluence with Waxahachie Creek (Assessment Unit [AU] 0814_02). Segment No. 0815 is also currently listed for sulfate in water from Bardwell Dam in Ellis County up to the normal pool elevation of 421 feet (AU 0815_01).

This facility is designed to provide adequate disinfection and, when operated properly, discharges made via Outfall 001 should not add to the bacterial impairment of Segment No 0814. Screening for TDS, chloride and sulfate was performed by the Executive Director and no requirements for effluent limits or monitoring and reporting requirements are needed in the draft permit for sulfate for Outfall 002. Therefore discharges from this facility via Outfall 002 should not add to the sulfate impairment of Segment No 0815.

The pollutant analysis of treated effluent provided by the permittee in the application indicated 497 mg/l total dissolved solids (TDS), 95 mg/l sulfate, and 111 mg/l chloride present in the effluent. The segment criteria for Segment No. 0814 are 500 mg/l for TDS, 160 mg/l for sulfate, and 90 mg/l for chlorides and the segment criteria for Segment No. 0815 are 300 mg/l for TDS, 50 mg/l for sulfate, and 50 mg/l for chlorides. Based on dissolved solids screening, monitoring and reporting requirements for total dissolved solids and chloride are needed for discharges into Segment 0814 made via Outfall 001; however, no additional limits or monitoring requirements for total dissolved solids, chloride, or sulfate are needed for discharges into Segment 0815 made via Outfall 002. See Attachment A of this Fact Sheet.

The effluent limitations and conditions in the draft permit comply with EPA-approved portions of the 2018 Texas Surface Water Quality Standards (TSWQS), 30 TAC §§ 307.1 - 307.10, effective March 1, 2018; 2014 TSWQS, effective March 6, 2014; 2010 TSWQS, effective July 22, 2010; and 2000 TSWQS, effective July 26, 2000.

(2) CONVENTIONAL PARAMETERS

Effluent limitations for the conventional effluent parameters (i.e., Five-Day Biochemical Oxygen Demand or Five-Day Carbonaceous Biochemical Oxygen Demand, Ammonia Nitrogen, etc.) are based on stream standards and waste load allocations for water quality-limited streams as established in the TSWQS and the State of Texas Water Quality Management Plan (WQMP).

The effluent limitations in the draft permit have been reviewed for consistency with the WQMP. The recommended limits for Outfall 001 are consistent with the WQMP for Outfall 001. The recommended limits for Outfall 002 are not contained in the approved WQMP. However, these limits will be included in the next WQMP update.

The effluent limitations in the draft permit meet the requirements for secondary treatment and the requirements for disinfection according to 30 TAC Chapter 309, Subchapter A: Effluent Limitations.

(3) COASTAL MANAGEMENT PLAN

The facility is not located in the Coastal Management Program boundary.

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS/CONDITIONS

(1) GENERAL COMMENTS

The Texas Surface Water Quality Standards (30 TAC Chapter 307) state that surface waters will not be toxic to man, or to terrestrial or aquatic life. The methodology outlined in the "Procedures to Implement the Texas Surface Water Quality Standards, June 2010" is designed to ensure compliance with 30 TAC Chapter 307. Specifically, the methodology is designed to ensure that no source will be allowed to discharge any wastewater that: (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical state water quality standard; (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation that threatens human health.

(2) AQUATIC LIFE CRITERIA

(a) SCREENING

Water quality-based effluent limitations are calculated from freshwater aquatic life criteria found in Table 1 of the Texas Surface Water Quality Standards (30 TAC Chapter 307).

Outfall 001

There is no mixing zone for this discharge directly to an intermittent stream with perennial pools; acute and chronic freshwater criteria apply at the end of pipe. The following critical effluent percentages are being used:

Acute Effluent % 100% Chronic Effluent % 100%

Outfall 002

There is no mixing zone or zone of initial dilution for this discharge directly to an intermittent stream; acute freshwater criteria apply at the end of pipe. Acute and chronic freshwater criteria are applied in the lake or reservoir.

For the intermittent stream, the percent effluent for acute protection of aquatic life is 100% because the 7Q2 of the intermittent stream is 0.0 cubic feet per second (cfs). TCEQ uses the U.S. Environmental Protection Agency horizontal jet plume model to estimate the dilution for acute and chronic protection of aquatic life for discharges into sections of lakes and reservoirs that are less than 200 feet wide. General assumptions used in the horizontal jet plume model are: a non-buoyant discharge; a submersed pipe; and no cross flow. The following critical effluent percentages are calculated based on the permitted flow of 4.0 MGD:

Acute Effluent % (stream):	100%	Chronic Effluent % (lake)	44%
Acute Effluent % (lake):	100%		

Waste load allocations (WLAs) are calculated using the above estimated effluent percentages, criteria outlined in the Texas Surface Water Quality Standards, and partitioning coefficients for metals (when appropriate and designated in the implementation procedures). The WLA is the end-of-pipe effluent concentration that can be discharged when, after mixing in the receiving stream, instream numerical criteria will not be exceeded.

Outfall 001 (Segment No. 0814)

From the WLA, a long-term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level. The LTA is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12).

Outfall 002 (Segment No. 0815)

From the WLA, a long-term average (LTA) is calculated using a log normal probability distribution, a given coefficient of variation (0.6), and a 99th percentile confidence level. lower of the two LTAs (acute and chronic) is used to calculate a daily average and daily maximum effluent limitation for the protection of aquatic life using the same statistical considerations with the 99th percentile confidence level and a standard number of monthly effluent samples collected (12).

Assumptions used in deriving the effluent limitations include segment values for hardness, chlorides, pH, and total suspended solids (TSS)

according to the segment-specific values contained in the TCEQ guidance document "Procedures to Implement the Texas Surface Water Quality Standards, June 2010." The segment values for Segment No. 0814 are 120 mg/l for hardness (as calcium carbonate), 23 mg/l chlorides, 7.5 standard units for pH, and 18 mg/l for TSS. The segment values for Segment 0815 are 96 mg/l for hardness (as calcium carbonate), 14 mg/l chlorides, 7.9 standard units for pH, and 6.1 mg/l for TSS. For additional details on the calculation of water quality-based effluent limitations, refer to the TCEQ guidance document.

TCEQ practice for determining significant potential is to compare the reported analytical data against percentages of the calculated daily average water quality-based effluent limitation. Permit limitations are required when analytical data reported in the application exceeds 85% of the calculated daily average water quality-based effluent limitation. Monitoring and reporting is required when analytical data reported in the application exceeds 70% of the calculated daily average water quality-based effluent limitation. See Attachment B of this Fact Sheet

(b) PERMIT ACTION

Outfall 001 and Outfall 002:

The reported analytical data was used to screen water quality-based effluent limits for Outfalls 001 and 002 because they are from the same treatment system. Analytical data reported in the application was screened against calculated water quality-based effluent limitations for the protection of aquatic life. Reported analytical data does not exceed 70% of the calculated daily average water quality-based effluent limitations for aquatic life protection.

(3) AQUATIC ORGANISM BIOACCUMULATION CRITERIA

(a) SCREENING

Outfall 001

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of freshwater fish tissue found in Table 2 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). The discharge point is to an intermittent stream with perennial pools or to an intermittent stream within 3 miles upstream of an intermittent stream with perennial pools. Human health screening using incidental freshwater fish tissue criteria (= 10 X freshwater fish tissue criteria) is applicable due to the perennial pools that support incidental freshwater fisheries. TCEQ uses the mass balance equation to estimate dilution in the intermittent stream with perennial pools during average flow conditions. The estimated dilution for human health protection is calculated using the permitted flow of 4 MGD and the harmonic mean flow of 0.1 cfs for Cummins Creek. The following effluent percentage is being used:

Human Health Effluent % 98.4%

Outfall 002

Water quality-based effluent limitations for the protection of human health are calculated using criteria for the consumption of freshwater fish tissue found in Table 2 of the Texas Surface Water Quality Standards (30 TAC Chapter 307). Freshwater fish tissue bioaccumulation criteria are applied in the lake or reservoir for a discharge to an intermittent stream that enters the lake or reservoir within 3 miles downstream of the discharge point. TCEQ uses the U.S. Environmental Protection Agency horizontal jet plume model to estimate dilution for discharges into sections of lakes or reservoirs that are less than 200 feet wide. General assumptions used in the horizontal jet plume model are: a non-buoyant discharge; a submersed pipe; and no cross flow. Based on this analysis, the following critical effluent percentage is calculated based on the permitted flow of 4.0 MGD:

Human Health Effluent %: 22%

Water quality-based effluent limitations for human health protection against the consumption of fish tissue are calculated using the same procedure as outlined for calculation of water quality-based effluent limitations for aquatic life protection. A 99th percentile confidence level in the long-term average calculation is used with only one long-term average value being calculated.

Significant potential is again determined by comparing reported analytical data against 70% and 85% of the calculated daily average water quality-based effluent limitation. See Attachment B of this Fact Sheet.

(b) PERMIT ACTION

Outfall 001 and Outfall 002:

The reported analytical data was used to screen water quality-based effluent limits for Outfalls 001 and 002 because they are from the same treatment system. Reported analytical data does not exceed 70% of the calculated daily average water quality-based effluent limitation for human health protection.

(4) DRINKING WATER SUPPLY PROTECTION

(a) SCREENING

Water Quality Segment No. 0814, which receives the discharge from this facility, is designated as a public water supply. The discharge point is located at a distance greater than three miles from the classified segment. Screening reported analytical data of the effluent against water quality-based effluent limitations calculated for the protection of a drinking water supply is not applicable due to the distance between the discharge point and the classified segment.

Water Quality Segment No. 0815, which receives the discharge from this facility, is designated as a public water supply. The screening procedure used to calculate water quality-based effluent limitations and determine the need for effluent limitations or monitoring requirements is identical to the procedure outlined in the aquatic organism bioaccumulation section of this fact sheet. Criteria used in the calculation of water quality-based effluent limitations for the protection of a drinking water supply are outlined in Table 2 (Water and Fish) of the Texas Surface Water Quality Standards (30 TAC Chapter 307). These criteria are developed from either drinking water maximum contaminant level (MCL) criteria outlined in 30 TAC Chapter 290 or from the combined human health effects of exposure to consumption of fish tissue and ingestion of drinking water.

(b) PERMIT ACTION

No analytical data is available for screening against water quality-based effluent limitations because the facility is not in operation.

Outfall 001

None.

Outfall 002

Criteria in the "Water and Fish" section of Table 2 do not distinguish if the criteria is based on a drinking water standard or the combined effects of ingestion of drinking water and fish tissue. Effluent limitations or monitoring requirements to protect the drinking water supply (and other human health effects) were previously calculated and outlined in the aquatic organism bioaccumulation criteria section of this fact sheet.

(5) WHOLE EFFLUENT TOXICITY (BIOMONITORING) CRITERIA

(a) SCREENING

TCEQ has determined that there may be pollutants present in the effluent that may have the potential to cause toxic conditions in the receiving stream. Whole effluent biomonitoring is the most direct measure of potential toxicity that incorporates the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity.

Outfall 001

The existing permit includes chronic freshwater biomonitoring requirements. A summary of the biomonitoring testing for the facility indicates that in the past three years, the permittee has performed twenty-two chronic tests, with zero demonstrations of significant toxicity (i.e., zero failures).

A reasonable potential (RP) determination was performed in accordance with 40 CFR §122.44(d)(1)(ii) to determine whether the discharge will reasonably be expected to cause or contribute to an exceedance of a state water quality standard or criterion within that standard. Each test species is evaluated separately. The RP determination is based on representative data from the previous three years of chronic WET testing. This determination was performed in accordance with the methodology outlined in the TCEQ letter to the EPA dated December 28, 2015 and approved by the EPA in a letter dated December 28, 2015.

With zero failures, a determination of no RP was made. WET limits are not required and both test species may be eligible for the testing frequency reduction after one year of quarterly testing.

Outfall 002

The applicant is not currently monitoring whole effluent toxicity because the requirements do not take effect until the permit has been issued.

(b) PERMIT ACTION

Outfall 001

The test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge. This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body.

Outfall 002

No analytical data is available because Outfall 002 is not in operation.

(6) WHOLE EFFLUENT TOXICITY CRITERIA (24-HOUR ACUTE)

(a) SCREENING

Outfall 001

The existing permit includes 24-hour acute freshwater biomonitoring language. A summary of the biomonitoring testing for the facility indicates that in the past three years, the permittee has performed ten 24-hour acute tests, with zero demonstrations of significant mortality (i.e., zero failures).

Outfall 002

The applicant is not currently monitoring whole effluent toxicity because the requirements do not take effect at Outfall 002 until discharges via Outfall 002 commence.

(b) PERMIT ACTION

Outfall 001

The draft permit includes 24-hour 100% acute biomonitoring tests for the life of the permit.

Outfall 002

The applicant is not currently monitoring whole effluent toxicity because the requirements do not take effect at Outfall 002 until discharges via Outfall 002 commence.

9. WATER QUALITY VARIANCE REQUESTS

No variance requests have been received.

10. PROCEDURES FOR FINAL DECISION

When an application is declared administratively complete, the Chief Clerk sends a letter to the applicant advising the applicant to publish the Notice of Receipt of Application and Intent to Obtain Permit in the newspaper. In addition, the Chief Clerk instructs the applicant to place a copy of the application in a public place for review and copying in the county where the facility is or will be located. This application will be in a public place throughout the comment period. The Chief Clerk also mails this notice to any interested persons and, if required, to landowners identified in the permit application. This notice informs the public about the application and provides that an interested person may file comments on the application or request a contested case hearing or a public meeting.

Once a draft permit is completed, it is sent, along with the Executive Director's preliminary decision, as contained in the technical summary or fact sheet, to the Chief Clerk. At that time, the Notice of Application and Preliminary Decision will be mailed to the same people and published in the same newspaper as the prior notice. This notice sets a deadline for making public comments. The applicant must place a copy of the Executive Director's preliminary decision and draft permit in the public place with the application.

Any interested person may request a public meeting on the application until the deadline for filing public comments. A public meeting is intended for the taking of public comment and is not a contested case proceeding.

After the public comment deadline, the Executive Director prepares a response to all significant public comments on the application or the draft permit raised during the public comment period. The Chief Clerk then mails the Executive Director's response to comments and final decision to people who have filed comments, requested a contested case hearing, or requested to be on the mailing list. This notice provides that if a person

is not satisfied with the Executive Director's response and decision, they can request a contested case hearing or file a request to reconsider the Executive Director's decision within 30 days after the notice is mailed.

The Executive Director will issue the permit unless a written hearing request or request for reconsideration is filed within 30 days after the Executive Director's response to comments and final decision is mailed. If a hearing request or request for reconsideration is filed, the Executive Director will not issue the permit and will forward the application and request to the TCEQ Commissioners for their consideration at a scheduled Commission meeting. If a contested case hearing is held, it will be a legal proceeding similar to a civil trial in state district court.

If the Executive Director calls a public meeting or the Commission grants a contested case hearing as described above, the Commission will give notice of the date, time, and place of the meeting or hearing. If a hearing request or request for reconsideration is made, the Commission will consider all public comments in making its decision and shall either adopt the Executive Director's response to public comments or prepare its own response.

For additional information about this application, contact Gordon R. Cooper at (512) 239-1963.

11. ADMINISTRATIVE RECORD

The following items were considered in developing the draft permit:

A. PERMIT(S)

TPDES Permit No. WQ0010443002 issued on August 30, 2017.

B. APPLICATION

Application received on July 29, 2021, and additional information received on September 7, 2021, December 16, 2021, and January 24, 2022.

C. MEMORANDA

Interoffice Memoranda from the Water Quality Assessment Section of the TCEQ Water Quality Division. Interoffice Memorandum from the Pretreatment Team of the TCEQ Water Quality Division.

D. MISCELLANEOUS

Federal Clean Water Act § 402; Texas Water Code § 26.027; 30 TAC Chapters 30, 305, 309, 312, and 319; Commission policies; and U.S. Environmental Protection Agency guidelines.

Texas Surface Water Quality Standards, 30 TAC §§ 307.1 - 307.10.

Procedures to Implement the Texas Surface Water Quality Standards (IP), Texas Commission on Environmental Quality, June 2010, as approved by the

City of Ennis TPDES Permit No. WQ0010443002
Fact Sheet and Executive Director's Preliminary Decision

U.S. Environmental Protection Agency, and the IP, January 2003, for portions of the 2010 IP not approved by the U.S. Environmental Protection Agency.

Texas 2020 Clean Water Act Section 303(d) List, Texas Commission on Environmental Quality, March 25, 2020; approved by the U.S. Environmental Protection Agency on May 12, 2020.

Texas Natural Resource Conservation Commission, Guidance Document for Establishing Monitoring Frequencies for Domestic and Industrial Wastewater Discharge Permits, Document No. 98-001.000-OWR-WQ, May 1998.

**Attachment A: Screening Calculations for
 Total Dissolved Solids, Chloride, and Sulfate**

Outfall 001

Menu 7 - Discharge to an Intermittent Stream with Perennial Pools

Screen the Intermittent Characteristics of the Stream

Applicant Name: City of Ennis
Permit Number, Outfall: WQ0010443002 Outfall 001
Segment Number: 0814

Enter values needed for screening:		Data Source (edit if different)
TDS CC - segment criterion - TDS	<u>500</u> mg/L	2018 TSWQS, Appendix A
Cl CC - segment criterion - chloride	<u>90</u> mg/L	2018 TSWQS, Appendix A
SO4 CC - segment criterion - sulfate	<u>160</u> mg/L	2018 TSWQS, Appendix A
TDS CE - average effluent concentration - TDS	<u>497</u> mg/L	Permit application
Cl CE - average effluent concentration - chloride	<u>111</u> mg/L	Permit application
SO4 CE - average effluent concentration - sulfate	<u>95</u> mg/L	Permit application

TDS Screening

The TDS screening value is determined by first calculating an initial TDS concentration, C_{TDS} , as follows:

$$C_{TDS} = (TDS\ CC / 500\ mg/L) * 2,500\ mg/L$$

Where:
 C_{TDS} = TDS concentration used to determine C_{sv} screening value
 TDS CC = TDS criterion at the first downstream segment
 500 mg/L = the median TDS concentration in Texas streams
 2,500 mg/L = the minimum TDS screening value

$$C_{TDS} = 2500\ mg/L$$

The next step is to use the initial C_{TDS} to set the actual TDS screening value, C_{sv} , using the following table:

If C_{TDS}	=	Then TDS C_{sv}
$\leq 2,500\ mg/L$	=	2,500 mg/L
$> 2,500\ mg/L$ but $\leq 6,000\ mg/L$	=	C_{TDS}
$> 6,000\ mg/L$	=	6,000 mg/L

Some specific types of intermittent streams have alternative screening values (C_{sv}):

Specific Type of Intermittent Stream	If C_{TDS} is	Default C_{sv} =
Dry except for short-term flow in immediate response to rainfall.	$< 4,000\ mg/L$	4,000 mg/L
	$\geq 4,000\ mg/L$	C_{TDS}
Constructed ditch conveying stormwater and wastewater, considered water in the state.	$< 4,000\ mg/L$	4,000 mg/L
	$\geq 4,000\ mg/L$	C_{TDS}
Within 3 miles of tidal waters.	—	6,000 mg/L

Once TDS C_{sv} is established, the next step is to compare the effluent TDS concentration, TDS CE, to the screening value. Control measures, which may include effluent limitations, are considered for TDS if the effluent TDS is greater than the screening value.

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Values needed for Screening	Data Source		
TDS CE - average effluent TDS concentration	497	mg/L	Permit application
TDS Csv - TDS screening value	2500	mg/L	Determined above

No control measures needed if: 497 ≤ 2500
 Consider control measures if: 497 > 2500

No control measures needed for TDS

When effluent limitations are established in the permit, the daily average TDS limit is typically set equal to the TDS screening value. The daily maximum TDS limit is calculated as 2.12 times the daily average limit.

Total Dissolved Solids			
Daily Average	=	N/A	mg/L
Daily Maximum	=	N/A	mg/L

Chloride Screening

If TDS limits are necessary or there are concerns about chloride, additional screening can be performed for chloride. First calculate the screening value for chloride, Cl Csv, as follows:

$$Cl\ Csv = (TDS\ Csv / TDS\ CC) * Cl\ CC$$

Where:
 Cl Csv = chloride screening value
 TDS Csv = TDS screening value
 TDS CC = TDS criterion at the first downstream segment
 Cl CC - chloride criterion at the first downstream segment

$$Cl\ Csv = \mathbf{450\ mg/L}$$

Once the Cl Csv is established, the next step is to compare the effluent chloride concentration, Cl CE, to the screening value. Control measures, which may include effluent limitations, are considered for chloride if the effluent chloride is greater than the screening value.

Values needed for Screening	Data Source		
Cl CE - average effluent chloride concentration	111	mg/L	Permit application
Cl Csv - chloride screening value	450	mg/L	Determined above

No control measures needed if: 111 ≤ 450
 Consider control measures if: 111 > 450

No control measures needed for chloride

When effluent limitations are established in the permit, the daily average chloride limit is typically set equal to the chloride screening value. The daily maximum chloride limit is calculated as 2.12 times the daily average limit.

Chloride			
Daily Average	=	N/A	mg/L
Daily Maximum	=	N/A	mg/L

Sulfate Screening

If TDS limits are necessary or there are concerns about sulfate, additional screening can be performed for sulfate. First calculate the screening value for sulfate, SO₄ C_{sv}, as follows:

$$\text{SO}_4 \text{ C}_{sv} = (\text{TDS C}_{sv} / \text{TDS CC}) * \text{SO}_4 \text{ CC}$$

Where:

- SO₄ C_{sv} = sulfate screening value
- TDS C_{sv} = TDS screening value
- TDS CC = TDS criterion at the first downstream segment
- SO₄ CC - sulfate criterion at the first downstream segment

$$\text{SO}_4 \text{ C}_{sv} = \mathbf{800} \text{ mg/L}$$

Once the SO₄ C_{sv} is established, the next step is to compare the effluent sulfate concentration, SO₄ C_e, to the screening value. Control measures, which may include effluent limitations, are considered for sulfate if the effluent sulfate is greater than the screening value.

Values needed for Screening	Data Source
SO ₄ C _e - average effluent sulfate concentration	95 mg/L Permit application
SO ₄ C _{sv} - sulfate screening value	800 mg/L Determined above
No control measures needed if:	95 ≤ 800
Consider control measures if:	95 > 800

No control measures needed for sulfate

When effluent limitations are established in the permit, the daily average sulfate limit is typically set equal to the sulfate screening value. The daily maximum sulfate limit is calculated as 2.12 times the daily average limit.

Sulfate	
Daily Average	= N/A mg/L
Daily Maximum	= N/A mg/L

Screen the Perennial Pool Characteristics of the Stream

Applicant Name: City of Ennis
Permit Number, Outfall: WQ0010443002 Outfall 001
Segment Number: 0814

Enter values needed for screening:	Data Source (edit if different)
QE - Average effluent flow	<u>4.0</u> MGD
QS - Stream harmonic mean (HM) flow	<u>0.71</u> cfs App. C - HM for Chambers Creek
QE - Average effluent flow	<u>6.1889</u> cfs Calculated
CA - TDS - ambient segment concentration	<u>349</u> mg/L 2010 IP, Appendix D
CA - chloride - ambient segment concentration	<u>23</u> mg/L 2010 IP, Appendix D
CA - sulfate - ambient segment concentration	<u>70</u> mg/L 2010 IP, Appendix D
CC - TDS - segment criterion	<u>500</u> mg/L 2018 TSWQS, Appendix A
CC - chloride - segment criterion	<u>90</u> mg/L 2018 TSWQS, Appendix A
CC - sulfate - segment criterion	<u>160</u> mg/L 2018 TSWQS, Appendix A

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

CE - TDS - average effluent concentration	<u>497</u> mg/L	Avg. TDS (2020-21)
CE - chloride - average effluent concentration	<u>111</u> mg/L	Permit application
CE - sulfate - average effluent concentration	<u>95</u> mg/L	Permit application

Screening Equation

$$CC \geq [(QS)(CA) + (QE)(CE)]/[QE + QS]$$

No further screening for TDS needed if:	481.77	≤	500
No further screening for chloride needed if:	101.94	≤	90
No further screening for sulfate needed if:	92.43	≤	160

Permit Limit Calculations

TDS

Calculate the WLA	WLA = [CC(QE+QS) - (QS)(CA)]/QE	517.32		
Calculate the LTA	LTA = WLA * 0.93	481.11		
Calculate the daily average	Daily Avg. = LTA * 1.47	707.23		
Calculate the daily maximum	Daily Max. = LTA * 3.11	1496.25		
Calculate 70% of the daily average	70% of Daily Avg. =	495.06		
Calculate 85% of the daily average	85% of Daily Avg. =	601.15		
No permit limitations needed if:	497	≤	495.06	
Reporting needed if:	497	>	495.06	but ≤ 601.15
Permit limits may be needed if:	497	>	601.15	

Reporting needed for TDS

Chloride

Calculate the WLA	WLA = [CC(QE+QS) - (QS)(CA)]/QE	97.69		
Calculate the LTA	LTA = WLA * 0.93	90.85		
Calculate the daily average	Daily Avg. = LTA * 1.47	133.55		
Calculate the daily maximum	Daily Max. = LTA * 3.11	282.54		
Calculate 70% of the daily average	70% of Daily Avg. =	93.48		
Calculate 85% of the daily average	85% of Daily Avg. =	113.51		
No permit limitations needed if:	111	≤	93.48	
Reporting needed if:	111	>	93.48	but ≤ 113.51
Permit limits may be needed if:	111	>	113.51	

Reporting needed for chloride

Sulfate

Calculate the WLA	WLA = [CC(QE+QS) - (QS)(CA)]/QE	170.32		
Calculate the LTA	LTA = WLA * 0.93	158.40		
Calculate the daily average	Daily Avg. = LTA * 1.47	232.85		
Calculate the daily maximum	Daily Max. = LTA * 3.11	492.63		
Calculate 70% of the daily average	70% of Daily Avg. =	163.00		
Calculate 85% of the daily average	85% of Daily Avg. =	197.92		

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

No permit limitations needed if:	95	≤	163.00	
Reporting needed if:	95	>	163.00	but ≤ 197.92
Permit limits may be needed if:	95	>	197.92	

No permit limitations needed for sulfate

Outfall 002

Menu 8 - Discharge to an Intermittent Stream within 3 Miles of a Lake

Screen the Lake

Applicant Name:	City of Ennis
Permit Number, Outfall:	WQ0010443002, Outfall 002
Segment Number:	0815

Enter values needed for screening:	Data Source (edit if different)		
EF - Effluent <u>fraction</u> at edge of human health MZ	<u>0.22</u>	decimal fraction	Critical Conditions Memo dated 2/9/22
CA - TDS - ambient segment concentration	<u>202</u>	mg/L	2010 IP, Appendix D
CA - chloride - ambient segment concentration	<u>14</u>	mg/L	2010 IP, Appendix D
CA - sulfate - ambient segment concentration	<u>35</u>	mg/L	2010 IP, Appendix D
CC - TDS - segment criterion	<u>300</u>	mg/L	2018 TSWQS, Appendix A
CC - chloride - segment criterion	<u>50</u>	mg/L	2018 TSWQS, Appendix A
CC - sulfate - segment criterion	<u>50</u>	mg/L	2018 TSWQS, Appendix A
CE - TDS - average effluent concentration	<u>497</u>	mg/L	Avg. TDS (2020-21)
CE - chloride - average effluent concentration	<u>111</u>	mg/L	Permit application
CE - sulfate - average effluent concentration	<u>95</u>	mg/L	Permit application

Screening Equation

$$CC \geq (EF)(CE) + (1-EF)(CA)$$

No further screening for TDS needed if:	266.90	≤	300
No further screening for chloride needed if:	35.34	≤	50
No further screening for sulfate needed if:	48.20	≤	50

Permit Limit Calculations

TDS

Calculate the WLA	WLA = [CC - (1-EF)(CA)]/EF	647.45	
Calculate the LTA	LTA = WLA * 0.93	602.13	
Calculate the daily average	Daily Avg. = LTA * 1.47	885.14	
Calculate the daily maximum	Daily Max. = LTA * 3.11	1872.63	
Calculate 70% of the daily average	70% of Daily Avg. =	619.59	
Calculate 85% of the daily average	85% of Daily Avg. =	752.36	
No permit limitations needed if:	497	≤	619.59
Reporting needed if:	497	>	619.59 but ≤ 752.36
Permit limits may be needed if:	497	>	752.36

No permit limitations needed for TDS

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Chloride

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF		177.64	
Calculate the LTA	LTA = WLA * 0.93		165.20	
Calculate the daily average	Daily Avg. = LTA * 1.47		242.85	
Calculate the daily maximum	Daily Max. = LTA * 3.11		513.78	
Calculate 70% of the daily average	70% of Daily Avg. =		169.99	
Calculate 85% of the daily average	85% of Daily Avg. =		206.42	
No permit limitations needed if:	111	≤	169.99	
Reporting needed if:	111	>	169.99	but ≤ 206.42
Permit limits may be needed if:	111	>	206.42	

No permit limitations needed for chloride

Sulfate

Calculate the WLA	WLA= [CC - (1-EF)(CA)]/EF		103.18	
Calculate the LTA	LTA = WLA * 0.93		95.96	
Calculate the daily average	Daily Avg. = LTA * 1.47		141.06	
Calculate the daily maximum	Daily Max. = LTA * 3.11		298.43	
Calculate 70% of the daily average	70% of Daily Avg. =		98.74	
Calculate 85% of the daily average	85% of Daily Avg. =		119.90	
No permit limitations needed if:	95	≤	98.74	
Reporting needed if:	95	>	98.74	but ≤ 119.90
Permit limits may be needed if:	95	>	119.90	

No permit limitations needed for sulfate

Attachment B: Calculated Water Quality Based Effluent Limitations

Outfall 001

TEXTTOX MENU #7 - INTERMITTENT STREAM WITH PERENNIAL POOLS

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life
 Table 2, 2018 Texas Surface Water Quality Standards for Human Health, Incidental Fishery
 "Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	City of Ennis
TPDES Permit No.:	WQ0010443002
Outfall No.:	001
Prepared by:	G.Cooper
Date:	May 11, 2022

DISCHARGE INFORMATION

Intermittent Receiving Waterbody:	to Cummins Creek (second-order reach)
Segment No.:	814
TSS (mg/L):	18
pH (Standard Units):	7.5
Hardness (mg/L as CaCO ₃):	120
Chloride (mg/L):	23
Effluent Flow for Aquatic Life (MGD):	4
Critical Low Flow [7Q2] (cfs):	0
% Effluent for Chronic Aquatic Life:	100
% Effluent for Acute Aquatic Life:	100
Effluent Flow for Human Health (MGD):	4
Harmonic Mean Flow (cfs):	0.1
% Effluent for Human Health:	98.410

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

<i>Stream/River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Source</i>	<i>Water Effect Ratio (WER)</i>	<i>Source</i>
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	58029.80	0.489		1.00	Assumed
Cadmium	6.60	-1.13	151894.51	0.268		1.00	Assumed
Chromium (total)	6.52	-0.93	225214.62	0.198		1.00	Assumed
Chromium (trivalent)	6.52	-0.93	225214.62	0.198		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.02	-0.74	123338.41	0.311		1.00	Assumed
Lead	6.45	-0.80	279114.24	0.166		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	5.69	-0.57	94296.30	0.371		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	122199.47	0.313		1.00	Assumed
Zinc	6.10	-0.70	166459.75	0.250		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

<i>Parameter</i>	<i>FW Acute Criterion (µg/L)</i>	<i>FW Chronic Criterion (µg/L)</i>	<i>WLAa (µg/L)</i>	<i>WLAc (µg/L)</i>	<i>LTAa (µg/L)</i>	<i>LTAc (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Aldrin	3.0	N/A	3.00	N/A	1.72	N/A	2.52	5.34
Aluminum	991	N/A	991	N/A	568	N/A	834	1765
Arsenic	340	150	695	307	398	236	347	734
Cadmium	10.2	0.279	38.3	1.04	21.9	0.803	1.18	2.49
Carbaryl	2.0	N/A	2.00	N/A	1.15	N/A	1.68	3.56
Chlordane	2.4	0.004	2.40	0.00400	1.38	0.00308	0.00452	0.00957
Chlorpyrifos	0.083	0.041	0.0830	0.0410	0.0476	0.0316	0.0464	0.0981
Chromium (+3)	662	86	3343	435	1916	335	492	1041
Chromium (+6)	15.7	10.6	15.7	10.6	9.00	8.16	11.9	25.3
Copper	16.9	11.1	54.3	35.6	31.1	27.4	40.3	85.3
Cyanide (free)	45.8	10.7	45.8	10.7	26.2	8.24	12.1	25.6
4,4'-DDT	1.1	0.001	1.10	0.00100	0.630	0.000770	0.00113	0.00239
Demeton	N/A	0.1	N/A	0.100	N/A	0.0770	0.113	0.239
Diazinon	0.17	0.17	0.170	0.170	0.0974	0.131	0.143	0.302
Dicofol	59.3	19.8	59.3	19.8	34.0	15.2	22.4	47.4
Dieldrin	0.24	0.002	0.240	0.00200	0.138	0.00154	0.00226	0.00478
Diuron	210	70	210	70.0	120	53.9	79.2	167
Endosulfan I (alpha)	0.22	0.056	0.220	0.0560	0.126	0.0431	0.0633	0.134
Endosulfan II (beta)	0.22	0.056	0.220	0.0560	0.126	0.0431	0.0633	0.134
Endosulfan sulfate	0.22	0.056	0.220	0.0560	0.126	0.0431	0.0633	0.134
Endrin	0.086	0.002	0.0860	0.00200	0.0493	0.00154	0.00226	0.00478
Guthion	N/A	0.01	N/A	0.0100	N/A	0.00770	0.0113	0.0239
Heptachlor	0.52	0.004	0.520	0.00400	0.298	0.00308	0.00452	0.00957
Hexachlorocyclohexane (Lindane)	1.126	0.08	1.13	0.0800	0.645	0.0616	0.0905	0.191
Lead	79	3.07	474	18.5	272	14.2	20.9	44.2
Malathion	N/A	0.01	N/A	0.0100	N/A	0.00770	0.0113	0.0239
Mercury	2.4	1.3	2.40	1.30	1.38	1.00	1.47	3.11
Methoxychlor	N/A	0.03	N/A	0.0300	N/A	0.0231	0.0339	0.0718
Mirex	N/A	0.001	N/A	0.00100	N/A	0.000770	0.00113	0.00239
Nickel	546	60.7	1474	164	844	126	185	391
Nonylphenol	28	6.6	28.0	6.60	16.0	5.08	7.47	15.8
Parathion (ethyl)	0.065	0.013	0.0650	0.0130	0.0372	0.0100	0.0147	0.0311
Pentachlorophenol	14.4	11.1	14.4	11.1	8.26	8.52	12.1	25.6
Phenanthrene	30	30	30.0	30.0	17.2	23.1	25.2	53.4
Polychlorinated Biphenyls (PCBs)	2.0	0.014	2.00	0.0140	1.15	0.0108	0.0158	0.0335
Selenium	20	5	20.0	5.00	11.5	3.85	5.65	11.9
Silver	0.8	N/A	6.04	N/A	3.46	N/A	5.08	10.7
Toxaphene	0.78	0.0002	0.780	0.000200	0.447	0.000154	0.000226	0.000478
Tributyltin (TBT)	0.13	0.024	0.130	0.0240	0.0745	0.0185	0.0271	0.0574
2,4,5 Trichlorophenol	136	64	136	64.0	77.9	49.3	72.4	153
Zinc	137	138	547	551	313	424	460	973

HUMAN HEALTH (APPLIES FOR INCIDENTAL FRESHWATER FISH TISSUE)

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>Incidental Fish Criterion (µg/L)</i>	<i>WLAh (µg/L)</i>	<i>LTAh (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Acrylonitrile	1150	1169	1087	1597	3379
Aldrin	1.147E-04	0.000117	0.000108	0.000159	0.000337
Anthracene	13170	13383	12446	18295	38707
Antimony	10710	10883	10121	14878	31477

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Arsenic	N/A	N/A	N/A	N/A	N/A
Barium	N/A	N/A	N/A	N/A	N/A
Benzene	5810	5904	5491	8071	17075
Benidine	1.07	1.09	1.01	1.48	3.14
Benzo(a)anthracene	0.25	0.254	0.236	0.347	0.734
Benzo(a)pyrene	0.025	0.0254	0.0236	0.0347	0.0734
Bis(chloromethyl)ether	2.745	2.79	2.59	3.81	8.06
Bis(2-chloroethyl)ether	428.3	435	405	594	1258
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	75.5	76.7	71.3	104	221
Bromodichloromethane [Dichlorobromomethane]	2750	2794	2599	3820	8082
Bromoform [Tribromomethane]	10600	10771	10017	14725	31153
Cadmium	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	460	467	435	639	1351
Chlordane	0.025	0.0254	0.0236	0.0347	0.0734
Chlorobenzene	27370	27812	25865	38022	80441
Chlorodibromomethane [Dibromochloromethane]	1830	1860	1729	2542	5378
Chloroform [Trichloromethane]	76970	78214	72739	106925	226217
Chromium (hexavalent)	5020	5101	4744	6973	14753
Chrysene	25.2	25.6	23.8	35.0	74.0
Cresols [Methylphenols]	93010	94513	87897	129208	273359
Cyanide (free)	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.02	0.0203	0.0189	0.0277	0.0587
4,4'-DDE	0.0013	0.00132	0.00123	0.00180	0.00382
4,4'-DDT	0.004	0.00406	0.00378	0.00555	0.0117
2,4'-D	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	4730	4806	4470	6570	13901
1,2-Dibromoethane [Ethylene Dibromide]	42.4	43.1	40.1	58.9	124
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	5950	6046	5623	8265	17487
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	32990	33523	31176	45829	96958
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	22.4	22.8	21.2	31.1	65.8
1,2-Dichloroethane	3640	3699	3440	5056	10698
1,1-Dichloroethylene [1,1-Dichloroethene]	551140	560045	520842	765637	1619819
Dichloromethane [Methylene Chloride]	133330	135484	126000	185220	391861
1,2-Dichloropropane	2590	2632	2448	3598	7612
1,3-Dichloropropene [1,3-Dichloropropylene]	1190	1209	1125	1653	3497
Dicofol [Kelthane]	3	3.05	2.84	4.16	8.81
Dieldrin	2.0E-04	0.000203	0.000189	0.000277	0.000587
2,4-Dimethylphenol	84360	85723	79722	117192	247936
Di- <i>n</i> -Butyl Phthalate	924	939	873	1283	2715
Dioxins/Furans [TCDD Equivalents]	7.97E-07	8.10E-07	7.53E-07	0.0000011	0.0000023
Endrin	0.2	0.203	0.189	0.277	0.587
Epichlorohydrin	20130	20455	19023	27964	59162
Ethylbenzene	18670	18972	17644	25936	54871
Ethylene Glycol	1.68E+08	170714544	158764526	233383853	493757675
Fluoride	N/A	N/A	N/A	N/A	N/A
Heptachlor	0.001	0.00102	0.000945	0.00138	0.00293
Heptachlor Epoxide	0.0029	0.00295	0.00274	0.00402	0.00852
Hexachlorobenzene	0.0068	0.00691	0.00643	0.00944	0.0199
Hexachlorobutadiene	2.2	2.24	2.08	3.05	6.46
Hexachlorocyclohexane (<i>alpha</i>)	0.084	0.0854	0.0794	0.116	0.246
Hexachlorocyclohexane (<i>beta</i>)	2.6	2.64	2.46	3.61	7.64
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	3.41	3.47	3.22	4.73	10.0
Hexachlorocyclopentadiene	116	118	110	161	340

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Hexachloroethane	23.3	23.7	22.0	32.3	68.4
Hexachlorophene	29	29.5	27.4	40.2	85.2
4,4'-Isopropylidenediphenol [Bisphenol A]	159820	162402	151034	222020	469716
Lead	38.3	234	218	320	678
Mercury	0.122	0.124	0.115	0.169	0.358
Methoxychlor	30	30.5	28.4	41.6	88.1
Methyl Ethyl Ketone	9.92E+06	10080287	9374667	13780760	29155215
Methyl <i>tert</i> -butyl ether [MTBE]	104820	106514	99058	145614	308069
Nickel	11400	31246	29059	42717	90374
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	18730	19033	17700	26019	55048
N-Nitrosodiethylamine	21	21.3	19.8	29.1	61.7
N-Nitroso-di- <i>n</i> -Butylamine	42	42.7	39.7	58.3	123
Pentachlorobenzene	3.55	3.61	3.35	4.93	10.4
Pentachlorophenol	2.9	2.95	2.74	4.02	8.52
Polychlorinated Biphenyls [PCBs]	6.40E-03	0.00650	0.00605	0.00889	0.0188
Pyridine	9470	9623	8949	13155	27832
Selenium	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	2.4	2.44	2.27	3.33	7.05
1,1,2,2-Tetrachloroethane	263.5	268	249	366	774
Tetrachloroethylene [Tetrachloroethylene]	2800	2845	2646	3889	8229
Thallium	2.3	2.34	2.17	3.19	6.75
Toluene	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.11	0.112	0.104	0.152	0.323
2,4,5-TP [Silvex]	3690	3750	3487	5126	10845
1,1,1-Trichloroethane	7843540	7970276	7412357	10896164	23052429
1,1,2-Trichloroethane	1660	1687	1569	2306	4878
Trichloroethylene [Trichloroethene]	719	731	679	998	2113
2,4,5-Trichlorophenol	18670	18972	17644	25936	54871
TTHM [Sum of Total Trihalomethanes]	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	165	168	156	229	484

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Aquatic Life	70% of	85% of
Parameter	Daily Avg.	Daily Avg.
	(µg/L)	(µg/L)
Aldrin	1.76	2.14
Aluminum	584	709
Arsenic	242	295
Cadmium	0.826	1.00
Carbaryl	1.17	1.43
Chlordane	0.00316	0.00384
Chlorpyrifos	0.0324	0.0394
Chromium (+3)	344	418
Chromium (+6)	8.39	10.1
Copper	28.2	34.2
Cyanide (free)	8.47	10.2
4,4'-DDT	0.000792	0.000962
Demeton	0.0792	0.0962
Diazinon	0.100	0.121
Dicofol	15.6	19.0
Dieldrin	0.00158	0.00192
Diuron	55.4	67.3

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Endosulfan (alpha)	0.0443	0.0538
Endosulfan (beta)	0.0443	0.0538
Endosulfan sulfate	0.0443	0.0538
Endrin	0.00158	0.00192
Guthion	0.00792	0.00962
Heptachlor	0.00316	0.00384
Hexachlorocyclohexane (Lindane)	0.0633	0.0769
Lead	14.6	17.7
Malathion	0.00792	0.00962
Mercury	1.03	1.25
Methoxychlor	0.0237	0.0288
Mirex	0.000792	0.000962
Nickel	129	157
Nonylphenol	5.22	6.34
Parathion (ethyl)	0.0103	0.0125
Pentachlorophenol	8.50	10.3
Phenanthrene	17.6	21.4
Polychlorinated Biphenyls (PCBs)	0.0110	0.0134
Selenium	3.96	4.81
Silver	3.56	4.32
Toxaphene	0.000158	0.000192
Tributyltin (TBT)	0.0190	0.0230
2,4,5 Trichlorophenol	50.7	61.5
Zinc	322	391

Human Health	70% of Daily Avg.	85% of Daily Avg.
Parameter	(µg/L)	(µg/L)
Acrylonitrile	1118	1357
Aldrin	0.000111	0.000135
Anthracene	12806	15551
Antimony	10414	12646
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	5649	6860
Benzidine	1.04	1.26
Benzo(a)anthracene	0.243	0.295
Benzo(a)pyrene	0.0243	0.0295
Bis(chloromethyl)ether	2.66	3.24
Bis(2-chloroethyl)ether	416	505
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	73.4	89.1
Bromodichloromethane [Dichlorobromomethane]	2674	3247
Bromoform [Tribromomethane]	10307	12516
Cadmium	N/A	N/A
Carbon Tetrachloride	447	543
Chlordane	0.0243	0.0295
Chlorobenzene	26615	32318
Chlorodibromomethane [Dibromochloromethane]	1779	2160
Chloroform [Trichloromethane]	74848	90887
Chromium (hexavalent)	4881	5927
Chrysene	24.5	29.7
Cresols [Methylphenols]	90445	109827
Cyanide (free)	N/A	N/A
4,4'-DDD	0.0194	0.0236

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

4,4'-DDE	0.00126	0.00153
4,4'-DDT	0.00388	0.00472
2,4'-D	N/A	N/A
Danitrol [Fenprothrin]	4599	5585
1,2-Dibromoethane [Ethylene Dibromide]	41.2	50.0
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	5785	7025
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	32080	38954
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	21.7	26.4
1,2-Dichloroethane	3539	4298
1,1-Dichloroethylene [1,1-Dichloroethene]	535946	650792
Dichloromethane [Methylene Chloride]	129654	157437
1,2-Dichloropropane	2518	3058
1,3-Dichloropropene [1,3-Dichloropropylene]	1157	1405
Dicofol [Kelthane]	2.91	3.54
Dieldrin	0.000194	0.000236
2,4-Dimethylphenol	82034	99613
Di- <i>n</i> -Butyl Phthalate	898	1091
Dioxins/Furans [TCDD Equivalents]	7.75E-07	9.41E-07
Endrin	0.194	0.236
Epichlorohydrin	19575	23769
Ethylbenzene	18155	22045
Ethylene Glycol	163368697	198376275
Fluoride	N/A	N/A
Heptachlor	0.000972	0.00118
Heptachlor Epoxide	0.00282	0.00342
Hexachlorobenzene	0.00661	0.00802
Hexachlorobutadiene	2.13	2.59
Hexachlorocyclohexane (<i>alpha</i>)	0.0816	0.0991
Hexachlorocyclohexane (<i>beta</i>)	2.52	3.07
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	3.31	4.02
Hexachlorocyclopentadiene	112	136
Hexachloroethane	22.6	27.5
Hexachlorophene	28.2	34.2
4,4'-Isopropylidenediphenol [Bisphenol A]	155414	188717
Lead	224	272
Mercury	0.118	0.144
Methoxychlor	29.1	35.4
Methyl Ethyl Ketone	9646532	11713646
Methyl <i>tert</i> -butyl ether [MTBE]	101930	123772
Nickel	29901	36309
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	18213	22116
N-Nitrosodiethylamine	20.4	24.7
N-Nitroso-di- <i>n</i> -Butylamine	40.8	49.5
Pentachlorobenzene	3.45	4.19
Pentachlorophenol	2.82	3.42
Polychlorinated Biphenyls [PCBs]	0.00622	0.00755
Pyridine	9208	11182
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	2.33	2.83
1,1,1,2-Tetrachloroethane	256	311
Tetrachloroethylene [Tetrachloroethylene]	2722	3306
Thallium	2.23	2.71

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Toluene	N/A	N/A
Toxaphene	0.106	0.129
2,4,5-TP [Silvex]	3588	4357
1,1,1-Trichloroethane	7627314	9261739
1,1,2-Trichloroethane	1614	1960
Trichloroethylene [Trichloroethene]	699	849
2,4,5-Trichlorophenol	18155	22045
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	160	194

Outfall 002

TEXTOX MENU #8 - INTERMITTENT STREAM WITHIN 3 MILES OF A LAKE/RESERVOIR

The water quality-based effluent limitations developed below are calculated using:

Table 1, 2014 Texas Surface Water Quality Standards (30 TAC 307) for Freshwater Aquatic Life

Table 2, 2018 Texas Surface Water Quality Standards for Human Health

"Procedures to Implement the Texas Surface Water Quality Standards," TCEQ, June 2010

PERMIT INFORMATION

Permittee Name:	City of Ennis
TPDES Permit No:	WQ0010443002
Outfall No:	001
Prepared by:	G.Cooper
Date:	May 11, 2022

DISCHARGE INFORMATION

<i>Intermittent Receiving Waterbody:</i>	unnamed tributary
TSS (mg/L) (Intermittent):	6.1
pH (Standard Units) (Intermittent):	7.9
Hardness (mg/L as CaCO ₃) (Intermittent):	96
Chloride (mg/L) (Intermittent):	14
Effluent Flow for Aquatic Life (MGD)	4
% Effluent for Acute Aquatic Life (Intermittent):	100
<i>Lake/Reservoir within 3 miles:</i>	Lake Bardwell
Segment No.:	815
TSS (mg/L) (Lake/Reservoir):	6.1
pH (Standard Units) (Lake/Reservoir):	7.9
Hardness (mg/L as CaCO ₃) (Lake/Reservoir):	96
Chloride (mg/L) (Lake/Reservoir):	14
% Effluent for Chronic Aquatic Life (Lake/Reservoir):	44
% Effluent for Acute Aquatic Life (Lake/Reservoir):	100
Effluent Flow for Human Health (MGD):	4
% Effluent for Human Health (Lake/Reservoir):	22
Human Health Criterion (select: PWS, FISH, or INC)	FISH

CALCULATE DISSOLVED FRACTION (AND ENTER WATER EFFECT RATIO IF APPLICABLE):

<i>Stream/River Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Source</i>	<i>Water Effect Ratio (WER)</i>	<i>Source</i>
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	127852.50	0.562		1.00	Assumed
Cadmium	6.60	-1.13	515913.97	0.241		1.00	Assumed

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Chromium (total)	6.52	-0.93	616088.71	0.210		1.00	Assumed
Chromium (trivalent)	6.52	-0.93	616088.71	0.210		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.02	-0.74	274698.27	0.374		1.00	Assumed
Lead	6.45	-0.80	663339.92	0.198		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	5.69	-0.57	174727.79	0.484		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	372486.27	0.306		1.00	Assumed
Zinc	6.10	-0.70	355033.32	0.316		1.00	Assumed

<i>Lake/Reservoir Metal</i>	<i>Intercept (b)</i>	<i>Slope (m)</i>	<i>Partition Coefficient (Kp)</i>	<i>Dissolved Fraction (Cd/Ct)</i>	<i>Source</i>	<i>Water Effect Ratio (WER)</i>	<i>Source</i>
Aluminum	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Arsenic	5.68	-0.73	127852.50	0.562		1.00	Assumed
Cadmium	6.55	-0.92	672196.97	0.196		1.00	Assumed
Chromium (total)	6.34	-0.27	#####	0.109		1.00	Assumed
Chromium (trivalent)	6.34	-0.27	#####	0.109		1.00	Assumed
Chromium (hexavalent)	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Copper	6.45	-0.90	553609.01	0.228		1.00	Assumed
Lead	6.31	-0.53	783024.21	0.173		1.00	Assumed
Mercury	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Nickel	6.34	-0.76	553540.40	0.228		1.00	Assumed
Selenium	N/A	N/A	N/A	1.00	Assumed	1.00	Assumed
Silver	6.38	-1.03	372486.27	0.306		1.00	Assumed
Zinc	6.52	-0.68	968223.71	0.145		1.00	Assumed

AQUATIC LIFE

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS:

<i>Parameter</i>	<i>FW Acute Criterion (int. stream) (µg/L)</i>	<i>FW Acute Criterion (lake) (µg/L)</i>	<i>FW Chronic Criterion (lake) (µg/L)</i>	<i>WLAa (int. stream) (µg/L)</i>	<i>WLAa (lake) (µg/L)</i>	<i>WLAc (lake) (µg/L)</i>	<i>LTAa (int. stream) (µg/L)</i>	<i>LTAa (lake) (µg/L)</i>	<i>LTAc (lake) (µg/L)</i>	<i>Daily Avg. (µg/L)</i>	<i>Daily Max. (µg/L)</i>
Aldrin	3.0	3.0	N/A	3.00	3.00	N/A	1.72	0.960	N/A	1.41	2.98
Aluminum	991	991	N/A	991	991	N/A	568	317	N/A	466	986
Arsenic	340	340	150	605	605	607	347	194	370	284	602
Cadmium	8.25	8.25	0.239	34.2	42.1	2.77	19.6	13.5	1.69	2.48	5.25
Carbaryl	2.0	2.0	N/A	2.00	2.00	N/A	1.15	0.640	N/A	0.940	1.99
Chlordane	2.4	2.4	0.004	2.40	2.40	0.00909	1.38	0.768	0.00555	0.00815	0.0172
Chlorpyrifos	0.083	0.083	0.041	0.0830	0.0830	0.0932	0.0476	0.0266	0.0568	0.0390	0.0826
Chromium (trivalent)	551	551	71.7	2622	5064	1497	1502	1620	913	1342	2840
Chromium (hexavalent)	15.7	15.7	10.6	15.7	15.7	24.1	9.00	5.02	14.7	7.38	15.6
Copper	13.67	13.67	9.14	36.6	59.8	91.0	21.0	19.1	55.5	28.1	59.5
Cyanide (free)	45.8	45.8	10.7	45.8	45.8	24.3	26.2	14.7	14.8	21.5	45.5
4,4'-DDT	1.1	1.1	0.001	1.10	1.10	0.00227	0.630	0.352	0.00139	0.00203	0.00431
Demeton	N/A	N/A	0.1	N/A	N/A	0.227	N/A	N/A	0.139	0.203	0.431
Diazinon	0.17	0.17	0.17	0.170	0.170	0.386	0.0974	0.0544	0.236	0.0799	0.169
Dicofol [Kelthane]	59.3	59.3	19.8	59.3	59.3	45.0	34.0	19.0	27.5	27.8	59.0
Dieldrin	0.24	0.24	0.002	0.240	0.240	0.00455	0.138	0.0768	0.00277	0.00407	0.00862
Diuron	210	210	70	210	210	159	120	67.2	97.0	98.7	208
Endosulfan I (alpha)	0.22	0.22	0.056	0.220	0.220	0.127	0.126	0.0704	0.0776	0.103	0.218

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Endosulfan II (<i>beta</i>)	0.22	0.22	0.056	0.220	0.220	0.127	0.126	0.0704	0.0776	0.103	0.218
Endosulfan sulfate	0.22	0.22	0.056	0.220	0.220	0.127	0.126	0.0704	0.0776	0.103	0.218
Endrin	0.086	0.086	0.002	0.0860	0.0860	0.00455	0.0493	0.0275	0.00277	0.00407	0.00862
Guthion [Azinphos Methyl]	N/A	N/A	0.01	N/A	N/A	0.0227	N/A	N/A	0.0139	0.0203	0.0431
Heptachlor	0.52	0.52	0.004	0.520	0.520	0.00909	0.298	0.166	0.00555	0.00815	0.0172
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	1.126	1.126	0.08	1.13	1.13	0.182	0.645	0.360	0.111	0.163	0.344
Lead	61.8	61.8	2.41	312	357	31.6	179	114	19.3	28.3	59.9
Malathion	N/A	N/A	0.01	N/A	N/A	0.0227	N/A	N/A	0.0139	0.0203	0.0431
Mercury	2.4	2.4	1.3	2.40	2.40	2.95	1.38	0.768	1.80	1.12	2.38
Methoxychlor	N/A	N/A	0.03	N/A	N/A	0.0682	N/A	N/A	0.0416	0.0611	0.129
Mirex	N/A	N/A	0.001	N/A	N/A	0.00227	N/A	N/A	0.00139	0.00203	0.00431
Nickel	452	452	50.2	934	1980	500	535	634	305	448	948
Nonylphenol	28	28	6.6	28.0	28.0	15.0	16.0	8.96	9.15	13.1	27.8
Parathion (ethyl)	0.065	0.065	0.013	0.0650	0.0650	0.0295	0.0372	0.0208	0.0180	0.0264	0.0560
Pentachlorophenol	21.6	21.6	16.54	21.6	21.6	37.6	12.3	6.90	22.9	10.1	21.4
Phenanthrene	30	30	30	30.0	30.0	68.2	17.2	9.60	41.6	14.1	29.8
Polychlorinated Biphenyls [PCBs]	2.0	2.0	0.014	2.00	2.00	0.0318	1.15	0.640	0.0194	0.0285	0.0603
Selenium	20	20	5	20.0	20.0	11.4	11.5	6.40	6.93	9.40	19.9
Silver	0.8	0.8	N/A	4.65	4.65	N/A	2.67	1.49	N/A	2.18	4.63
Toxaphene	0.78	0.78	0.0002	0.780	0.780	0.000455	0.447	0.250	0.000277	0.000407	0.000862
Tributyltin [TBT]	0.13	0.13	0.024	0.130	0.130	0.0545	0.0745	0.0416	0.0333	0.0489	0.103
2,4,5 Trichlorophenol	136	136	64	136	136	145	77.9	43.5	88.7	63.9	135
Zinc	113.2	113.2	114.1	358	782	1791	205	250	1093	301	638

HUMAN HEALTH

CALCULATE DAILY AVERAGE AND DAILY MAXIMUM EFFLUENT LIMITATIONS

<i>Parameter</i>	<i>Water and Fish</i>			<i>Incidental Fish Criterion</i> (µg/L)	<i>WLAh</i> (µg/L)	<i>LTAh</i> (µg/L)	<i>Daily Avg.</i> (µg/L)	<i>Daily Max.</i> (µg/L)
	<i>Fish Criterion</i> (µg/L)	<i>Fish Only Criterion</i> (µg/L)						
Acrylonitrile	1.0	115		1150	523	486	714	1511
Aldrin	1.146E-05	1.147E-05		1.147E-04	0.0000521	0.0000485	0.0000712	0.000150
Anthracene	1109	1317		13170	5986	5567	8183	17314
Antimony	6	1071		10710	4868	4527	6655	14080
Arsenic	10	N/A		N/A	N/A	N/A	N/A	N/A
Barium	2000	N/A		N/A	N/A	N/A	N/A	N/A
Benzene	5	581		5810	2641	2456	3610	7638
Benzidine	0.0015	0.107		1.07	0.486	0.452	0.664	1.40
Benzo(a)anthracene	0.024	0.025		0.25	0.114	0.106	0.155	0.328
Benzo(a)pyrene	0.0025	0.0025		0.025	0.0114	0.0106	0.0155	0.0328
Bis(chloromethyl)ether	0.0024	0.2745		2.745	1.25	1.16	1.70	3.60
Bis(2-chloroethyl)ether	0.60	42.83		428.3	195	181	266	563
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	6	7.55		75.5	34.3	31.9	46.9	99.2
Bromodichloromethane [Dichlorobromomethane]	10.2	275		2750	1250	1163	1708	3615
Bromoform [Tribromomethane]	66.9	1060		10600	4818	4481	6586	13935
Cadmium	5	N/A		N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	4.5	46		460	209	194	285	604
Chlordane	0.0025	0.0025		0.025	0.0114	0.0106	0.0155	0.0328
Chlorobenzene	100	2737		27370	12441	11570	17007	35982
Chlorodibromomethane [Dibromochloromethane]	7.5	183		1830	832	774	1137	2405
Chloroform [Trichloromethane]	70	7697		76970	34986	32537	47829	101191

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Chromium (hexavalent)	62	502	5020	2282	2122	3119	6599
Chrysene	2.45	2.52	25.2	11.5	10.7	15.6	33.1
Cresols [Methylphenols]	1041	9301	93010	42277	39318	57797	122278
Cyanide (free)	200	N/A	N/A	N/A	N/A	N/A	N/A
4,4'-DDD	0.002	0.002	0.02	0.00909	0.00845	0.0124	0.0262
4,4'-DDE	0.00013	0.00013	0.0013	0.000591	0.000550	0.000807	0.00170
4,4'-DDT	0.0004	0.0004	0.004	0.00182	0.00169	0.00248	0.00525
2,4'-D	70	N/A	N/A	N/A	N/A	N/A	N/A
Danitol [Fenpropathrin]	262	473	4730	2150	2000	2939	6218
1,2-Dibromoethane [Ethylene Dibromide]	0.17	4.24	42.4	19.3	17.9	26.3	55.7
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	322	595	5950	2705	2515	3697	7822
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	600	3299	32990	14995	13946	20500	43371
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	75	N/A	N/A	N/A	N/A	N/A	N/A
3,3'-Dichlorobenzidine	0.79	2.24	22.4	10.2	9.47	13.9	29.4
1,2-Dichloroethane	5	364	3640	1655	1539	2261	4785
1,1-Dichloroethylene [1,1-Dichloroethene]	7	55114	551140	250518	232982	342483	724573
Dichloromethane [Methylene Chloride]	5	13333	133330	60605	56362	82852	175286
1,2-Dichloropropane	5	259	2590	1177	1095	1609	3405
1,3-Dichloropropene [1,3-Dichloropropylene]	2.8	119	1190	541	503	739	1564
Dicofol [Kelthane]	0.30	0.30	3	1.36	1.27	1.86	3.94
Dieldrin	2.0E-05	2.0E-05	2.0E-04	0.0000909	0.0000845	0.000124	0.000262
2,4-Dimethylphenol	444	8436	84360	38345	35661	52422	110906
Di- <i>n</i> -Butyl Phthalate	88.9	92.4	924	420	391	574	1214
Dioxins/Furans [TCDD Equivalents]	7.80E-08	7.97E-08	7.97E-07	3.62E-07	3.37E-07	4.95E-07	0.0000010
Endrin	0.02	0.02	0.2	0.0909	0.0845	0.124	0.262
Epichlorohydrin	53.5	2013	20130	9150	8510	12508	26464
Ethylbenzene	700	1867	18670	8486	7892	11601	24545
Ethylene Glycol	46744	1.68E+07	1.68E+08	76363636	71018182	104396727	220866545
Fluoride	4000	N/A	N/A	N/A	N/A	N/A	N/A
Heptachlor	8.0E-05	0.0001	0.001	0.000455	0.000423	0.000621	0.00131
Heptachlor Epoxide	0.00029	0.00029	0.0029	0.00132	0.00123	0.00180	0.00381
Hexachlorobenzene	0.00068	0.00068	0.0068	0.00309	0.00287	0.00422	0.00893
Hexachlorobutadiene	0.21	0.22	2.2	1.00	0.930	1.36	2.89
Hexachlorocyclohexane (<i>alpha</i>)	0.0078	0.0084	0.084	0.0382	0.0355	0.0521	0.110
Hexachlorocyclohexane (<i>beta</i>)	0.15	0.26	2.6	1.18	1.10	1.61	3.41
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	0.2	0.341	3.41	1.55	1.44	2.11	4.48
Hexachlorocyclopentadiene	10.7	11.6	116	52.7	49.0	72.0	152
Hexachloroethane	1.84	2.33	23.3	10.6	9.85	14.4	30.6
Hexachlorophene	2.05	2.90	29	13.2	12.3	18.0	38.1
4,4'-Isopropylidenediphenol [Bisphenol A]	1092	15982	159820	72645	67560	99313	210112
Lead	1.15	3.83	38.3	101	93.5	137	290
Mercury	0.0122	0.0122	0.122	0.0555	0.0516	0.0758	0.160
Methoxychlor	2.92	3.0	30	13.6	12.7	18.6	39.4
Methyl Ethyl Ketone	13865	9.92E+05	9.92E+06	4509091	4193455	6164378	13041643
Methyl <i>tert</i> -butyl ether [MTBE]	15	10482	104820	47645	44310	65136	137804
Nickel	332	1140	11400	22679	21091	31004	65593
Nitrate-Nitrogen (as Total Nitrogen)	10000	N/A	N/A	N/A	N/A	N/A	N/A
Nitrobenzene	45.7	1873	18730	8514	7918	11638	24623
N-Nitrosodiethylamine	0.0037	2.1	21	9.55	8.88	13.0	27.6
N-Nitroso-di- <i>n</i> -Butylamine	0.119	4.2	42	19.1	17.8	26.0	55.2
Pentachlorobenzene	0.348	0.355	3.55	1.61	1.50	2.20	4.66
Pentachlorophenol	0.22	0.29	2.9	1.32	1.23	1.80	3.81
Polychlorinated Biphenyls [PCBs]	6.4E-04	6.4E-04	6.40E-03	0.00291	0.00271	0.00397	0.00841
Pyridine	23	947	9470	4305	4003	5884	12450

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Selenium	50	N/A	N/A	N/A	N/A	N/A	N/A
1,2,4,5-Tetrachlorobenzene	0.23	0.24	2.4	1.09	1.01	1.49	3.15
1,1,2,2-Tetrachloroethane	1.64	26.35	263.5	120	111	163	346
Tetrachloroethylene [Tetrachloroethylene]	5	280	2800	1273	1184	1739	3681
Thallium	0.12	0.23	2.3	1.05	0.972	1.42	3.02
Toluene	1000	N/A	N/A	N/A	N/A	N/A	N/A
Toxaphene	0.011	0.011	0.11	0.0500	0.0465	0.0683	0.144
2,4,5-TP [Silvex]	50	369	3690	1677	1560	2292	4851
1,1,1-Trichloroethane	200	784354	7843540	3565245	3315678	4874047	10311759
1,1,2-Trichloroethane	5	166	1660	755	702	1031	2182
Trichloroethylene [Trichloroethene]	5	71.9	719	327	304	446	945
2,4,5-Trichlorophenol	1039	1867	18670	8486	7892	11601	24545
TTHM [Sum of Total Trihalomethanes]	80	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	0.23	16.5	165	75.0	69.8	102	216

CALCULATE 70% AND 85% OF DAILY AVERAGE EFFLUENT LIMITATIONS:

Aquatic Life	70% of Daily Avg.	85% of Daily Avg.
Parameter	(µg/L)	(µg/L)
Aldrin	0.987	1.19
Aluminum	326	396
Arsenic	199	241
Cadmium	1.73	2.11
Carbaryl	0.658	0.799
Chlordane	0.00570	0.00692
Chlorpyrifos	0.0273	0.0331
Chromium (trivalent)	939	1141
Chromium (hexavalent)	5.16	6.27
Copper	19.6	23.9
Cyanide (free)	15.0	18.3
4,4'-DDT	0.00142	0.00173
Demeton	0.142	0.173
Diazinon	0.0559	0.0679
Dicofol [Kelthane]	19.5	23.7
Dieldrin	0.00285	0.00346
Diuron	69.1	83.9
Endosulfan I (<i>alpha</i>)	0.0724	0.0879
Endosulfan II (<i>beta</i>)	0.0724	0.0879
Endosulfan sulfate	0.0724	0.0879
Endrin	0.00285	0.00346
Guthion [Azinphos Methyl]	0.0142	0.0173
Heptachlor	0.00570	0.00692
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	0.114	0.138
Lead	19.8	24.0
Malathion	0.0142	0.0173
Mercury	0.790	0.959
Methoxychlor	0.0427	0.0519
Mirex	0.00142	0.00173
Nickel	313	380
Nonylphenol	9.21	11.1
Parathion (ethyl)	0.0185	0.0225
Pentachlorophenol	7.09	8.61
Phenanthrene	9.87	11.9

City of Ennis TPDES Permit No. WQ0010443002
 Fact Sheet and Executive Director's Preliminary Decision

Polychlorinated Biphenyls [PCBs]	0.0199	0.0242
Selenium	6.58	7.99
Silver	1.53	1.86
Toxaphene	0.000285	0.000346
Tributyltin [TBT]	0.0342	0.0415
2,4,5 Trichlorophenol	44.7	54.3
Zinc	211	256

Human Health	70% of Daily Avg.	85% of Daily Avg.
Parameter	(µg/L)	(µg/L)
Acrylonitrile	500	607
Aldrin	0.0000498	0.0000605
Anthracene	5728	6956
Antimony	4658	5656
Arsenic	N/A	N/A
Barium	N/A	N/A
Benzene	2527	3068
Benzidine	0.465	0.565
Benzo(a)anthracene	0.108	0.132
Benzo(a)pyrene	0.0108	0.0132
Bis(chloromethyl)ether	1.19	1.44
Bis(2-chloroethyl)ether	186	226
Bis(2-ethylhexyl) phthalate [Di(2-ethylhexyl) phthalate]	32.8	39.8
Bromodichloromethane [Dichlorobromomethane]	1196	1452
Bromoform [Tribromomethane]	4610	5598
Cadmium	N/A	N/A
Carbon Tetrachloride	200	242
Chlordane	0.0108	0.0132
Chlorobenzene	11905	14456
Chlorodibromomethane [Dibromochloromethane]	796	966
Chloroform [Trichloromethane]	33480	40655
Chromium (hexavalent)	2183	2651
Chrysene	10.9	13.3
Cresols [Methylphenols]	40458	49127
Cyanide (free)	N/A	N/A
4,4'-DDD	0.00869	0.0105
4,4'-DDE	0.000565	0.000686
4,4'-DDT	0.00173	0.00211
2,4'-D	N/A	N/A
Danitol [Fenprothrin]	2057	2498
1,2-Dibromoethane [Ethylene Dibromide]	18.4	22.3
<i>m</i> -Dichlorobenzene [1,3-Dichlorobenzene]	2588	3142
<i>o</i> -Dichlorobenzene [1,2-Dichlorobenzene]	14350	17425
<i>p</i> -Dichlorobenzene [1,4-Dichlorobenzene]	N/A	N/A
3,3'-Dichlorobenzidine	9.74	11.8
1,2-Dichloroethane	1583	1922
1,1-Dichloroethylene [1,1-Dichloroethene]	239738	291110
Dichloromethane [Methylene Chloride]	57996	70424
1,2-Dichloropropane	1126	1368
1,3-Dichloropropene [1,3-Dichloropropylene]	517	628
Dicofol [Kelthane]	1.30	1.58
Dieldrin	0.0000869	0.000105

City of Ennis TPDES Permit No. WQ0010443002
Fact Sheet and Executive Director's Preliminary Decision

2,4-Dimethylphenol	36695	44558
Di- <i>n</i> -Butyl Phthalate	401	488
Dioxins/Furans [TCDD Equivalents]	3.46E-07	4.20E-07
Endrin	0.0869	0.105
Epichlorohydrin	8756	10632
Ethylbenzene	8121	9861
Ethylene Glycol	73077709	88737218
Fluoride	N/A	N/A
Heptachlor	0.000434	0.000528
Heptachlor Epoxide	0.00126	0.00153
Hexachlorobenzene	0.00295	0.00359
Hexachlorobutadiene	0.956	1.16
Hexachlorocyclohexane (<i>alpha</i>)	0.0365	0.0443
Hexachlorocyclohexane (<i>beta</i>)	1.13	1.37
Hexachlorocyclohexane (<i>gamma</i>) [Lindane]	1.48	1.80
Hexachlorocyclopentadiene	50.4	61.2
Hexachloroethane	10.1	12.3
Hexachlorophene	12.6	15.3
4,4'-Isopropylidenediphenol [Bisphenol A]	69519	84416
Lead	96.2	116
Mercury	0.0530	0.0644
Methoxychlor	13.0	15.8
Methyl Ethyl Ketone	4315064	5239721
Methyl <i>tert</i> -butyl ether [MTBE]	45595	55365
Nickel	21702	26353
Nitrate-Nitrogen (as Total Nitrogen)	N/A	N/A
Nitrobenzene	8147	9893
N-Nitrosodiethylamine	9.13	11.0
N-Nitroso-di- <i>n</i> -Butylamine	18.2	22.1
Pentachlorobenzene	1.54	1.87
Pentachlorophenol	1.26	1.53
Polychlorinated Biphenyls [PCBs]	0.00278	0.00338
Pyridine	4119	5002
Selenium	N/A	N/A
1,2,4,5-Tetrachlorobenzene	1.04	1.26
1,1,2,2-Tetrachloroethane	114	139
Tetrachloroethylene [Tetrachloroethylene]	1217	1478
Thallium	1.00	1.21
Toluene	N/A	N/A
Toxaphene	0.0478	0.0581
2,4,5-TP [Silvex]	1605	1949
1,1,1-Trichloroethane	3411832	4142940
1,1,2-Trichloroethane	722	876
Trichloroethylene [Trichloroethene]	312	379
2,4,5-Trichlorophenol	8121	9861
TTHM [Sum of Total Trihalomethanes]	N/A	N/A
Vinyl Chloride	71.7	87.1



TPDES PERMIT NO.
WQ0010443002
*[For TCEQ office use only - EPA I.D.
No. TX0047261]*

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

This major amendment supersedes and replaces TPDES Permit No. WQ0010443002 issued on August 30, 2017.

PERMIT TO DISCHARGE WASTES
under provisions of
Section 402 of the Clean Water Act
and Chapter 26 of the Texas Water Code

City of Ennis

whose mailing address is

107 N Sherman Street
Ennis, Texas 75119

is authorized to treat and discharge wastes from the Oak Grove Wastewater Treatment Facility, SIC Code 4952

located at 401 West Plant Road, Ennis in Ellis County, Texas 75119

to via Outfall 001 to Cummins Creek, thence to Chambers Creek Above Richland-Chamber Reservoir in Segment 0814 of the Trinity River Basin; and via proposed Outfall 002 and pipe to an unnamed tributary, thence to Bardwell Reservoir in Segment No. 0815 of the Trinity River Basin

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

This permit shall expire at midnight, **five years from the date of issuance.**

ISSUED DATE:

For the Commission

INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Numbers 001 and 002

1. During the period beginning upon the date of issuance and lasting through the completion of expansion to the 4.0 million gallons per day (MGD) facility, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 3.1 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 5,764 gallons per minute. The combined annual average flow of effluent via Outfalls 001 and 002 shall not exceed 3.1 MGD

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
	mg/l (lbs/day) Report	mg/l N/A	mg/l Report	mg/l N/A	Continuous	Totalizing Meter
Flow, MGD						
Carbonaceous Biochemical Oxygen Demand (5-day)	7 (181*)	12	22	32	Two/week	Composite
Total Suspended Solids	15 (388*)	25	40	60	Two/week	Composite
Ammonia Nitrogen	2 (52*)	5	10	15	Two/week	Composite
Total Dissolved Solids**	Report (Report)	N/A	Report	N/A	One/week	Composite
Chloride**	Report (Report)	N/A	Report	N/A	One/week	Composite
<i>E. coli</i> , CFU or MPN*** per 100 ml	126	N/A	399	N/A	One/week	Grab

*Combined 30-day average lbs/day limit for Outfalls 001 and 002.

**Applicable only to discharges made via Outfall 001.

***CFU or MPN - colony-forming units or most probable number

2. The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Outfall Numbers 001 and 002

1. During the period beginning upon the date of completion of expansion to the 4.0 million gallons per day (MGD) phase and lasting through the date of expiration, the permittee is authorized to discharge subject to the following effluent limitations:

The annual average flow of effluent shall not exceed 4.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 5,764 gallons per minute. The combined annual average flow of effluent via Outfalls 001 and 002 shall not exceed 4.0 MGD

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg	7-day Avg	Daily Max	Single Grab	Report Daily Avg. & Daily Max. Measurement	
	mg/l (lbs/day) Report	mg/l N/A	mg/l Report	mg/l N/A	Frequency Continuous	Sample Type Totalizing Meter
Flow, MGD						
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (167*)	10	20	30	Two/week	Composite
Total Suspended Solids	12 (400*)	20	40	60	Two/week	Composite
Ammonia Nitrogen	2 (67*)	5	10	15	Two/week	Composite
Total Dissolved Solids**	Report (Report)	N/A	Report	N/A	One/week	Composite
Chloride**	Report (Report)	N/A	Report	N/A	One/week	Composite
<i>E. coli</i> , CFU or MPN*** per 100 ml	126	N/A	399	N/A	One/week	Grab

*The combined 30-day average lbs/day limit for Outfalls 001 and 002.

**Applicable only to discharges made via Outfall 001.

***CFU or MPN - colony-forming units or most probable number

2. The effluent shall contain a total chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l total chlorine residual and shall monitor total chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
5. Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
6. The effluent shall contain a minimum dissolved oxygen of 6.0 mg/l and shall be monitored twice per week by grab sample.
7. The annual average flow and maximum 2-hour peak flow shall be reported monthly.

DEFINITIONS AND STANDARD PERMIT CONDITIONS

As required by Title 30 Texas Administrative Code (TAC) Chapter 305, certain regulations appear as standard conditions in waste discharge permits. 30 TAC § 305.121 - 305.129 (relating to Permit Characteristics and Conditions) as promulgated under the Texas Water Code (TWC) §§ 5.103 and 5.105, and the Texas Health and Safety Code (THSC) §§ 361.017 and 361.024(a), establish the characteristics and standards for waste discharge permits, including sewage sludge, and those sections of 40 Code of Federal Regulations (CFR) Part 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in TWC § 26.001 and 30 TAC Chapter 305 shall apply to this permit and are incorporated by reference. Some specific definitions of words or phrases used in this permit are as follows:

1. Flow Measurements

- a. Annual average flow - the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months. The annual average flow determination shall consist of daily flow volume determinations made by a totalizing meter, charted on a chart recorder and limited to major domestic wastewater discharge facilities with one million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily flow within a period of one calendar month. The daily average flow determination shall consist of determinations made on at least four separate days. If instantaneous measurements are used to determine the daily flow, the determination shall be the arithmetic average of all instantaneous measurements taken during that month. Daily average flow determination for intermittent discharges shall consist of a minimum of three flow determinations on days of discharge.
- c. Daily maximum flow - the highest total flow for any 24-hour period in a calendar month.
- d. Instantaneous flow - the measured flow during the minimum time required to interpret the flow measuring device.
- e. 2-hour peak flow (domestic wastewater treatment plants) - the maximum flow sustained for a two-hour period during the period of daily discharge. The average of multiple measurements of instantaneous maximum flow within a two-hour period may be used to calculate the 2-hour peak flow.
- f. Maximum 2-hour peak flow (domestic wastewater treatment plants) - the highest 2-hour peak flow for any 24-hour period in a calendar month.

2. Concentration Measurements

- a. Daily average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar month, consisting of at least four separate representative measurements.
 - i. For domestic wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values in the previous four consecutive month period consisting of at least four measurements shall be utilized as the daily average concentration.

- ii. For all other wastewater treatment plants - When four samples are not available in a calendar month, the arithmetic average (weighted by flow) of all values taken during the month shall be utilized as the daily average concentration.
- b. 7-day average concentration - the arithmetic average of all effluent samples, composite or grab as required by this permit, within a period of one calendar week, Sunday through Saturday.
- c. Daily maximum concentration - the maximum concentration measured on a single day, by the sample type specified in the permit, within a period of one calendar month.
- d. Daily discharge - the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the average measurement of the pollutant over the sampling day.

The daily discharge determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the daily discharge determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that day.

- e. Bacteria concentration (*E. coli* or Enterococci) - Colony Forming Units (CFU) or Most Probable Number (MPN) of bacteria per 100 milliliters effluent. The daily average bacteria concentration is a geometric mean of the values for the effluent samples collected in a calendar month. The geometric mean shall be determined by calculating the n th root of the product of all measurements made in a calendar month, where n equals the number of measurements made; or, computed as the antilogarithm of the arithmetic mean of the logarithms of all measurements made in a calendar month. For any measurement of bacteria equaling zero, a substituted value of one shall be made for input into either computation method. If specified, the 7-day average for bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
 - f. Daily average loading (lbs/day) - the arithmetic average of all daily discharge loading calculations during a period of one calendar month. These calculations must be made for each day of the month that a parameter is analyzed. The daily discharge, in terms of mass (lbs/day), is calculated as (Flow, MGD x Concentration, mg/l x 8.34).
 - g. Daily maximum loading (lbs/day) - the highest daily discharge, in terms of mass (lbs/day), within a period of one calendar month.
3. Sample Type
- a. Composite sample - For domestic wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (a). For industrial wastewater, a composite sample is a sample made up of a minimum of three effluent portions collected in a continuous 24-hour period or during the period of daily discharge if less than 24 hours, and combined in volumes proportional to flow, and collected at the intervals required by 30 TAC § 319.9 (b).

- b. Grab sample - an individual sample collected in less than 15 minutes.
4. Treatment Facility (facility) - wastewater facilities used in the conveyance, storage, treatment, recycling, reclamation and/or disposal of domestic sewage, industrial wastes, agricultural wastes, recreational wastes, or other wastes including sludge handling or disposal facilities under the jurisdiction of the Commission.
5. The term "sewage sludge" is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in 30 TAC Chapter 312. This includes the solids that have not been classified as hazardous waste separated from wastewater by unit processes.
6. The term "biosolids" is defined as sewage sludge that has been tested or processed to meet Class A, Class AB, or Class B pathogen standards in 30 TAC Chapter 312 for beneficial use.
7. Bypass - the intentional diversion of a waste stream from any portion of a treatment facility.

MONITORING AND REPORTING REQUIREMENTS

1. Self-Reporting

Monitoring results shall be provided at the intervals specified in the permit. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall conduct effluent sampling and reporting in accordance with 30 TAC §§ 319.4 - 319.12. Unless otherwise specified, effluent monitoring data shall be submitted each month, to the Compliance Monitoring Team of the Enforcement Division (MC 224), by the 20th day of the following month for each discharge which is described by this permit whether or not a discharge is made for that month. Monitoring results must be submitted online using the NetDMR reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. Monitoring results must be signed and certified as required by Monitoring and Reporting Requirements No. 10.

As provided by state law, the permittee is subject to administrative, civil and criminal penalties, as applicable, for negligently or knowingly violating the Clean Water Act (CWA); TWC §§ 26, 27, and 28; and THSC § 361, including but not limited to knowingly making any false statement, representation, or certification on any report, record, or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or falsifying, tampering with or knowingly rendering inaccurate any monitoring device or method required by this permit or violating any other requirement imposed by state or federal regulations.

2. Test Procedures

- a. Unless otherwise specified in this permit, test procedures for the analysis of pollutants shall comply with procedures specified in 30 TAC §§ 319.11 - 319.12. Measurements, tests, and calculations shall be accurately accomplished in a representative manner.
- b. All laboratory tests submitted to demonstrate compliance with this permit must meet the requirements of 30 TAC § 25, Environmental Testing Laboratory Accreditation and Certification.

3. Records of Results

- a. Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

- b. Except for records of monitoring information required by this permit related to the permittee's sewage sludge or biosolids use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), monitoring and reporting records, including strip charts and records of calibration and maintenance, copies of all records required by this permit, records of all data used to complete the application for this permit, and the certification required by 40 CFR § 264.73(b)(9) shall be retained at the facility site, or shall be readily available for review by a TCEQ representative for a period of three years from the date of the record or sample, measurement, report, application or certification. This period shall be extended at the request of the Executive Director.
- c. Records of monitoring activities shall include the following:
 - i. date, time and place of sample or measurement;
 - ii. identity of individual who collected the sample or made the measurement.
 - iii. date and time of analysis;
 - iv. identity of the individual and laboratory who performed the analysis;
 - v. the technique or method of analysis; and
 - vi. the results of the analysis or measurement and quality assurance/quality control records.

The period during which records are required to be kept shall be automatically extended to the date of the final disposition of any administrative or judicial enforcement action that may be instituted against the permittee.

4. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit using approved analytical methods as specified above, all results of such monitoring shall be included in the calculation and reporting of the values submitted on the approved self-report form. Increased frequency of sampling shall be indicated on the self-report form.

5. Calibration of Instruments

All automatic flow measuring or recording devices and all totalizing meters for measuring flows shall be accurately calibrated by a trained person at plant start-up and as often thereafter as necessary to ensure accuracy, but not less often than annually unless authorized by the Executive Director for a longer period. Such person shall verify in writing that the device is operating properly and giving accurate results. Copies of the verification shall be retained at the facility site and/or shall be readily available for review by a TCEQ representative for a period of three years.

6. Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224).

7. Noncompliance Notification

- a. In accordance with 30 TAC § 305.125(9) any noncompliance which may endanger human health or safety, or the environment shall be reported by the permittee to the TCEQ. Except as allowed by 30 TAC § 305.132, report of such information shall be provided orally or by facsimile transmission (FAX) to the Regional Office within 24 hours of becoming aware of the noncompliance. A written submission of such information shall also be provided by the permittee to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within five working days of becoming aware of the noncompliance. For Publicly Owned Treatment Works (POTWs), effective December 21, 2025, the permittee must submit the written report for unauthorized discharges and unanticipated bypasses that exceed any effluent limit in the permit using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.
 - b. The following violations shall be reported under Monitoring and Reporting Requirement 7.a.:
 - i. Unauthorized discharges as defined in Permit Condition 2(g).
 - ii. Any unanticipated bypass that exceeds any effluent limitation in the permit.
 - iii. Violation of a permitted maximum daily discharge limitation for pollutants listed specifically in the Other Requirements section of an Industrial TPDES permit.
 - c. In addition to the above, any effluent violation which deviates from the permitted effluent limitation by more than 40% shall be reported by the permittee in writing to the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) within 5 working days of becoming aware of the noncompliance.
 - d. Any noncompliance other than that specified in this section, or any required information not submitted or submitted incorrectly, shall be reported to the Compliance Monitoring Team of the Enforcement Division (MC 224) as promptly as possible. For effluent limitation violations, noncompliances shall be reported on the approved self-report form.
8. In accordance with the procedures described in 30 TAC §§ 35.301 - 35.303 (relating to Water Quality Emergency and Temporary Orders) if the permittee knows in advance of the need for a bypass, it shall submit prior notice by applying for such authorization.

9. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Regional Office, orally or by facsimile transmission within 24 hours, and both the Regional Office and the Compliance Monitoring Team of the Enforcement Division (MC 224) in writing within five (5) working days, after becoming aware of or having reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - i. One hundred micrograms per liter (100 µg/L);
 - ii. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
 - iv. The level established by the TCEQ.
- b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - i. Five hundred micrograms per liter (500 µg/L);
 - ii. One milligram per liter (1 mg/L) for antimony;
 - iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
 - iv. The level established by the TCEQ.

10. Signatories to Reports

All reports and other information requested by the Executive Director shall be signed by the person and in the manner required by 30 TAC § 305.128 (relating to Signatories to Reports).

11. All POTWs must provide adequate notice to the Executive Director of the following:

- a. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to CWA § 301 or § 306 if it were directly discharging those pollutants;
- b. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit; and
- c. For the purpose of this paragraph, adequate notice shall include information on:
 - i. The quality and quantity of effluent introduced into the POTW; and
 - ii. Any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

PERMIT CONDITIONS

1. General

- a. When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in an application or in any report to the Executive Director, it shall promptly submit such facts or information.
- b. This permit is granted on the basis of the information supplied and representations made by the permittee during action on an application, and relying upon the accuracy and completeness of that information and those representations. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked, in whole or in part, in accordance with 30 TAC Chapter 305, Subchapter D, during its term for good cause including, but not limited to, the following:
 - i. Violation of any terms or conditions of this permit;
 - ii. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
 - iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- c. The permittee shall furnish to the Executive Director, upon request and within a reasonable time, any information to determine whether cause exists for amending, revoking, suspending or terminating the permit. The permittee shall also furnish to the Executive Director, upon request, copies of records required to be kept by the permit.

2. Compliance

- a. Acceptance of the permit by the person to whom it is issued constitutes acknowledgment and agreement that such person will comply with all the terms and conditions embodied in the permit, and the rules and other orders of the Commission.
- b. The permittee has a duty to comply with all conditions of the permit. Failure to comply with any permit condition constitutes a violation of the permit and the Texas Water Code or the Texas Health and Safety Code, and is grounds for enforcement action, for permit amendment, revocation, or suspension, or for denial of a permit renewal application or an application for a permit for another facility.
- c. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
- d. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal or other permit violation that has a reasonable likelihood of adversely affecting human health or the environment.
- e. Authorization from the Commission is required before beginning any change in the permitted facility or activity that may result in noncompliance with any permit requirements.

- f. A permit may be amended, suspended and reissued, or revoked for cause in accordance with 30 TAC §§ 305.62 and 305.66 and TWC§ 7.302. The filing of a request by the permittee for a permit amendment, suspension and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
 - g. There shall be no unauthorized discharge of wastewater or any other waste. For the purpose of this permit, an unauthorized discharge is considered to be any discharge of wastewater into or adjacent to water in the state at any location not permitted as an outfall or otherwise defined in the Other Requirements section of this permit.
 - h. In accordance with 30 TAC § 305.535(a), the permittee may allow any bypass to occur from a TPDES permitted facility which does not cause permitted effluent limitations to be exceeded or an unauthorized discharge to occur, but only if the bypass is also for essential maintenance to assure efficient operation.
 - i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under TWC §§ 7.051 - 7.075 (relating to Administrative Penalties), 7.101 - 7.111 (relating to Civil Penalties), and 7.141 - 7.202 (relating to Criminal Offenses and Penalties) for violations including, but not limited to, negligently or knowingly violating the federal CWA §§ 301, 302, 306, 307, 308, 318, or 405, or any condition or limitation implementing any sections in a permit issued under the CWA § 402, or any requirement imposed in a pretreatment program approved under the CWA §§ 402 (a)(3) or 402 (b)(8).
3. Inspections and Entry
- a. Inspection and entry shall be allowed as prescribed in the TWC Chapters 26, 27, and 28, and THSC § 361.
 - b. The members of the Commission and employees and agents of the Commission are entitled to enter any public or private property at any reasonable time for the purpose of inspecting and investigating conditions relating to the quality of water in the state or the compliance with any rule, regulation, permit or other order of the Commission. Members, employees, or agents of the Commission and Commission contractors are entitled to enter public or private property at any reasonable time to investigate or monitor or, if the responsible party is not responsive or there is an immediate danger to public health or the environment, to remove or remediate a condition related to the quality of water in the state. Members, employees, Commission contractors, or agents acting under this authority who enter private property shall observe the establishment's rules and regulations concerning safety, internal security, and fire protection, and if the property has management in residence, shall notify management or the person then in charge of his presence and shall exhibit proper credentials. If any member, employee, Commission contractor, or agent is refused the right to enter in or on public or private property under this authority, the Executive Director may invoke the remedies authorized in TWC § 7.002. The statement above, that Commission entry shall occur in accordance with an establishment's rules and regulations concerning safety, internal security, and fire protection, is not grounds for denial or restriction of entry to any part of the facility, but merely describes the Commission's duty to observe appropriate rules and regulations during an inspection.

4. Permit Amendment and/or Renewal

- a. The permittee shall give notice to the Executive Director as soon as possible of any planned physical alterations or additions to the permitted facility if such alterations or additions would require a permit amendment or result in a violation of permit requirements. Notice shall also be required under this paragraph when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in accordance with 30 TAC § 305.534 (relating to New Sources and New Dischargers); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 9; or
 - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
- b. Prior to any facility modifications, additions, or expansions that will increase the plant capacity beyond the permitted flow, the permittee must apply for and obtain proper authorization from the Commission before commencing construction.
- c. The permittee must apply for an amendment or renewal at least 180 days prior to expiration of the existing permit in order to continue a permitted activity after the expiration date of the permit. If an application is submitted prior to the expiration date of the permit, the existing permit shall remain in effect until the application is approved, denied, or returned. If the application is returned or denied, authorization to continue such activity shall terminate upon the effective date of the action. If an application is not submitted prior to the expiration date of the permit, the permit shall expire and authorization to continue such activity shall terminate.
- d. Prior to accepting or generating wastes which are not described in the permit application or which would result in a significant change in the quantity or quality of the existing discharge, the permittee must report the proposed changes to the Commission. The permittee must apply for a permit amendment reflecting any necessary changes in permit conditions, including effluent limitations for pollutants not identified and limited by this permit.
- e. In accordance with the TWC § 26.029(b), after a public hearing, notice of which shall be given to the permittee, the Commission may require the permittee, from time to time, for good cause, in accordance with applicable laws, to conform to new or additional conditions.
- f. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under CWA § 307(a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or

prohibition. The permittee shall comply with effluent standards or prohibitions established under CWA § 307(a) for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5. Permit Transfer

- a. Prior to any transfer of this permit, Commission approval must be obtained. The Commission shall be notified in writing of any change in control or ownership of facilities authorized by this permit. Such notification should be sent to the Applications Review and Processing Team (MC 148) of the Water Quality Division.
- b. A permit may be transferred only according to the provisions of 30 TAC § 305.64 (relating to Transfer of Permits) and 30 TAC § 50.133 (relating to Executive Director Action on Application or WQMP update).

6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal that requires a permit or other authorization pursuant to the Texas Health and Safety Code.

7. Relationship to Water Rights

Disposal of treated effluent by any means other than discharge directly to water in the state must be specifically authorized in this permit and may require a permit pursuant to TWC Chapter 11.

8. Property Rights

A permit does not convey any property rights of any sort, or any exclusive privilege.

9. Permit Enforceability

The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

10. Relationship to Permit Application

The application pursuant to which the permit has been issued is incorporated herein; provided, however, that in the event of a conflict between the provisions of this permit and the application, the provisions of the permit shall control.

11. Notice of Bankruptcy

- a. Each permittee shall notify the Executive Director, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of Title 11 (Bankruptcy) of the United States Code (11 USC) by or against:
 - i. the permittee;
 - ii. an entity (as that term is defined in 11 USC, § 101(14)) controlling the permittee or listing the permit or permittee as property of the estate; or

- iii. an affiliate (as that term is defined in 11 USC, § 101(2)) of the permittee.
- b. This notification must indicate:
 - i. the name of the permittee;
 - ii. the permit number(s);
 - iii. the bankruptcy court in which the petition for bankruptcy was filed; and
 - iv. the date of filing of the petition.

OPERATIONAL REQUIREMENTS

1. The permittee shall at all times ensure that the facility and all of its systems of collection, treatment, and disposal are properly operated and maintained. This includes, but is not limited to, the regular, periodic examination of wastewater solids within the treatment plant by the operator in order to maintain an appropriate quantity and quality of solids inventory as described in the various operator training manuals and according to accepted industry standards for process control. Process control, maintenance, and operations records shall be retained at the facility site, or shall be readily available for review by a TCEQ representative, for a period of three years.
2. Upon request by the Executive Director, the permittee shall take appropriate samples and provide proper analysis in order to demonstrate compliance with Commission rules. Unless otherwise specified in this permit or otherwise ordered by the Commission, the permittee shall comply with all applicable provisions of 30 TAC Chapter 312 concerning sewage sludge or biosolids use and disposal and 30 TAC §§ 319.21 - 319.29 concerning the discharge of certain hazardous metals.
3. Domestic wastewater treatment facilities shall comply with the following provisions:
 - a. The permittee shall notify the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, of any facility expansion at least 90 days prior to conducting such activity.
 - b. The permittee shall submit a closure plan for review and approval to the Municipal Permits Team, Wastewater Permitting Section (MC 148) of the Water Quality Division, for any closure activity at least 90 days prior to conducting such activity. Closure is the act of permanently taking a waste management unit or treatment facility out of service and includes the permanent removal from service of any pit, tank, pond, lagoon, surface impoundment and/or other treatment unit regulated by this permit.
4. The permittee is responsible for installing prior to plant start-up, and subsequently maintaining, adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failures by means of alternate power sources, standby generators, and/or retention of inadequately treated wastewater.
5. Unless otherwise specified, the permittee shall provide a readily accessible sampling point and, where applicable, an effluent flow measuring device or other acceptable means by which effluent flow may be determined.

6. The permittee shall remit an annual water quality fee to the Commission as required by 30 TAC Chapter 21. Failure to pay the fee may result in revocation of this permit under TWC § 7.302(b)(6).

7. Documentation

For all written notifications to the Commission required of the permittee by this permit, the permittee shall keep and make available a copy of each such notification under the same conditions as self-monitoring data are required to be kept and made available. Except for information required for TPDES permit applications, effluent data, including effluent data in permits, draft permits and permit applications, and other information specified as not confidential in 30 TAC §§ 1.5(d), any information submitted pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted in the manner prescribed in the application form or by stamping the words confidential business information on each page containing such information. If no claim is made at the time of submission, information may be made available to the public without further notice. If the Commission or Executive Director agrees with the designation of confidentiality, the TCEQ will not provide the information for public inspection unless required by the Texas Attorney General or a court pursuant to an open records request. If the Executive Director does not agree with the designation of confidentiality, the person submitting the information will be notified.

8. Facilities that generate domestic wastewater shall comply with the following provisions; domestic wastewater treatment facilities at permitted industrial sites are excluded.
 - a. Whenever flow measurements for any domestic sewage treatment facility reach 75% of the permitted daily average or annual average flow for three consecutive months, the permittee must initiate engineering and financial planning for expansion and/or upgrading of the domestic wastewater treatment and/or collection facilities. Whenever the flow reaches 90% of the permitted daily average or annual average flow for three consecutive months, the permittee shall obtain necessary authorization from the Commission to commence construction of the necessary additional treatment and/or collection facilities. In the case of a domestic wastewater treatment facility which reaches 75% of the permitted daily average or annual average flow for three consecutive months, and the planned population to be served or the quantity of waste produced is not expected to exceed the design limitations of the treatment facility, the permittee shall submit an engineering report supporting this claim to the Executive Director of the Commission.

If in the judgment of the Executive Director the population to be served will not cause permit noncompliance, then the requirement of this section may be waived. To be effective, any waiver must be in writing and signed by the Director of the Enforcement Division (MC 219) of the Commission, and such waiver of these requirements will be reviewed upon expiration of the existing permit; however, any such waiver shall not be interpreted as condoning or excusing any violation of any permit parameter.

- b. The plans and specifications for domestic sewage collection and treatment works associated with any domestic permit must be approved by the Commission and failure to secure approval before commencing construction of such works or making a discharge is a violation of this permit and each day is an additional violation until approval has been secured.

- c. Permits for domestic wastewater treatment plants are granted subject to the policy of the Commission to encourage the development of area-wide waste collection, treatment, and disposal systems. The Commission reserves the right to amend any domestic wastewater permit in accordance with applicable procedural requirements to require the system covered by this permit to be integrated into an area-wide system, should such be developed; to require the delivery of the wastes authorized to be collected in, treated by or discharged from said system, to such area-wide system; or to amend this permit in any other particular to effectuate the Commission's policy. Such amendments may be made when the changes required are advisable for water quality control purposes and are feasible on the basis of waste treatment technology, engineering, financial, and related considerations existing at the time the changes are required, exclusive of the loss of investment in or revenues from any then existing or proposed waste collection, treatment or disposal system.
9. Domestic wastewater treatment plants shall be operated and maintained by sewage plant operators holding a valid certificate of competency at the required level as defined in 30 TAC Chapter 30.
10. For Publicly Owned Treatment Works (POTWs), the 30-day average (or monthly average) percent removal for BOD and TSS shall not be less than 85%, unless otherwise authorized by this permit.
11. Facilities that generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
 - a. Any solid waste, as defined in 30 TAC § 335.1 (including but not limited to such wastes as garbage, refuse, sludge from a waste treatment, water supply treatment plant or air pollution control facility, discarded materials, discarded materials to be recycled, whether the waste is solid, liquid, or semisolid), generated by the permittee during the management and treatment of wastewater, must be managed in accordance with all applicable provisions of 30 TAC Chapter 335, relating to Industrial Solid Waste Management.
 - b. Industrial wastewater that is being collected, accumulated, stored, or processed before discharge through any final discharge outfall, specified by this permit, is considered to be industrial solid waste until the wastewater passes through the actual point source discharge and must be managed in accordance with all applicable provisions of 30 TAC Chapter 335.
 - c. The permittee shall provide written notification, pursuant to the requirements of 30 TAC § 335.8(b)(1), to the Corrective Action Section (MC 127) of the Remediation Division informing the Commission of any closure activity involving an Industrial Solid Waste Management Unit, at least 90 days prior to conducting such an activity.
 - d. Construction of any industrial solid waste management unit requires the prior written notification of the proposed activity to the Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division. No person shall dispose of industrial solid waste, including sludge or other solids from wastewater treatment processes, prior to fulfilling the deed recordation requirements of 30 TAC § 335.5.

- e. The term “industrial solid waste management unit” means a landfill, surface impoundment, waste-pile, industrial furnace, incinerator, cement kiln, injection well, container, drum, salt dome waste containment cavern, or any other structure vessel, appurtenance, or other improvement on land used to manage industrial solid waste.
- f. The permittee shall keep management records for all sludge (or other waste) removed from any wastewater treatment process. These records shall fulfill all applicable requirements of 30 TAC § 335 and must include the following, as it pertains to wastewater treatment and discharge:
 - i. Volume of waste and date(s) generated from treatment process;
 - ii. Volume of waste disposed of on-site or shipped off-site;
 - iii. Date(s) of disposal;
 - iv. Identity of hauler or transporter;
 - v. Location of disposal site; and
 - vi. Method of final disposal.

The above records shall be maintained on a monthly basis. The records shall be retained at the facility site, or shall be readily available for review by authorized representatives of the TCEQ for at least five years.

- 12. For industrial facilities to which the requirements of 30 TAC § 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with THSC § 361.

TCEQ Revision 06/2020

SLUDGE PROVISIONS

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) authorized land application site, co-disposal landfill, wastewater treatment facility, or facility that further processes sludge. **The disposal of sludge or biosolids by land application on property owned, leased or under the direct control of the permittee is a violation of the permit unless the site is authorized with the TCEQ. This provision does not authorize Distribution and Marketing of Class A or Class AB Biosolids. This provision does not authorize the permittee to land apply biosolids on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge or biosolids.
2. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.
3. The land application of processed or unprocessed chemical toilet waste, grease trap waste, grit trap waste, milk solids, or similar non-hazardous municipal or industrial solid wastes, or any of the wastes listed in this provision combined with biosolids, WTP residuals or domestic septage is prohibited unless the grease trap waste is added at a fats, oil and grease (FOG) receiving facility as part of an anaerobic digestion process.

B. Testing Requirements

1. Sewage sludge or biosolids shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I [Toxicity Characteristic Leaching Procedure (TCLP)] or other method that receives the prior approval of the TCEQ for the contaminants listed in 40 CFR Part 261.24, Table 1. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal. Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) within seven (7) days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

2. Biosolids shall not be applied to the land if the concentration of the pollutants exceeds the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C. of this permit.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(Milligrams per kilogram)*</u>
Arsenic	75
Cadmium	85
Chromium	3000
Copper	4300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
PCBs	49
Selenium	100
Zinc	7500

* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site must be treated by one of the following methods to ensure that the sludge meets either the Class A, Class AB or Class B biosolids pathogen requirements.

- a. For sewage sludge to be classified as Class A biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 most probable number (MPN) per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge must be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at or above a specific value for a period of time. See 30 TAC § 312.82(a)(2)(A) for specific information;

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of must be treated in one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503, Appendix B. PFRP include composting, heat drying, heat treatment, and thermophilic aerobic digestion; or

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of must be treated in a process that has been approved by the U. S. Environmental Protection Agency as being equivalent to those in Alternative 5.

- b. For sewage sludge to be classified as Class AB biosolids with respect to pathogens, the density of fecal coliform in the sewage sludge must be less than 1,000 MPN per gram of total solids (dry weight basis), or the density of *Salmonella* sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. In addition, one of the alternatives listed below must be met:

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 std. units and shall remain above 12 std. units for 72 hours.

The temperature of the sewage sludge shall be above 52° Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12 std. units.

At the end of the 72-hour period during which the pH of the sewage sludge is above 12 std. units, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50%; or

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is less than one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(i-iii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 30 TAC § 312.82(a)(2)(C)(iv-vi) for specific information; or

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed. The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed.

- c. Sewage sludge that meets the requirements of Class AB biosolids may be classified a Class A biosolids if a variance request is submitted in writing that is supported by substantial documentation demonstrating equivalent methods for reducing odors and written approval is granted by the executive director. The executive director may deny the variance request or revoke that approved variance if it is determined that the variance may potentially endanger human health or the environment, or create nuisance odor conditions.
- d. Three alternatives are available to demonstrate compliance with Class B biosolids criteria.

Alternative 1

- i. A minimum of seven random samples of the sewage sludge shall be collected within 48 hours of the time the sewage sludge is used or disposed of during each monitoring episode for the sewage sludge.
- ii. The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge that is used or disposed of shall be treated in one of the Processes to Significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503, Appendix B, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;
- ii. An independent Texas Licensed Professional Engineer must make a certification to the generator of a sewage sludge that the wastewater treatment facility generating the sewage sludge is designed to achieve one of the PSRP at the permitted design loading of the facility. The certification need only be repeated if the design loading of the facility is increased. The certification shall include a statement indicating the design meets all the applicable standards specified in Appendix B of 40 CFR Part 503;
- iii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iv. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review; and
- v. If the sewage sludge is generated from a mixture of sources, resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the PSRP, and shall meet the certification, operation, and record keeping requirements of this paragraph.

Alternative 3 - Sewage sludge shall be treated in an equivalent process that has been approved by the U.S. Environmental Protection Agency, so long as all of the following requirements are met by the generator of the sewage sludge.

- i. Prior to use or disposal, all the sewage sludge must have been generated from a single location, except as provided in paragraph v. below;

- ii. Prior to any off-site transportation or on-site use or disposal of any sewage sludge generated at a wastewater treatment facility, the chief certified operator of the wastewater treatment facility or other responsible official who manages the processes to significantly reduce pathogens at the wastewater treatment facility for the permittee, shall certify that the sewage sludge underwent at least the minimum operational requirements necessary in order to meet one of the PSRP. The acceptable processes and the minimum operational and record keeping requirements shall be in accordance with established U.S. Environmental Protection Agency final guidance;
- iii. All certification records and operational records describing how the requirements of this paragraph were met shall be kept by the generator for a minimum of three years and be available for inspection by commission staff for review;
- iv. The Executive Director will accept from the U.S. Environmental Protection Agency a finding of equivalency to the defined PSRP; and
- v. If the sewage sludge is generated from a mixture of sources resulting from a person who prepares sewage sludge from more than one wastewater treatment facility, the resulting derived product shall meet one of the Processes to Significantly Reduce Pathogens, and shall meet the certification, operation, and record keeping requirements of this paragraph.

In addition to the Alternatives 1 – 3, the following site restrictions must be met if Class B biosolids are land applied:

- i. Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for 4 months or longer prior to incorporation into the soil.
- iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than 4 months prior to incorporation into the soil.
- iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
- v. Domestic livestock shall not be allowed to graze on the land for 30 days after application of biosolids.
- vi. Turf grown on land where biosolids are applied shall not be harvested for 1 year after application of the biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn.
- vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of biosolids.

- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of biosolids.
 - ix. Land application of biosolids shall be in accordance with the buffer zone requirements found in 30 TAC § 312.44.
4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following Alternatives 1 through 10 for vector attraction reduction.

- Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38%.
- Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30° and 37° Celsius. Volatile solids must be reduced by less than 17% to demonstrate compliance.
- Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20° Celsius. Volatile solids must be reduced by less than 15% to demonstrate compliance.
- Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20° Celsius.
- Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40° Celsius and the average temperature of the sewage sludge shall be higher than 45° Celsius.
- Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then remain at a pH of 11.5 or higher for an additional 22 hours at the time the sewage sludge is prepared for sale or given away in a bag or other container.
- Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75% based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90% based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

- Alternative 9 -
- i. Biosolids shall be injected below the surface of the land.
 - ii. No significant amount of the biosolids shall be present on the land surface within one hour after the biosolids are injected.
 - iii. When sewage sludge that is injected below the surface of the land is Class A or Class AB with respect to pathogens, the biosolids shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

- Alternative 10-
- i. Biosolids applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.
 - ii. When biosolids that are incorporated into the soil is Class A or Class AB with respect to pathogens, the biosolids shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test - annually
 PCBs - annually

All metal constituents and fecal coliform or *Salmonella* sp. bacteria shall be monitored at the appropriate frequency shown below, pursuant to 30 TAC § 312.46(a)(1):

<u>Amount of biosolids (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 to less than 290	Once/Year
290 to less than 1,500	Once/Quarter
1,500 to less than 15,000	Once/Two Months
15,000 or greater	Once/Month

(*) *The amount of bulk biosolids applied to the land (dry wt. basis).*

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 30 TAC § 312.7

Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.

Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.

Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge or biosolids for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE OR BIOSOLIDS FOR APPLICATION TO THE LAND MEETING CLASS A, CLASS AB or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

For those permittees meeting Class A, Class AB or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below listed in Table 3, the following conditions apply:

A. Pollutant Limits

Table 2

<u>Pollutant</u>	Cumulative Pollutant Loading Rate (pounds per acre)*
Arsenic	36
Cadmium	35
Chromium	2677
Copper	1339
Lead	268
Mercury	15
Molybdenum	Report Only
Nickel	375
Selenium	89
Zinc	2500

Table 3

<u>Pollutant</u>	Monthly Average Concentration (milligrams per kilogram)*
Arsenic	41
Cadmium	39
Chromium	1200
Copper	1500
Lead	300
Mercury	17
Molybdenum	Report Only
Nickel	420
Selenium	36
Zinc	2800

*Dry weight basis

B. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, shall be treated by either Class A, Class AB or Class B biosolids pathogen reduction requirements as defined above in Section I.B.3.

C. Management Practices

1. Bulk biosolids shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters in the State.
2. Bulk biosolids not meeting Class A requirements shall be land applied in a manner which complies with Applicability in accordance with 30 TAC §312.41 and the Management Requirements in accordance with 30 TAC § 312.44.
3. Bulk biosolids shall be applied at or below the agronomic rate of the cover crop.
4. An information sheet shall be provided to the person who receives bulk Class A or AB biosolids sold or given away. The information sheet shall contain the following information:
 - a. The name and address of the person who prepared the Class A or AB biosolids that are sold or given away in a bag or other container for application to the land.
 - b. A statement that application of the biosolids to the land is prohibited except in accordance with the instruction on the label or information sheet.
 - c. The annual whole sludge application rate for the biosolids application rate for the biosolids that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Section II above are met.

D. Notification Requirements

1. If bulk is applied to land in a State other than Texas, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk biosolids are proposed to be applied. The notice shall include:
 - a. The location, by street address, and specific latitude and longitude, of each land application site.
 - b. The approximate time period bulk biosolids will be applied to the site.
 - c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk biosolids.
2. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the biosolids disposal practice.

E. Record Keeping Requirements

The documents will be retained at the facility site and/or shall be readily available for review by a TCEQ representative. The person who prepares bulk sewage sludge or a biosolids material shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative for a

period of five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply.

1. The concentration (mg/kg) in the sludge of each pollutant listed in Table 3 above and the applicable pollutant concentration criteria (mg/kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (lbs/ac) listed in Table 2 above.
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class AB and Class B biosolids, if applicable).
3. A description of how the vector attraction reduction requirements are met.
4. A description of how the management practices listed above in Section II.C are being met.
5. The following certification statement:

“I certify, under penalty of law, that the applicable pathogen requirements in 30 TAC § 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC § 312.83(b) have been met for each site on which bulk biosolids are applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.”

6. The recommended agronomic loading rate from the references listed in Section II.C.3. above, as well as the actual agronomic loading rate shall be retained. The person who applies bulk biosolids shall develop the following information and shall retain the information at the facility site and/or shall be readily available for review by a TCEQ representative indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for record keeping found in 30 TAC § 312.47 for persons who land apply:
 - a. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii), as applicable, and to the permittee’s specific sludge treatment activities.
 - b. The location, by street address, and specific latitude and longitude, of each site on which biosolids are applied.
 - c. The number of acres in each site on which bulk biosolids are applied.
 - d. The date and time biosolids are applied to each site.
 - e. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
 - f. The total amount of biosolids applied to each site in dry tons.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

F. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30th of each year the following information. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Identify the nature of material generated by the facility (such as a biosolid for beneficial use or land-farming, or sewage sludge for disposal at a monofill) and whether the material is ultimately conveyed off-site in bulk or in bags.
3. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
4. The frequency of monitoring listed in Section I.C. that applies to the permittee.
5. Toxicity Characteristic Leaching Procedure (TCLP) results.
6. PCB concentration in sludge or biosolids in mg/kg.
7. Identity of hauler(s) and TCEQ transporter number.
8. Date(s) of transport.
9. Texas Commission on Environmental Quality registration number, if applicable.
10. Amount of sludge or biosolids disposal dry weight (lbs/acre) at each disposal site.
11. The concentration (mg/kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/kg) listed in Table 3 above, or the applicable pollutant loading rate limit (lbs/acre) listed in Table 2 above if it exceeds 90% of the limit.
12. Level of pathogen reduction achieved (Class A, Class AB or Class B).
13. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B biosolids, include information on how site restrictions were met.
14. Identify each of the analytic methods used by the facility to analyze enteric viruses, fecal coliforms, helminth ova, *Salmonella* sp., and other regulated parameters.
15. Vector attraction reduction alternative used as listed in Section I.B.4.

16. Amount of sludge or biosolids transported in dry tons/year.
17. The certification statement listed in either 30 TAC § 312.47(a)(4)(A)(ii) or 30 TAC § 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge or biosolids treatment activities, shall be attached to the annual reporting form.
18. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the annual reporting form.
 - a. The location, by street address, and specific latitude and longitude.
 - b. The number of acres in each site on which bulk biosolids are applied.
 - c. The date and time bulk biosolids are applied to each site.
 - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk biosolids applied to each site.
 - e. The amount of biosolids (i.e., dry tons) applied to each site.

The above records shall be maintained on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION III. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE OR BIOSOLIDS DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL

- A. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC § 330 and all other applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present. The permittee shall ensure that the sewage sludge meets the requirements in 30 TAC § 330 concerning the quality of the sludge or biosolids disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge or biosolids to the owner or operator of a municipal solid waste landfill (MSWLF) for disposal, the permittee shall provide to the owner or operator of the MSWLF appropriate information needed to be in compliance with the provisions of this permit.
- C. The permittee shall give 180 days prior notice to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division of any change planned in the sewage sludge or biosolids disposal practice.
- D. Sewage sludge or biosolids shall be tested annually in accordance with the method specified in both 40 CFR Part 261, Appendix II and 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure) or other method, which receives the prior approval of the TCEQ for contaminants listed in Table 1 of 40 CFR § 261.24. Sewage sludge or biosolids failing this test shall be managed according to RCRA standards for generators of hazardous waste, and the waste's disposition must be in accordance with all applicable requirements for hazardous waste processing, storage, or disposal.

Following failure of any TCLP test, the management or disposal of sewage sludge or biosolids at a facility other than an authorized hazardous waste processing, storage, or disposal facility shall be prohibited until such time as the permittee can demonstrate the sewage sludge or biosolids no longer exhibits the hazardous waste toxicity characteristics (as demonstrated by the results of the TCLP tests). A written report shall be provided to both the TCEQ Registration and Reporting Section (MC 129) of the Permitting and Registration Support Division and the Regional Director (MC Region 4) of the appropriate TCEQ field office within 7 days after failing the TCLP Test.

The report shall contain test results, certification that unauthorized waste management has stopped and a summary of alternative disposal plans that comply with RCRA standards for the management of hazardous waste. The report shall be addressed to: Director, Permitting and Registration Support Division (MC 129), Texas Commission on Environmental Quality, P. O. Box 13087, Austin, Texas 78711-3087. In addition, the permittee shall prepare an annual report on the results of all sludge toxicity testing. This annual report shall be submitted to the TCEQ Regional Office (MC Region 4) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge or biosolids shall be tested as needed, in accordance with the requirements of 30 TAC Chapter 330.
- F. Record Keeping Requirements

The permittee shall develop the following information and shall retain the information for five years.

1. The description (including procedures followed and the results) of all liquid Paint Filter Tests performed.
2. The description (including procedures followed and results) of all TCLP tests performed.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

G. Reporting Requirements

The permittee shall report annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30th of each year the following information. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and dewatering), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge or biosolids production in dry tons/year.
4. Amount of sludge or biosolids disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge or biosolids transported interstate in dry tons/year.
6. A certification that the sewage sludge or biosolids meets the requirements of 30 TAC § 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
7. Identity of hauler(s) and transporter registration number.
8. Owner of disposal site(s).
9. Location of disposal site(s).
10. Date(s) of disposal.

The above records shall be maintained on-site on a monthly basis and shall be made available to the Texas Commission on Environmental Quality upon request.

SECTION IV. REQUIREMENTS APPLYING TO SLUDGE OR BIOSOLIDS TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING

These provisions apply to sludge or biosolids that is transported to another wastewater treatment facility or facility that further processes sludge or biosolids. These provisions are intended to allow transport of sludge or biosolids to facilities that have been authorized to accept sludge or biosolids. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge or biosolids, nor do they limit the ability of the receiving facility to request additional testing or documentation.

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge or biosolids in accordance with 30 TAC Chapter 312 and all other applicable state and federal regulations in a manner that protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge.
2. Sludge or biosolids may only be transported using a registered transporter or using an approved pipeline.

B. Record Keeping Requirements

1. For sludge transported by an approved pipeline, the permittee must maintain records of the following:
 - a. the amount of sludge or biosolids transported;
 - b. the date of transport;
 - c. the name and TCEQ permit number of the receiving facility or facilities;
 - d. the location of the receiving facility or facilities;
 - e. the name and TCEQ permit number of the facility that generated the waste; and
 - f. copy of the written agreement between the permittee and the receiving facility to accept sludge or biosolids.
2. For sludge or biosolids transported by a registered transporter, the permittee must maintain records of the completed trip tickets in accordance with 30 TAC § 312.145(a)(1)-(7) and amount of sludge or biosolids transported.
3. The above records shall be maintained on-site on a monthly basis and shall be made available to the TCEQ upon request. These records shall be retained for at least five years.

C. Reporting Requirements

The permittee shall report the following information annually to the TCEQ Regional Office (MC Region 4) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30th of each year. The permittee must submit this annual report using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver.

1. Identify in the following categories (as applicable) the sewage sludge or biosolids treatment process or processes at the facility: preliminary operations (e.g., sludge or biosolids grinding and degritting), thickening (concentration), stabilization, anaerobic digestion, aerobic digestion, composting, conditioning, disinfection (e.g., beta ray irradiation, gamma ray irradiation, pasteurization), dewatering (e.g., centrifugation, sludge drying beds, sludge lagoons), heat drying, thermal reduction, and methane or biogas capture and recovery.
2. the annual sludge or biosolids production;
3. the amount of sludge or biosolids transported;
4. the owner of each receiving facility;
5. the location of each receiving facility; and
6. the date(s) of disposal at each receiving facility.

OTHER REQUIREMENTS

1. The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater system operations companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies.

This Category B facility must be operated by a chief operator or an operator holding a Class B license or higher. The facility must be operated a minimum of five days per week by the licensed chief operator or an operator holding the required level of license or higher. The licensed chief operator or operator holding the required level of license or higher must be available by telephone or pager seven days per week. Where shift operation of the wastewater treatment facility is necessary, each shift that does not have the on-site supervision of the licensed chief operator must be supervised by an operator in charge who is licensed not less than one level below the category for the facility.

2. The facility is not located in the Coastal Management Program boundary.
3. There is no mixing zone established for this discharge via Outfall 001 to an intermittent stream with perennial pools. Chronic toxic criteria apply at the point of discharge. There is no mixing zone established for this discharge via Outfall 002 to an intermittent stream. Acute toxic criteria apply at the point of discharge.
4. The permittee has submitted sufficient evidence of legal restrictions prohibiting residential structures within the part of the buffer zone not owned by the permittee according to 30 TAC Section 309.13(e)(3). The southern holding pond is not a wastewater treatment plant unit. The southern holding pond shall be used only for emergency purposes and is therefore not subject to the buffer zone requirements. If the buffer zone extends beyond the property line, the permittee must submit sufficient evidence of legal restrictions prohibiting residential structures within part of the buffer zone not owned by the permittee. The evidence of legal restrictions shall be submitted to the executive director in care of the TCEQ Wastewater Permitting Section (MC 148). The permittee shall comply with the requirements of 30 TAC Section 309.13(a) through (d). (See Attachment A.)

The permittee has submitted copies of the Residential Buffer Easements for the portions of the buffer zone not owned by the permittee to the north and east of the wastewater treatment facility as shown in Attachments "B" and "C".

5. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
6. Prior to the Final phase, the permittee shall submit to the TCEQ Wastewater Permitting Section (MC 148) a summary transmittal letter in accordance with the requirements in 30 TAC § 217.6(d). If requested by the Wastewater Permitting Section, the permittee shall submit plans, specifications, and a final engineering design report which comply with 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems. The permittee shall clearly show how the treatment system will meet the effluent limitations required on Page 2a of this permit. A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

Plans and specifications have been approved for the 3.1 MGD wastewater treatment facility, in accordance with 30 TAC § 217, Design Criteria for Domestic Wastewater Systems. A summary transmittal approval letter was issued on August 12, 2014 (Log No. 0714/011). A copy of the summary transmittal letter shall be available at the plant site for inspection by authorized representatives of the TCEQ.

7. In accordance with 30 TAC § 319.9, a permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission in writing of its compliance and request a less frequent measurement schedule. To request a less frequent schedule, the permittee shall submit a written request to the TCEQ Wastewater Permitting Section (MC 148) for each phase that includes a different monitoring frequency. The request must contain all of the reported bacteria values (Daily Avg. and Daily Max/Single Grab) for the twelve consecutive months immediately prior to the request. If the Executive Director finds that a less frequent measurement schedule is protective of human health and the environment, the permittee may be given a less frequent measurement schedule. For this permit 1/week can be reduced to 2/month in the Interim and Final phases. **A violation of any bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule and submit written notice to the TCEQ Wastewater Permitting Section (MC 148).** The permittee may not apply for another reduction in measurement frequency for at least 24 months from the date of the last violation. The Executive Director may establish a more frequent measurement schedule if necessary to protect human health or the environment.
8. The permittee shall notify the TCEQ Regional Office (MC Region 4) and the Applications Review and Processing Team (MC 148) of the Water Quality Division in writing at least forty-five days prior to the completion of the Final phase facility on Notification of Completion Form 20007.

CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The permittee shall operate an industrial pretreatment program in accordance with Sections 402(b)(8) and (9) of the Clean Water Act, the General Pretreatment Regulations (40 CFR Part 403), and the approved **City of Ennis** publicly owned treatment works (POTW) pretreatment program submitted by the permittee. The pretreatment program was approved on **December 1, 1983** and modified on **December 4, 1992, December 22, 2011,** and on **July 29, 2020 (nonsubstantial Streamlining Rule)**.

The POTW pretreatment program is hereby incorporated by reference and shall be implemented in a manner consistent with the following requirements:

- a. Industrial user (IU) information shall be kept current according to 40 CFR §§403.8(f)(2)(i) and (ii) and updated at a frequency set forth in the approved pretreatment program to reflect the accurate characterization of all IUs.
- b. The frequency and nature of IU compliance monitoring activities by the permittee shall be consistent with the approved POTW pretreatment program and commensurate with the character, consistency, and volume of waste. The permittee is required to inspect and sample the effluent from each significant industrial user (SIU) at least once per year, except as specified in 40 CFR §403.8(f)(2)(v). This is in addition to any industrial self-monitoring activities.
- c. The permittee shall enforce and obtain remedies for IU noncompliance with applicable pretreatment standards and requirements and the approved POTW pretreatment program.
- d. The permittee shall control through permit, order, or similar means, the contribution to the POTW by each IU to ensure compliance with applicable pretreatment standards and requirements and the approved POTW pretreatment program. In the case of SIUs (identified as significant under 40 CFR §403.3(v)), this control shall be achieved through individual permits or general control mechanisms, in accordance with 40 CFR §403.8(f)(1)(iii).

Both individual and general control mechanisms must be enforceable and contain, at a minimum, the following conditions:

- (1) Statement of duration (in no case more than five years);
- (2) Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
- (3) Effluent limits, which may include enforceable best management practices (BMPs), based on applicable general pretreatment standards, categorical pretreatment standards, local limits, and State and local law;
- (4) Self-monitoring, sampling, reporting, notification and record keeping requirements, identification of the pollutants to be monitored (including, if applicable, the process for seeking a waiver for a pollutant neither present nor expected to be present in the IU's discharge in accordance with 40 CFR §403.12(e)(2), or a specific waived pollutant in the case of an individual control mechanism), sampling location, sampling frequency, and sample type, based on the applicable general pretreatment standards in 40 CFR Part 403, categorical pretreatment standards, local limits, and State and local law;

- (5) Statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond federal deadlines; and
 - (6) Requirements to control slug discharges, if determined by the POTW to be necessary.
 - e. For those IUs who are covered by a general control mechanism, in order to implement 40 CFR §403.8(f)(1)(iii)(A)(2), a monitoring waiver for a pollutant neither present nor expected to be present in the IU's discharge is not effective in the general control mechanism until after the POTW has provided written notice to the SIU that such a waiver request has been granted in accordance with 40 CFR §403.12(e)(2).
 - f. The permittee shall evaluate whether each SIU needs a plan or other action to control slug discharges, in accordance with 40 CFR §403.8(f)(2)(vi). If the POTW decides that a slug control plan is needed, the plan shall contain at least the minimum elements required in 40 CFR §403.8(f)(2)(vi).
 - g. The permittee shall provide adequate staff, equipment, and support capabilities to carry out all elements of the pretreatment program.
 - h. The approved program shall not be modified by the permittee without the prior approval of the Executive Director, according to 40 CFR §403.18.
2. The permittee is under a continuing duty to establish and enforce specific local limits to implement the provisions of 40 CFR §403.5, develop and enforce local limits as necessary, and modify the approved pretreatment program as necessary to comply with federal, state, and local law, as amended. The permittee may develop BMPs to implement 40 CFR §403.5(c)(1) and (2). Such BMPs shall be considered local limits and pretreatment standards. The permittee is required to effectively enforce such limits and to modify its pretreatment program, including the Legal Authority, Enforcement Response Plan, and Standard Operating Procedures (including forms), if required by the Executive Director to reflect changing conditions at the POTW. Substantial modifications will be approved in accordance with 40 CFR §403.18, and modifications will become effective upon approval by the Executive Director in accordance with 40 CFR §403.18.

The permittee is required to redevelop the existing technically based local limits (TBLLs) and additional components of the pretreatment program. The permittee shall submit to the TCEQ Pretreatment Team (MC148) of the Water Quality Division, **within twelve (12) months of commencement of discharge from Outfall 002**. The permittee shall demonstrate and certify that the revised TBLLs will attain the Texas Surface Water Quality Standards [30 TAC Chapter 307] in water in the state, prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination. The POTW is required to evaluate any enforceable BMP loadings during the redevelopment of the current TBLLs. The technical redevelopment of the current TBLLs should be developed in accordance with EPA's *Local Limits Development Guidance*, July 2004, and EPA Region 6's *Technically Based Local Limits Development Guidance*, October 12, 1993. The TBLLs package, draft legal authority which incorporates such revisions, and additional modifications to the pretreatment program, as required by 40 CFR Part 403 [rev.10/14/05], and applicable state and local law, including Enforcement Response Plan and Standard Operating Procedures (including forms), shall be submitted

within twelve (12) months of commencement of discharge from Outfall 002.

This submission shall be signed and certified by the permittee *[according to 40 CFR §122.41(k)]*.

3. The permittee shall analyze the treatment facility influent and effluent for the presence of the toxic pollutants listed in the Texas Surface Water Quality Standards [30 TAC Chapter 307], and 40 CFR Part 122, Appendix D, Table II at least **once per year** and the toxic pollutants listed in 40 CFR Part 122, Appendix D, Table III at least **once per six months**. If, based upon information available to the permittee, there is reason to suspect the presence of any toxic or hazardous pollutant listed in 40 CFR Part 122, Appendix D, Table V, or any other pollutant, known or suspected to adversely affect treatment plant operation, receiving water quality, or solids disposal procedures, analysis for those pollutants shall be performed at least **once per six months** on both the influent and the effluent.

The influent and effluent samples collected shall be composite samples consisting of at least 12 aliquots collected at approximately equal intervals over a representative 24-hour period and composited according to flow. Sampling and analytical procedures shall be in accordance with guidelines established in 40 CFR Part 136, as amended; as approved by the EPA through the application for alternate test procedures; or as suggested in Tables E-1 and E-2 of the *Procedures to Implement the Texas Surface Water Quality Standards* (RG-194), June 2010, as amended and adopted by the TCEQ. The effluent samples shall be analyzed to the minimum analytical level (MAL), if necessary, to determine compliance with the daily average water quality based effluent concentration from the TCEQ's Texas Toxicity Modeling Program (TEXTOX) and other applicable water quality discharge standards. Where composite samples are inappropriate due to sampling, holding time, or analytical constraints, at least four (4) grab samples shall be taken at equal intervals over a representative 24-hour period.

4. The permittee shall prepare annually a list of IUs, which during the preceding twelve (12) months were in significant noncompliance (SNC) with applicable pretreatment requirements. For the purposes of this section of the permit, "CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS," SNC shall be determined based upon the more stringent of either criteria established at 40 CFR §403.8(f)(2)(viii) *[rev. 10/14/05]* or criteria established in the approved POTW pretreatment program. This list is to be published annually during the month of **December** in a newspaper of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW.

In addition, each **December** the permittee shall submit an updated pretreatment program annual status report, in accordance with 40 CFR §§403.12(i) *[rev. 10/22/15]* and (m), to the TCEQ Pretreatment Team (MC148) of the Water Quality Division. The report summary shall be submitted on the Pretreatment Performance Summary (PPS) form [TCEQ-20218]. The report shall contain the following information as well as the information on the tables in this section:

- a. An updated list of all regulated IUs as indicated in this section. For each listed IU, the following information shall be included:
 - (1) Standard Industrial Classification (SIC) or North American Industry Classification System (NAICS) code *and* categorical determination.

- (2) If the pretreatment program has been modified and approved to incorporate reduced monitoring for any of the categorical IUs as provided by 40 CFR Part 403 [rev. 10/14/05], then the list must also identify:
 - categorical IUs subject to the conditions for reduced monitoring and reporting requirements under 40 CFR § 403.12(e)(1) [rev. 10/22/15] and (3);
 - those IUs that are non-significant categorical industrial users (NSCIUs) under 40 CFR §403.3(v)(2); and
 - those IUs that are middle tier categorical industrial users (MTCIUs) under 40 CFR §403.12(e)(3).
- (3) Control mechanism status.
 - Indicate whether the IU has an effective individual or general control mechanism, and the date such control mechanism was last issued, reissued, or modified;
 - Indicate which IUs were added to the system, or newly identified, during the pretreatment year reporting period;
 - Include the type of general control mechanisms; and
 - Report all NSCIU annual evaluations performed, as applicable.
- (4) A summary of all compliance monitoring activities performed by the POTW during the pretreatment year reporting period. The following information shall be reported:
 - Total number of inspections performed; and
 - Total number of sampling events conducted.
- (5) Status of IU compliance with effluent limitations, reporting, and narrative standard (which may include enforceable BMPs, narrative limits, and/or operational standards) requirements. Compliance status shall be defined as follows:
 - Compliant (C) - no violations during the pretreatment year reporting period;
 - Non-compliant (NC) - one or more violations during the pretreatment year reporting period but does not meet the criteria for SNC; and
 - Significant Noncompliance (SNC) - in accordance with requirements described above in this section.
- (6) For noncompliant IUs, indicate the nature of the violations, the type and number of actions taken (notice of violation, administrative order, criminal or civil suit, fines or penalties collected, etc.), and the current compliance status. If

any IU was on a schedule to attain compliance with effluent limits or narrative standards, indicate the date the schedule was issued and the date compliance is to be attained.

- b. A list of each IU whose authorization to discharge was terminated or revoked during the pretreatment year reporting period and the reason for termination.
- c. A report on any interference, pass through, Act of God, or POTW permit violations known or suspected to be caused by IUs and response actions taken by the permittee.
- d. The results of all influent and effluent analyses performed pursuant to Item 3 of this section.
- e. An original newspaper public notice, or copy of the newspaper publication with official affidavit, of the list of IUs that meet the criteria of SNC, giving the name of the newspaper and date the list was published.
- f. The daily average water quality based effluent concentrations (from the TCEQ's Texas Toxicity Modeling Program (TexTox)) necessary to attain the Texas Surface Water Quality Standards, 30 TAC Chapter 307, in water in the state.
- g. The maximum allowable headworks loading (MAHL) in pounds per day (lb/day) of the approved TBLLs or for each pollutant of concern (POC) for which the permittee has calculated a MAHL. In addition, the influent loading as a percent of the MAHL, using the annual average flow of the wastewater treatment plant in million gallons per day (MGD) during the pretreatment year reporting period, for each pollutant that has an adopted TBLL or for each POC for which the permittee has calculated a MAHL. (*See Endnotes No. 2 at the end of this section for the influent loading as a percent of the MAHL equation.*)
- h. The permittee may submit the updated pretreatment program annual status report information in tabular form using the example table format provided. Please attach, on a separate sheet, explanations to document the various pretreatment activities, including IU permits that have expired, BMP violations, and any sampling events that were not conducted by the permittee as required.
- i. A summary of changes to the POTW's approved pretreatment program that have not been previously reported to the Approval Authority.

Effective December 21, 2025, the permittee must submit the updated pretreatment program annual status report required by this section electronically using the online electronic reporting system available through the TCEQ website unless the permittee requests and obtains an electronic reporting waiver. [*rev. Federal Register/ Vol. 80/ No. 204/ Friday, October 22, 2015/ Rules and Regulations, pages 64064-64158*].

5. The permittee shall provide adequate written notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days of the permittee's knowledge of the following:

- a. Any new introduction of pollutants into the treatment works from an indirect discharger that would be subject to Sections 301 and 306 of the Clean Water Act, if the indirect discharger was directly discharging those pollutants; and
- b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Adequate notice shall include information on the quality and quantity of effluent to be introduced into the treatment works and any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

Revised June 2020

TPDES Pretreatment Program Annual Report Form for Updated Industrial Users List

Reporting month/year: _____, _____ **to** _____, _____

TPDES Permit No.: _____ **Permittee:** _____ **Treatment Plant:** _____

PRETREATMENT PROGRAM STATUS REPORT UPDATED INDUSTRIAL USERS' LIST																
Industrial User Name	SIC or NAICS Code	CIU ²	CONTROL MECHANISM				New User ³ (Y or N)	Times Inspected by the CA	Times Sampled by the CA	COMPLIANCE STATUS During the Pretreatment Year Reporting Period ⁴ (C = Compliant, NC = Noncompliant, SNC= Significant Noncompliance)						
			Y/N or NR ⁵	IND or GEN or NR	Last Action ⁶	TBLLs or TBLLs only ⁷				REPORTS				NSCIU Certifications	Effluent Limits	Narrative Standards
										BMR	90-Day	Semi- Annual	Self- Monitoring ⁸			

- 1 Include all significant industrial users (SIUs), non-significant categorical industrial users (NSCIUs) as defined in 40 CFR §403.3(v)(2), and/or middle tier categorical industrial users (MTCIUs) as defined in 40 CFR §403.12(e)(3). Please do not include non-significant noncategorical IUs that are covered under best management practices (BMPs) or general control mechanisms.
- 2 Categorical determination (include 40 CFR citation and NSCIU or MTCIU status, if applicable).
- 3 Indicate whether the IU is a new user. If the answer is No or N, then indicate the expiration date of the last issued IU permit.
- 4 The term SNC applies to a broader range of violations, such as daily maximum, long-term average, instantaneous limits, and narrative standards (which may include enforceable BMPs, narrative limits and/or operational standards). Any other violation, or group of violations, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment Program now includes BMP violations (40 CFR §403.8(f)(2)(viii)(H)).
- 5 Code NR= None required (NSCIUs only); IND = individual control mechanism; GEN = general control mechanism. Include as a footnote (or on a separate page) the name of the general control mechanism used for similar groups of IUs, identify the similar types of operations and types of wastes that are the same for each general control mechanism. Any BMPs through general control mechanisms that are applied to nonsignificant IUs need to be reported separately, e.g. the sector type and BMP description.
- 6 Permit or NSCIU evaluations as applicable.
- 7 According to 40 CFR §403.12(i)(1), indicate whether the IU is subject to technically based local limits (TBLLs) that are more stringent than categorical pretreatment standards, e.g. where there is one end-of-pipe sampling point at a CIU, and you have determined that the TBLLs are more stringent than the categorical pretreatment standards for any pollutant at the end-of-pipe sampling point; **OR** the IU is subject only to local limits (TBLLs only), e.g. the IU is a non-categorical SIU subject only to TBLLs at the end-of-pipe sampling point.
- 8 For those IUs where a monitoring waiver has been granted, please add the code "W" (after either C, NC, or SNC codes) and indicate the pollutant(s) for which the waiver has been granted.

**TPDES Pretreatment Program Annual Report Form for
Industrial User Inventory Modifications**

Reporting month/year: _____, _____ **to** _____, _____

TPDES Permit No: _____ **Permittee:** _____ **Treatment Plant:** _____

INDUSTRIAL USER INVENTORY MODIFICATIONS					
FACILITY NAME, ADDRESS AND CONTACT PERSON	ADD, CHANGE, DELETE (Including categorical reclassification to NSCIU or MTCIU)	IF DELETION: Reason For Deletion	IF ADDITION OR SIGNIFICANT CHANGE:		
			PROCESS DESCRIPTION	POLLUTANTS (Including any sampling waiver given for each pollutant not present)	FLOW RATE ⁹ (In gpd) R = Regulated U = Unregulated T = Total

9 For NSCIUs, total flow must be given, if regulated flow is not determined.

TPDES Pretreatment Program Annual Report Form for Enforcement Actions Taken

Reporting month/year: _____, _____ **to** _____, _____

TPDES Permit No: _____ **Permittee:** _____ **Treatment Plant:** _____

Overall SNC ____% **SNC ¹⁰ based on:** **Effluent Violations** ____%
Reporting Violations ____% **Narrative Standard Violations** ____%

Noncompliant Industrial Users - Enforcement Actions Taken															
Industrial User Name	Nature of Violation ¹¹				Number of Actions Taken					Penalties Collected (Do not include Surcharge)	Compliance Schedule			Current Status Returned to Compliance: (Y or N)	Comments
	Effluent Limits	Reports	NSCIU Certifications	Narrative Standards	NOV	A.O.	Civil	Criminal	Other		Y or N	Date Issued	Date Due		

10 # %
 ___ Pretreatment Standards [WENDB-PSNC] (Local Limits/Categorical Standards)
 ___ Reporting Requirements [WENDB-PSNC]
 ___ Narrative Standards

11 Please specify a separate number for each type of violation, e.g. report, notification, and/or NSCIU certification.

**TPDES Pretreatment Program Annual Report Form for
Influent and Effluent Monitoring Results¹**

Reporting month/year: _____, _____ to _____, _____

TPDES Permit No.: _____ **Permittee:** _____ **Treatment Plant:** _____

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
METALS, CYANIDE AND PHENOLS											
Antimony, Total											
Arsenic, Total											
Beryllium, Total											
Cadmium, Total											
Chromium, Total											
Chromium (Hex)											
Chromium (Tri) ⁵											
Copper, Total											
Lead, Total											
Mercury, Total											
Nickel, Total											
Selenium, Total											
Silver, Total											
Thallium, Total											
Zinc, Total											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Cyanide, Available ⁶											
Cyanide, Total											
Phenols, Total											
VOLATILE COMPOUNDS											
Acrolein											
Acrylonitrile											
Benzene											
Bromoform							See TTHM				
Carbon Tetrachloride											
Chlorobenzene											
Chlorodibromomethane							See TTHM				
Chloroethane											
2-Chloroethylvinyl Ether											
Chloroform							See TTHM				
Dichlorobromomethane							See TTHM				
1,1-Dichloroethane											
1,2-Dichloroethane											
1,1-Dichloroethylene											
1,2-Dichloropropane											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
1,3-Dichloropropylene											
Ethyl benzene											
Methyl Bromide											
Methyl Chloride											
Methylene Chloride											
1,1,2,2-Tetra-chloroethane											
Tetrachloroethylene											
Toluene											
1,2-Trans-Dichloroethylene											
1,1,1-Trichloroethane											
1,1,2-Trichloroethane											
Trichloroethylene											
Vinyl Chloride											
ACID COMPOUNDS											
2-Chlorophenol											
2,4-Dichlorophenol											
2,4-Dimethylphenol											
4,6-Dinitro-o-Cresol											
2,4-Dinitrophenol											
2-Nitrophenol											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
4-Nitrophenol											
P-Chloro-m-Cresol											
Pentachlorophenol											
Phenol											
2,4,6-Trichlorophenol											
BASE/NEUTRAL COMPOUNDS											
Acenaphthene											
Acenaphthylene											
Anthracene											
Benzidine											
Benzo(a)Anthracene											
Benzo(a)Pyrene											
3,4-Benzofluoranthene											
Benzo(ghi)Perylene											
Benzo(k)Fluoranthene											
Bis(2-Chloroethoxy)Methane											
Bis(2-Chloroethyl)Ether											
Bis(2-Chloroisopropyl)Ether											
Bis(2-Ethylhexyl)Phthalate											
4-Bromophenyl Phenyl Ether											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Butylbenzyl Phthalate											
2-Chloronaphthalene											
4-Chlorophenyl Phenyl Ether											
Chrysene											
Dibenzo(a,h)Anthracene											
1,2-Dichlorobenzene											
1,3-Dichlorobenzene											
1,4-Dichlorobenzene											
3,3-Dichlorobenzidine											
Diethyl Phthalate											
Dimethyl Phthalate											
Di-n-Butyl Phthalate											
2,4-Dinitrotoluene											
2,6-Dinitrotoluene											
Di-n-Octyl Phthalate											
1,2-Diphenyl Hydrazine											
Fluoranthene											
Fluorene											
Hexachlorobenzene											
Hexachlorobutadiene											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Hexachloro- cyclopentadiene											
Hexachloroethane											
Indeno(1,2,3-cd)pyrene											
Isophorone											
Naphthalene											
Nitrobenzene											
N-Nitrosodimethylamine											
N-Nitrosodi-n-Propylamine											
N-Nitrosodiphenylamine											
Phenanthrene											
Pyrene											
1,2,4-Trichlorobenzene											
PESTICIDES											
Aldrin											
Alpha-hexachlorocyclohexane (BHC)											
beta-BHC											
gamma-BHC (Lindane)											
delta-BHC											
Chlordane											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
4,4-DDT											
4,4-DDE											
4,4-DDD											
Dieldrin											
alpha-Endosulfan											
beta-Endosulfan											
Endosulfan Sulfate											
Endrin											
Endrin Aldehyde											
Heptachlor											
Heptachlor Epoxide											
Polychlorinated biphenols (PCBs) <i>The sum of PCB concentrations not to exceed daily average value.</i>											
PCB-1242							See PCBs				
PCB-1254							See PCBs				
PCB-1221							See PCBs				
PCB-1232							See PCBs				
PCB-1248							See PCBs				
PCB-1260							See PCBs				

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
PCB-1016							See PCBs				
Toxaphene											
ADDITIONAL TOXIC POLLUTANTS REGULATED UNDER 30 TAC CHAPTER 307											
Aluminum											
Barium											
Bis(chloromethyl)ether ⁷											
Carbaryl											
Chloropyrifos											
Cresols											
2,4-D											
Danitol ⁸											
Demeton											
Diazinon											
Dicofol											
Dioxin/Furans ⁹											
Diuron											
Epichlorohydrin ⁹											
Ethylene glycol ⁹											
Fluoride											
Guthion											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Hexachlorophene											
4,4-Isopropylidenediphenol (bisphenol A) ⁹											
Malathion											
Methoxychlor											
Methyl Ethyl Ketone											
Methyl tert-butyl-ether (MTBE) ⁹											
Mirex											
Nitrate-Nitrogen											
N-Nitrosodiethylamine											
N-Nitroso-di-n-Butylamine											
Nonylphenol											
Parathion											
Pentachlorobenzene											
Pyridine											
1,2-Dibromoethane											
1,2,4,5-Tetrachlorobenzene											
2,4,5-TP (Silvex)											
Tributyltin ⁹											
2,4,5-Trichlorophenol											
TTHM (Total											

PRETREATMENT PROGRAM INFLUENT AND EFFLUENT MONITORING RESULTS											
POLLUTANT	MAHL, if Applicable in lb/day	Influent Measured in µg/L (Actual Concentration or < MAL)				Average Influent % of the MAHL ²	Daily Average Effluent Limit (µg/L) ³	Effluent Measured in µg/L (Actual Concentration or < MAL) ⁴			
		Date	Date	Date	Date			Date	Date	Date	Date
Trihalomethanes)											

Endnotes:

1. It is advised that the permittee collect the influent and effluent samples considering flow detention time through each wastewater treatment plant (WWTP).
2. The MAHL of the approved TBLLs or for each pollutant of concern (POC) for which the permittee has calculated a MAHL. Only complete the column labeled "Average Influent % of the MAHL," as a percentage, for pollutants that have approved TBLLs or for each POC for which the permittee has calculated a MAHL (U.S. Environmental Protection Agency *Local Limits Development Guidance*, July 2004, EPA933-R-04-002A).

The % of the MAHL is to be calculated using the following formulas:

$$\text{Equation A: } L_{\text{INF}} = (C_{\text{POLL}} \times Q_{\text{WWTP}} \times 8.34) / 1000$$

$$\text{Equation B: } L\% = (L_{\text{INF}} / \text{MAHL}) \times 100$$

Where:

L_{INF} = Current Average (Avg) influent loading in lb/day

C_{POLL} = Avg concentration in $\mu\text{g/L}$ of all influent samples collected during the pretreatment year.

Q_{WWTP} = Annual average flow of the WWTP in MGD, defined as the arithmetic average of all daily flow determinations taken within the preceding 12 consecutive calendar months (or during the pretreatment year), and as described in the Definitions and Standard Permit Conditions section.

$L\%$ = % of the MAHL

MAHL = Calculated MAHL in lb/day

8.34 = Unit conversion factor

3. Daily average effluent limit (metal values are for total metals) as derived by the Texas Toxicity Modeling Program (TexTox). Effluent limits as calculated are designed to be protective of the Texas Surface Water Quality Standards. The permittee shall determine and indicate which effluent limit is the most stringent between the 30 TAC Chapter 319, Subchapter B (Hazardous Metals) limit, TexTox values, or any applicable limit in the Effluent Limitations and Monitoring Requirements Section of this TPDES permit. Shaded blocks need not be filled in unless the permittee has received a permit requirement/limit for the particular parameter.
4. Minimum analytical levels (MALs) and analytical methods as suggested in Tables E-1 and E-2 of the *Procedures to Implement the Texas Surface Water Quality Standards* (June 2010), as amended and adopted by the TCEQ. Pollutants that are not detectable above the MAL need to be reported as less than (<) the MAL numeric value.
5. Report result by subtracting Hexavalent Chromium from Total Chromium.
6. Either the method for Amenable to Chlorination or Weak-Acid Dissociable is authorized.
7. Hydrolyzes in water. Will not require permittee to analyze at this time.
8. EPA procedure not approved. Will not require permittee to analyze at this time.
9. Analyses are not required at this time for these pollutants unless there is reason to believe that these pollutants may be present.

BIOMONITORING REQUIREMENTS**CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER**

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for toxicity in accordance with the provisions below. Such testing will determine if an appropriately dilute effluent sample adversely affects the survival, reproduction, or growth of the test organisms.
- b. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this part of this permit and in accordance with "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," fourth edition (EPA-821-R-02-013) or its most recent update:
 - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0). This test should be terminated when 60% of the surviving adults in the control produce three broods or at the end of eight days, whichever occurs first. This test shall be conducted once per quarter.
 - 2) Chronic static renewal 7-day larval survival and growth test using the fathead minnow (*Pimephales promelas*) (Method 1000.0). A minimum of five replicates with eight organisms per replicate shall be used in the control and in each dilution. This test shall be conducted once per quarter.

The permittee must perform and report a valid test for each test species during the prescribed reporting period. An invalid test must be repeated during the same reporting period. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These effluent dilution concentrations are 32%, 42%, 56%, 75%, and 100% effluent. The critical dilution, defined as 100% effluent, is the effluent concentration representative of the proportion of effluent in the receiving water during critical low flow or critical mixing conditions.
- d. This permit may be amended to require a WET limit, a chemical-specific effluent limit, a best management practice, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.
- e. Testing Frequency Reduction
 - 1) If none of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee may submit this information in writing

and, upon approval, reduce the testing frequency to once per six months for the invertebrate test species and once per year for the vertebrate test species.

- 2) If one or more of the first four consecutive quarterly tests demonstrates significant toxicity, the permittee shall continue quarterly testing for that species until this permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant toxicity, the permittee shall resume a quarterly testing frequency for that species until this permit is reissued.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control and all effluent dilutions, which fail to meet the following criteria:
 - 1) a control mean survival of 80% or greater;
 - 2) a control mean number of water flea neonates per surviving adult of 15 or greater;
 - 3) a control mean dry weight of surviving fathead minnow larvae of 0.25 mg or greater;
 - 4) a control coefficient of variation percent (CV%) of 40 or less in between replicates for the young of surviving females in the water flea test; and the growth and survival endpoints in the fathead minnow test;
 - 5) a critical dilution CV% of 40 or less for the young of surviving females in the water flea test; and the growth and survival endpoints for the fathead minnow test. However, if statistically significant lethal or nonlethal effects are exhibited at the critical dilution, a CV% greater than 40 shall not invalidate the test;
 - 6) a percent minimum significant difference of 47 or less for water flea reproduction; and
 - 7) a percent minimum significant difference of 30 or less for fathead minnow growth.
- b. Statistical Interpretation
 - 1) For the water flea survival test, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be the Fisher's exact test as described in the manual referenced in in Part 1.b.
 - 2) For the water flea reproduction test and the fathead minnow larval survival and growth tests, the statistical analyses used to determine if there is a significant difference between the control and an effluent dilution shall be in accordance with the manual referenced in Part 1.b..

- 3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test-results are interpreted and reported correctly. The document entitled "Method Guidance and Recommendation for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)" (EPA 821-B-00-004) provides guidance on determining the validity of test results.
- 4) If significant lethality is demonstrated (that is, there is a statistically significant difference in survival at the critical dilution when compared to the survival in the control), the conditions of test acceptability are met, and the survival of the test organisms are equal to or greater than 80% in the critical dilution and all dilutions below that, then the permittee shall report a survival No Observed Effect Concentration (NOEC) of not less than the critical dilution for the reporting requirements.
- 5) The NOEC is defined as the greatest effluent dilution at which no significant effect is demonstrated. The Lowest Observed Effect Concentration (LOEC) is defined as the lowest effluent dilution at which a significant effect is demonstrated. A significant effect is defined as a statistically significant difference between the survival, reproduction, or growth of the test organism in a specified effluent dilution when compared to the survival, reproduction, or growth of the test organism in the control (0% effluent).
- 6) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3.
- 7) Pursuant to the responsibility assigned to the permittee in Part 2.b.3), test results that demonstrate a non-monotonic (non-continuous) concentration-response relationship may be submitted, prior to the due date, for technical review. The guidance manual referenced in Item 3 will be used when making a determination of test acceptability.
- 8) TCEQ staff will review test results for consistency with rules, procedures, and permit requirements.

c. Dilution Water

- 1) Dilution water used in the toxicity tests must be the receiving water collected at a point upstream of the discharge point as close as possible to the discharge point but unaffected by the discharge. Where the toxicity tests are conducted on effluent discharges to receiving waters that are classified as intermittent streams, or where the toxicity tests are conducted on effluent discharges where no receiving water is available due to zero flow conditions, the permittee shall:

- a) substitute a synthetic dilution water that has a pH, hardness, and alkalinity similar to that of the closest downstream perennial water unaffected by the discharge; or
 - b) use the closest downstream perennial water unaffected by the discharge.
- 2) Where the receiving water proves unsatisfactory as a result of pre-existing instream toxicity (i.e. fails to fulfill the test acceptance criteria of Part 2.a.), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:
- a) a synthetic lab water control was performed (in addition to the receiving water control) which fulfilled the test acceptance requirements of Part 2.a;
 - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days); and
 - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3.
- 3) The synthetic dilution water shall consist of standard, moderately hard, reconstituted water. Upon approval, the permittee may substitute other appropriate dilution water with chemical and physical characteristics similar to that of the receiving water.
- d. Samples and Composites
- 1) The permittee shall collect a minimum of three composite samples from Outfall 001. The second and third composite samples will be used for the renewal of the dilution concentrations for each toxicity test.
 - 2) The permittee shall collect the composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged on an intermittent basis.
 - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the first composite sample. The holding time for any subsequent composite sample shall not exceed 72 hours. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
 - 4) If Outfall 001 ceases discharging during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions, and the sample holding time are waived during that sampling period. However, the permittee must have collected an effluent composite sample volume sufficient to complete the required toxicity tests with renewal of the effluent. When possible, the

effluent samples used for the toxicity tests shall be collected on separate days if the discharge occurs over multiple days. The sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report.

- 5) The effluent samples shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated whether carried to completion or not.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit.
 - 1) Annual biomonitoring test results are due on or before January 20th for biomonitoring conducted during the previous 12-month period.
 - 2) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.
 - 3) Quarterly biomonitoring test results are due on or before April 20th, July 20th, October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
 - 4) Monthly biomonitoring test results are due on or before the 20th day of the month following sampling.
- c. Enter the following codes for the appropriate parameters for valid tests only:
 - 1) For the water flea, Parameter TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 2) For the water flea, Parameter TOP3B, report the NOEC for survival.
 - 3) For the water flea, Parameter TXP3B, report the LOEC for survival.
 - 4) For the water flea, Parameter TWP3B, enter a "1" if the NOEC for reproduction is less than the critical dilution; otherwise, enter a "0."
 - 5) For the water flea, Parameter TPP3B, report the NOEC for reproduction.
 - 6) For the water flea, Parameter TYP3B, report the LOEC for reproduction.

- 7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.
 - 9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.
 - 10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
 - 11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.
 - 12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.
- d. Enter the following codes for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
 - 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. Significant lethality and significant effect were defined in Part 2.b. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction in the control.

- a. The permittee shall conduct a total of 2 additional tests (retests) for any species that demonstrates a significant effect (lethal or sublethal) at the critical dilution. The two retests shall be conducted monthly during the next two consecutive months. The permittee shall not substitute either of the two retests in lieu of routine toxicity testing. All reports shall be submitted within 20 days of test completion. Test completion is defined as the last day of the test.
- b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of Part 4.a. are suspended upon completion of the two retests and submittal of the TRE action plan and schedule defined in Part 5.

If neither test demonstrates significant lethality and the permittee is testing under the reduced testing frequency provision of Part 1.e., the permittee shall return to a quarterly testing frequency for that species.

- c. If the two retests are performed due to a demonstration of significant sublethality, and one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in Part 4.a.

- d. If the two retests are performed due to a demonstration of significant sublethality, and neither test demonstrates significant lethality, the permittee shall continue testing at the quarterly frequency.
- e. Regardless of whether retesting for lethal or sublethal effects, or a combination of the two, no more than one retest per month is required for a species.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, or within 45 days of being so instructed due to multiple toxic events, the permittee shall submit a general outline for initiating a 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 90 days of the retest that demonstrates significant lethality, or within 90 days of being so instructed due to multiple toxic events, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses 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 describe an approach for the reduction or elimination of lethality for both test species defined in Part 1.b. At 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 "Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I" (EPA/600/6-91/005F) or alternate procedures. The permittee shall perform multiple identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
 - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures, and chemical-specific analyses when the toxicity tests show

- significant lethality. Where the permittee has identified or suspects a specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source 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, and mechanisms to detect artifactual toxicity; and
 - 4) Project Organization - The TRE action plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.
- d. The permittee shall submit quarterly TRE activities reports concerning the progress of the TRE. The quarterly reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and suspected pollutant 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 of effluent toxicity;
 - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
 - 5) any data that identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to meet no significant lethality at the critical dilution; and
 - 6) any changes to the initial TRE plan and schedule that are believed necessary as a result of the TRE findings.
- e. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive months with at least monthly testing. At the end of the 12 months, the permittee shall submit a statement of

intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 28 months from the last test day of the retest that confirmed significant lethal effects at the critical dilution. The permittee may petition the Executive Director (in writing) for an extension of the 28-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall provide information pertaining to the specific control mechanism selected that will, when implemented, result in the reduction of effluent toxicity to no significant lethality at the critical dilution. The report shall also provide a specific corrective action schedule for implementing the selected control mechanism.
- h. Based on the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- i. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 1 (SHEET 2 OF 4)

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION TEST

1. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean number of young produced per adult significantly less than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): _____ YES _____ NO

PERCENT SURVIVAL

Time of Reading	Percent effluent					
	0%	32%	42%	56%	75%	100%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

Is the mean survival at test end significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (100%): _____ YES _____ NO

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

a.) NOEC survival = _____% effluent

b.) LOEC survival = _____% effluent

c.) NOEC reproduction = _____% effluent

d.) LOEC reproduction = _____% effluent

TABLE 1 (SHEET 3 OF 4)
 BIOMONITORING REPORTING
 FATHEAD MINNOW LARVAE GROWTH AND SURVIVAL

Dates and Times Composites Collected

Date Time

No. 1 FROM: _____ TO: _____

No. 2 FROM: _____ TO: _____

No. 3 FROM: _____ TO: _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic dilution water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration	Average Dry Weight in replicate chambers					Mean Dry Weight	CV%*
	A	B	C	D	E		
0%							
32%							
42%							
56%							
75%							
100%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

- Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean dry weight (growth) at 7 days significantly less than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (100%): _____ YES _____ NO

TABLE 1 (SHEET 4 OF 4)
 BIOMONITORING REPORTING
 FATHEAD MINNOW GROWTH AND SURVIVAL TEST
 FATHEAD MINNOW SURVIVAL DATA

Effluent Concentration	Percent Survival in replicate chambers					Mean percent survival			CV%*
	A	B	C	D	E	24h	48h	7 day	
0%									
32%									
42%									
56%									
75%									
100%									

* Coefficient of Variation = standard deviation x 100/mean

2. Dunnett's Procedure or Steel's Many-One Rank Test or Wilcoxon Rank Sum Test (with Bonferroni adjustment) or t-test (with Bonferroni adjustment) as appropriate:

Is the mean survival at 7 days significantly less than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (100%): _____ YES _____ NO

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

a.) NOEC survival = _____ % effluent

b.) LOEC survival = _____ % effluent

c.) NOEC growth = _____ % effluent

d.) LOEC growth = _____ % effluent

24-HOUR ACUTE BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this section apply to Outfall 001 for whole effluent toxicity (WET) testing.

1. Scope, Frequency, and Methodology

- a. The permittee shall test the effluent for lethality in accordance with the provisions in this section. Such testing will determine compliance with Texas Surface Water Quality Standard 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests using the test organisms, procedures, and quality assurance requirements specified in this section of the permit and in accordance with “Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,” fifth edition (EPA-821-R-02-012) or its most recent update:
 - 1) Acute 24-hour static toxicity test using the water flea (*Daphnia pulex* or *Ceriodaphnia dubia*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.
 - 2) Acute 24-hour static toxicity test using the fathead minnow (*Pimephales promelas*). A minimum of five replicates with eight organisms per replicate shall be used in the control and each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, and then repeat, an invalid test during the same reporting period. The repeat test shall include the control and the 100% effluent dilution and use the appropriate number of organisms and replicates, as specified above. An invalid test is defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit.

- c. In addition to an appropriate control, a 100% effluent concentration shall be used in the toxicity tests. Except as discussed in item 2.b., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a WET limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, or other appropriate actions to address toxicity. The permittee may be required to conduct a Toxicity Reduction Evaluation after multiple toxic events.
- e. As the dilution series specified in the Chronic Biomonitoring Requirements includes a 100% effluent concentration, the results from those tests may fulfill the requirements of this Section; any tests performed in the proper time interval may be substituted. Compliance will be evaluated as specified in item a. 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 to comply with the minimum testing frequency defined in item b.

2. Required Toxicity Testing Conditions

- a. Test Acceptance - The permittee shall repeat any toxicity test, including the control, if the control fails to meet a mean survival equal to or greater than 90%.
- b. Dilution Water - In accordance with item 1.c., the control and dilution water shall normally consist of standard, synthetic, moderately hard, reconstituted water. If the permittee utilizes the results of a chronic test to satisfy the requirements in item 1.e., the permittee may use the receiving water or dilution water that meets the requirements of item 2.a as the control and dilution water.
- c. Samples and Composites
 - 1) The permittee shall collect one composite sample from Outfall 001.
 - 2) The permittee shall collect the composite sample such that the sample is representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance being discharged.
 - 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the composite sample. The sample shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
 - 4) If Outfall 001 ceases discharging during the collection of the effluent composite sample, the requirements for the minimum number of effluent portions are waived. However, the permittee must have collected a composite sample volume sufficient for completion of the required test. The abbreviated sample collection, duration, and methodology must be documented in the full report.
 - 5) The effluent sample shall not be dechlorinated after sample collection.

3. Reporting

All reports, tables, plans, summaries, and related correspondence required in this section shall be submitted to the attention of the Standards Implementation Team (MC 150) of the Water Quality Division.

- a. The permittee shall prepare a full report of the results of all tests conducted in accordance with the manual referenced in Part 1.b. for every valid and invalid toxicity test initiated.
- b. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit.
 - 1) Semiannual biomonitoring test results are due on or before July 20th and January 20th for biomonitoring conducted during the previous 6-month period.

- 2) Quarterly biomonitoring test results are due on or before April 20th, July 20th, and October 20th, and January 20th for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes for the appropriate parameters for valid tests only:
 - 1) For the water flea, Parameter TIE3D, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”
 - 2) For the fathead minnow, Parameter TIE6C, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”
- d. Enter the following codes for retests only:
 - 1) For retest number 1, Parameter 22415, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”
 - 2) For retest number 2, Parameter 22416, enter a “0” if the mean survival at 24 hours is greater than 50% in the 100% effluent dilution; if the mean survival is less than or equal to 50%, enter a “1.”

4. Persistent Mortality

The requirements of this part apply when a toxicity test demonstrates significant lethality, which is defined as a mean mortality of 50% or greater of organisms exposed to the 100% effluent concentration for 24 hours.

- a. The permittee shall conduct 2 additional tests (retests) for each species that demonstrates significant lethality. The two retests shall be conducted once per week for 2 weeks. Five effluent dilution concentrations in addition to an appropriate control shall be used in the retests. These effluent concentrations are 6%, 13%, 25%, 50% and 100% effluent. The first retest shall be conducted within 15 days of the laboratory determination of significant lethality. All test results shall be submitted within 20 days of test completion of the second retest. Test completion is defined as the 24th hour.
- b. If one or both of the two retests specified in Part 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5.

5. Toxicity Reduction Evaluation

- a. Within 45 days of the retest that demonstrates significant lethality, the permittee shall submit a general outline for initiating a 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 90 days of the retest that demonstrates significant lethality, the permittee shall submit a TRE action plan and schedule for conducting a TRE. The plan shall specify the approach and methodology to be used in performing the TRE. A TRE is a step-wise investigation combining toxicity testing with physical and chemical analyses to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE action plan shall lead to the successful elimination of significant lethality for both test species defined in Part 1.b. At 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 identifications and follow the methods specified in the documents entitled "Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/080) and "Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity" (EPA/600/R-92/081). All characterization, identification, and confirmation tests shall be conducted in an orderly and logical progression;
 - 2) Sampling Plan - The TRE action plan should describe sampling locations, methods, holding times, chain of custody, and preservation techniques. The effluent sample volume collected for all tests shall be adequate to perform the toxicity characterization/identification/confirmation procedures and chemical-specific analyses when the toxicity tests show significant lethality. Where the permittee has identified or suspects specific pollutant and source of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and suspected pollutant and source 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, and mechanisms to detect artifactual toxicity; and
 - 4) Project Organization - The TRE Action Plan should describe the project staff, project manager, consulting engineering services (where applicable), consulting analytical and toxicological services, etc.
- c. Within 30 days of submittal of the TRE action plan and schedule, the permittee shall implement the TRE.

- 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 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 that identifies the pollutant and source of effluent toxicity;
 - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
 - 5) any data that 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. During the TRE, the permittee shall perform, at a minimum, quarterly testing using the more sensitive species. Testing for the less sensitive species shall continue at the frequency specified in Part 1.b.
- f. If the effluent ceases to effect significant lethality, i.e., there is a cessation of lethality, the permittee may end the TRE. A cessation of lethality is defined as no significant lethality for a period of 12 consecutive weeks with at least weekly testing. At the end of the 12 weeks, the permittee shall submit a statement of intent to cease the TRE and may then resume the testing frequency specified in Part 1.b.

This provision accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE, in contrast to a situation where a single toxicant or group of toxicants cause lethality. This provision does not apply as a result of corrective actions taken by the permittee. Corrective actions are defined as proactive efforts that eliminate or reduce effluent toxicity. These include, but are not limited to, source reduction or elimination, improved housekeeping, changes in chemical usage, and modifications of influent streams and effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates significant lethality to the same species, the permit will be amended to add a WET limit with a compliance period, if appropriate. However, prior to the effective date of the WET limit, the permittee may apply for a permit amendment removing and replacing the WET limit with an alternate toxicity control measure by identifying and confirming the toxicant and an appropriate control measure.

- g. The permittee shall complete the TRE and submit a final report on the TRE activities no later than 18 months from the last test day of the retest that demonstrates significant lethality. The permittee may petition the Executive Director (in writing) for an extension of the 18-month limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE. The report shall specify the control mechanism that will, when implemented, reduce effluent toxicity as specified in Part 5.h. The report shall also specify a corrective action schedule for implementing the selected control mechanism. A copy of the TRE final report shall also be submitted to the U.S. EPA Region 6 office.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC § 307.6(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in its pursuit of the toxicity identification evaluation/TRE and must prove that circumstances beyond its control stalled the toxicity identification evaluation/TRE.

The permittee may be exempted from complying with 30 TAC § 307.6(e)(2)(B) upon proving that toxicity is caused by an excess, imbalance, or deficiency of dissolved salts. This exemption excludes instances where individually toxic components (e.g., metals) form a salt compound. Following the exemption, this permit may be amended to include an ion-adjustment protocol, alternate species testing, or single species testing.

- i. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements where necessary, require a compliance schedule for implementation of corrective actions, specify a WET limit, specify a best management practice, and specify a chemical-specific limit.
- j. Copies of any and all required TRE plans and reports shall also be submitted to the U.S. EPA Region 6 office, 6WQ-PO.

TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24-hour LC50 = _____% effluent

TABLE 2 (SHEET 2 OF 2)
 FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time	Date
Composite Sample Collected		
Test Initiated		

PERCENT SURVIVAL

Time	Rep	Percent effluent					
		0%	6%	13%	25%	50%	100%
24h	A						
	B						
	C						
	D						
	E						
	MEAN						

Enter percent effluent corresponding to the LC50 below:

24-hour LC50 = _____% effluent

ATTACHMENT B

City of Ennis
TPDES Permit No. WQ0010443002

VOL. G.
RESIDENTIAL BUFFER EASEMENT

* FILED FOR RECORD *
Ellis County, Texas
0126958 V 1813 P 433
11/05/2001 12:15pm

SCHIRM USA, INC. TO CITY OF ENNIS

THE STATE OF TEXAS §

COUNTY OF ELLIS § KNOW ALL MEN THESE PRESENTS

THAT the undersigned (hereinafter referred to as "Grantor", whether one or more), for and in consideration of the sum of Ten and No/100 Dollars (\$10.00) in hand paid and other good and valuable consideration, the receipt of and sufficiency of which is hereby acknowledged, does hereby grant to the City of Ennis, its successors and assigns (hereinafter referred to as "Grantee"), a perpetual residential buffer easement that restricts the development or construction of all types of residential property, including any part of a residential lot(s) on the lands owned by Grantor or in which Grantor has an interest situated in Ellis County, Texas, to-wit:

SEE EXHIBIT "A"

Attached hereto and made part hereto for all purposes.

It is the intention of the Grantor herein to convey to Grantee a residential buffer easement over such lands described in Exhibit "A" that restricts any residential development or construction and the inclusion of the easement within a residential lot(s).

Grantor reserves for themselves, their heirs, or assignees, the right to use and enjoy said lands except as may be necessary for the purposes herein granted.


The terms and provisions hereof shall be binding upon and shall insure to the benefit of the heirs, personal representatives, successors and assigns of Grantor and Grantee, and Grantee is expressly granted the right to assign this residential buffer easement, or any part thereof of interest therein, and the same shall be divisible among two or more parties as to any right of interest created hereunder.

This agreement, as written, covers the entire agreement between the parties and no other representation or agreements, written or oral, have been made modifying, adding to or changing the terms hereof or inducing the execution hereof and the persons obtaining this agreement or representation not expressly set forth herein.

TO HAVE AND TO HOLD unto Grantee, its successors and assigns forever or until released by a recordable instrument.

In witness whereof this instrument executed this 31 day of August, 2001.

GRANTORS:
SCHIRM USA, INC.



THE STATE OF TEXAS §

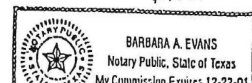
COUNTY OF ELLIS §

This instrument was acknowledged before me on the 31 day of August, 2001
by BARBARA EVANS.



Notary Public, State of Texas

After Recording Return To:
Black & Veatch
100 E. 15th Street, Suite 600
Fort Worth, Texas 76102



City of Ennis
TPDES Permit No. WQ0010443002

VOL. PG.

EXHIBIT "A"

PERMANENT RESIDENTIAL BUFFER EASEMENT

Being a permanent residential buffer easement situated in the James N. Duncan Survey, Abstract No. 291, City of Ennis, Ellis County, Texas, and being a portion of a 29.98 acre tract of land deeded to Agricultural Warehouse, Inc., as recorded in Volume 752, Page 1051, of the Deed Records of Ellis County, Texas, said permanent residential buffer easement being more particularly described by metes and bounds as follows:

COMMENCING at a 1/2 inch iron rod found for the southwest corner of a 0.1727 acre tract of land deeded to the City of Ennis as recorded in Volume 1168, page 18 of the Deed Records of Ellis County, Texas, said 1/2 inch iron rod being the southeast corner of a 0.3362 acre tract of land deeded to the City of Ennis as recorded in Volume 1167, Page 753 of the Deed Records of Ellis County, Texas, said 1/2 inch iron rod also being in the northwesterly line of a 17.358 acre tract of land deeded to the City of Ennis as recorded in Volume 477, Page 180 of the Deed Records of Ellis County, Texas; THENCE North 61 degrees 52 minutes 35 seconds East, with the south line of said 0.1727 acre tract and the north line of said 17.358 acre tract, a distance of 114.75 feet to the southeast corner of said 0.1727 acre tract of land, said point being the POINT OF BEGINNING of the herein described permanent residential buffer easement;

THENCE North 29 degrees 14 minutes 40 seconds West, leaving the north line of said 17.358 acre tract and with the east line of said 0.1727 acre tract, a distance of 69.87 feet to a point for corner, said corner also being the northeast corner of said 0.1727 acre tract of land;

THENCE North 61 degrees 52 minutes 35 seconds East, a distance of 356.91 feet to a point for corner;

THENCE South 28 degrees 07 minutes 25 seconds East a distance of 19.46 feet to a point for corner; said point also being the northwest point for corner of a 1.640 acre tract deeded to the City of Ennis as recorded in Volume 477, Page 180 of the Deed Records of Ellis County, Texas;

THENCE South 40 degrees 35 minutes 20 seconds West, with the west line of said 1.640 acre tract, a distance of 138.81 feet, to a point for corner on the north line of said 17.358 acre tract;

THENCE South 61 degrees 52 minutes 35 seconds West (bearing basis from 29.98 parent tract description), with the north line of said 17.358 acre tract, a distance of 226.20 feet to the POINT OF BEGINNING and containing 21625 square feet or 0.4964 acres of land, more or less

SURVEYOR'S CERTIFICATE

TO ALL PARTIES INTERESTED IN TITLE TO THE PREMISES SURVEYED, I DO HEREBY CERTIFY THE ABOVE LEGAL DESCRIPTION WAS PREPARED FROM PUBLIC RECORDS AND FROM AN ACTUAL AND ACCURATE SURVEY UPON THE GROUND ON APRIL 3, 2000 AND THAT THE SAME IS TRUE AND CORRECT.

Company Name: Black & Veatch Corporation

By: Randall G. McIntyre 8/23/01
Randall G. McIntyre
Registered Professional Land Surveyor,
Texas No. 4853



JN 812

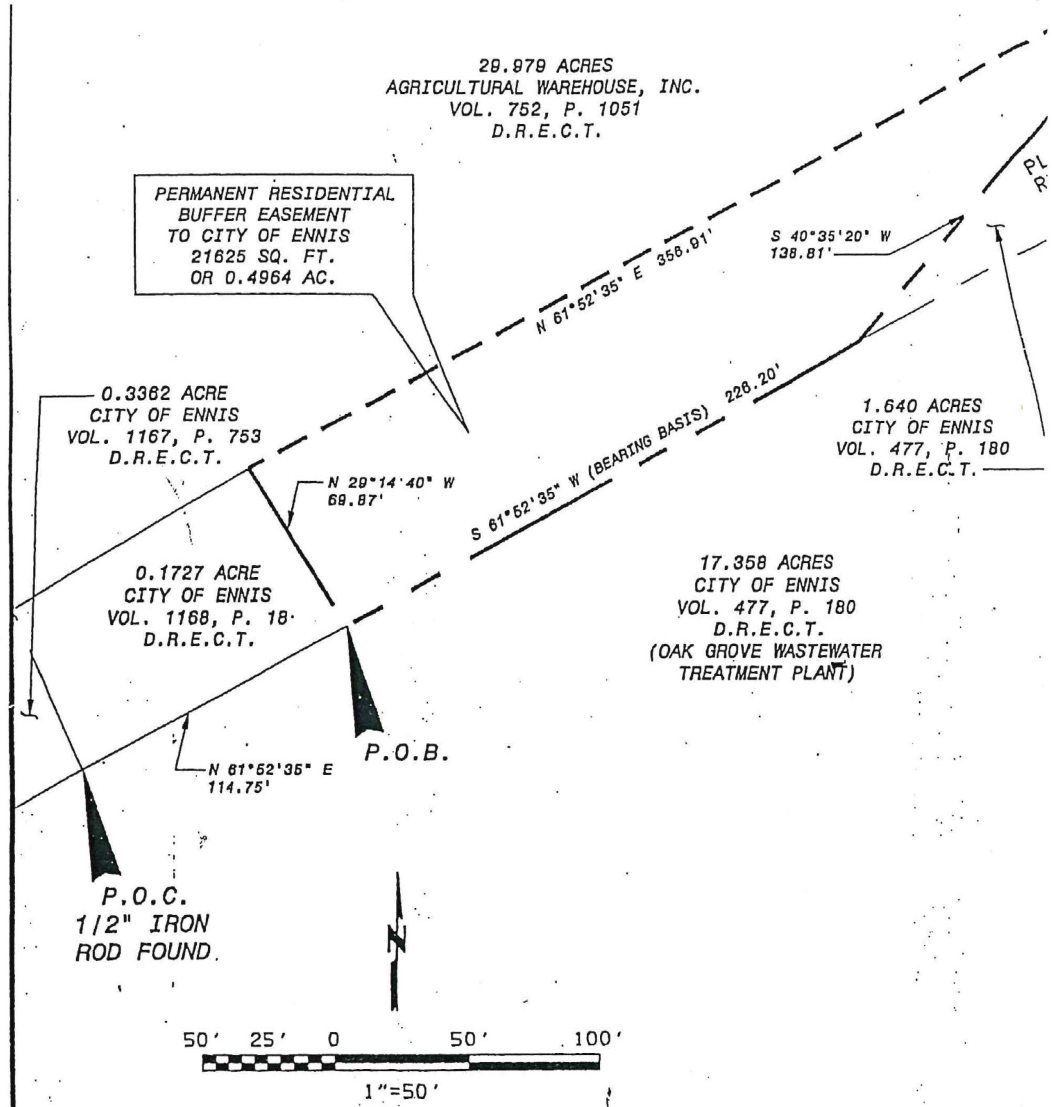
City of Ennis
TPDES Permit No. WQ0010443002

EXHIBIT

VOL. PG.

JAMES N. DUNCAN SURVEY
ABSTRACT NO. 291

S 28°07'25"
19.46'



CITY OF ENNIS		
P.O. BOX 220		ENNIS, TEXAS 75120-0220
RESIDENTIAL BUFFER ZONE EASEMENTS - OAK GROVE WWTP		
SURVEY: JAMES DUNCAN SURVEY, ABSTRACT NO. 291		
LOCATION: CITY OF ENNIS, ELLIS COUNTY, TEXAS		
EASEMENT ACQUISITION AREA: 21625 SQUARE FEET OR 0.4964 ACRES		
DATE: 08-08-01	DRAWN BY: JCL	PAGE 3 OF 3



Randall G. McIntyre
8/1
REGISTERED PROFESSIONAL LAND SURVEYOR
NO. 4853

BLACK & VEATCH 100 E. 15TH. STREET, STE. 600 FORT WORTH, TEXAS 76102 PH. 817/429-7558 FAX 817/429-7559

ATTACHMENT C

City of Ennis
TPDES Permit No. WQ00 302
City of Ennis
TPDES

RESIDENTIAL BUFFER EASEMENT

* FILED FOR RECORD *
Ellis County, Texas
0126957 V 1813 P 429
11/05/2001 12:15pm

THE SHERWIN-WILLIAMS COMPANY TO CITY OF ENNIS
THE STATE OF TEXAS)
COUNTY OF ELLIS) KNOW ALL MEN BY THESE PRESENTS

THAT The Sherwin-Williams Company (hereinafter referred to as "Grantor"), for and in consideration of the sum of Ten and No/100 Dollars (\$10.00) in hand paid and other good and valuable consideration, the receipt of and sufficiency of which is hereby acknowledged, does hereby grant to the City of Ennis, its successors and assigns (hereinafter referred as "Grantee"), a permanent residential buffer easement that restricts the development or construction of residential property, including any part of a residential lot(s) on that certain land owned by Grantor or in which Grantor has an interest, situated in Ellis County, Texas, to wit::

SEE EXHIBIT "A"
Attached hereto and made part hereof for all purposes.

It is the intention of the Grantor herein to convey to Grantee a residential buffer easement over such lands described in Exhibit "A" that restricts any residential development or residential construction or the inclusion of the easement within a residential lot(s).

Grantor reserves for themselves, their heirs, or assignees, the right to use and enjoy said lands described in Exhibit "A" for any and all purposes, including all business purposes and related construction, with the exception of residential uses herein restricted.

The terms and provisions hereof shall be binding upon and shall insure to the benefit of the heirs, personal representatives, successors and assigns of Grantor and Grantee, and Grantee is expressly granted the right to assign this residential buffer easement, or any part thereof of interest therein, and the same shall be divisible among two or more parties as to any right of interest created hereunder.

This agreement, as written, covers the entire agreement between the parties and no other representation or agreements, written or oral, have been made modifying, adding to or changing the terms hereof or inducing the execution hereof and the persons obtaining this agreement or representation not expressly set forth herein.

TO HAVE AND TO HOLD unto Grantee, its successors and assigns forever or until released by a recordable instrument or until the Grantee no longer uses its property immediately adjacent to the residential buffer easement for a purpose, which requires a residential buffer zone.

In witness whereof this instrument executed this 14th day of September, 2001.

GRANTOR:
THE SHERWIN-WILLIAMS COMPANY

[Signature]
By: James J. Sgambellone Its Assistant Secretary

THE STATE OF OHIO)
COUNTY OF CUYAHOGA)

This instrument was acknowledged before me on the 14th day of September, 2001 by James J. Sgambellone

[Signature]
Notary Public, State of Ohio

LAURA A. MOORE
Notary Public - State of Ohio
My Commission Expires March 21, 2005

After Recording Return To:
Black & Veatch
100 E. 15th Street, Suite 600
Fort Worth, Texas 76102

City of Ennis
TPDES Permit No. WQ0010443002

EXHIBIT "A"

VOL. PG.

PERMANENT RESIDENTIAL BUFFER EASEMENT

Being a permanent residential buffer easement situated in the James N. Duncan Survey, Abstract No. 291, City of Ennis, Ellis County, Texas, and being a portion of a 9.616 acre tract of land deed to The Sherwin-Williams Company as recorded in Volume 1604, Page 636, of the Deed Records of Ellis County, Texas, and also being part of Lot 1 United Coatings Addition, a 10.0 acre addition to the City of Ennis as recorded in Cabinet B, Slide 334 of the Map Records of Ellis County, said permanent residential buffer easement being more particularly described by metes and bounds as follows:

BEGINNING at a point for corner at a 1/2 inch iron rod found at the southwest corner of said Lot 1, said 1/2 inch iron rod being the northwest corner of a 16.008 tract of land deeded to The Sherwin-Williams Company as recorded in Volume 1646, Page 15, of the Deed Records of Ellis County, Texas, said 1/2 inch iron rod also being in the east line of a 17.358 acre tract of land deeded to the City of Ennis, recorded in Volume 477, Page 180, of the Deed Records of Ellis County, Texas;

THENCE North 29 degrees 14 minutes 30 seconds West, (bearing basis from Lot 1 map) with the east line of said 17.358 acre tract of land, and with the west line of Lot 1, a distance of 262.46 feet to a point for corner, said point being the southwest corner of a 0.3840 acre tract of land deeded to the City of Ennis out of said Lot 1 as recorded in Volume 1200, Page 710, of the Deed Records of Ellis County, Texas;

THENCE North 60 degrees 45 minutes 30 seconds East, leaving the east line of said 17.358 acre tract and with the south line of said 0.3840 acre tract, a distance of 62.74 feet to a point for corner, said point being the southeast corner of said 0.3840 acre tract;

THENCE South 29 degrees 14 minutes 30 seconds East a distance of 261.78 feet to a point for corner, said point being in the south line of Lot 1 and being in the north line of said 16.008 acre tract;

THENCE South 60 degrees 08 minutes West, with the south line of Lot 1 and north line of said 16.008 acre tract, a distance of 62.74 feet to the **POINT OF BEGINNING** and containing 16445 square feet or 0.3775 acres of land, more or less.

SURVEYOR'S CERTIFICATE

TO ALL PARTIES INTERESTED IN TITLE TO THE PREMISES SURVEYED, I DO HEREBY CERTIFY THE ABOVE LEGAL DESCRIPTION WAS PREPARED FROM PUBLIC RECORDS AND FROM AN ACTUAL AND ACCURATE SURVEY UPON THE GROUND ON APRIL 3, 2000 AND THAT THE SAME IS TRUE AND CORRECT.

Company Name: Black & Veatch Corporation

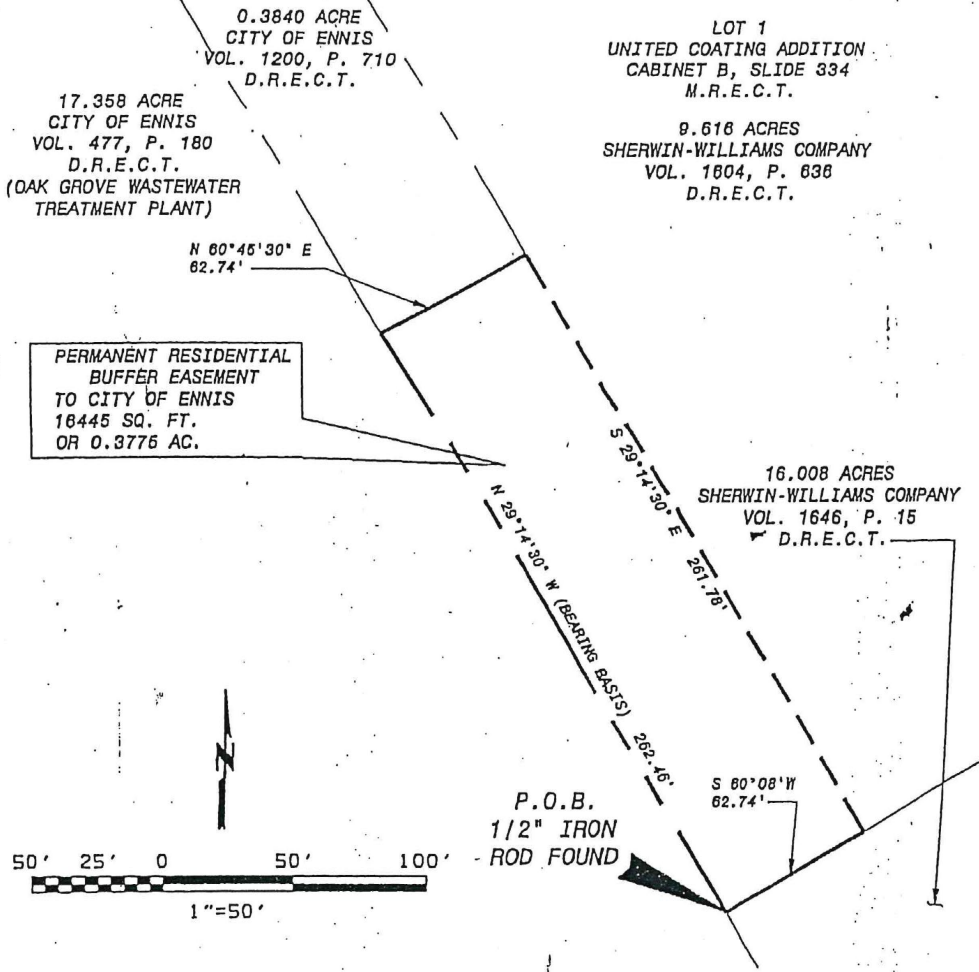
By: Randall G. McIntyre 8/23/01
Randall G. McIntyre
Registered Professional Land Surveyor,
Texas No. 4853



VOL. PG.

JAMES N. DUNCAN SURVEY
ABSTRACT NO. 291

City of Ennis
TPDES Permit No. WQ0010443002



CITY OF ENNIS		
P.O. BOX 220 ENNIS, TEXAS 75120-0220		
RESIDENTIAL BUFFER ZONE EASEMENTS - OAK GROVE WWTP		
SURVEY: JAMES DUNCAN SURVEY, ABSTRACT NO. 291		
LOCATION: CITY OF ENNIS, ELLIS COUNTY, TEXAS		
EASEMENT ACQUISITION AREA: 16445 SQUARE FEET, OR 0.3776 ACRES		
DATE: 08-08-01	DRAWN BY: JCL	PAGE 3 OF 3
BLACK & VEATCH 100 E. 15TH. STREET, STE. 800 FORT WORTH, TEXAS 76102 PH. 817/429-7558 FAX 817/429-7		



P.G.

* FILED FOR RECORD *
Ellis County, Texas
#0126958 V 1813 P 436
11/05/2001 12:15pm

Any provision herein which restricts the sale, rental, or
use of this described real property because of color, or
race is invalid and unenforceable under federal law.
STATE OF TEXAS COUNTY OF ELLIS
I hereby certify this instrument was filed on the date
and time stamped hereon and was duly recorded in the
volume and page of the OFFICIAL PUBLIC RECORDS of Ellis County,
Texas as stamped hereon.



Cindy Palley

COUNTY CLERK, ELLIS COUNTY, TEXAS

City of Ennis
TPDES Permit No. WQ0010443002

The TCEQ is committed to accessibility.

To request a more accessible version of this report, please contact the TCEQ Help Desk at (512) 239-4357.



Compliance History Report

Compliance History Report for CN600602478, RN101611648, Rating Year 2021 which includes Compliance History (CH) components from September 1, 2016, through August 31, 2021.

Customer, Respondent, or Owner/Operator: CN600602478, City of Ennis **Classification:** SATISFACTORY **Rating:** 0.12

Regulated Entity: RN101611648, OAK GROVE PLANT **Classification:** SATISFACTORY **Rating:** 0.35

Complexity Points: 10 **Repeat Violator:** NO

CH Group: 08 - Sewage Treatment Facilities

Location: 401 W PLANT RD ENNIS, TX 75119-9028, ELLIS COUNTY

TCEQ Region: REGION 04 - DFW METROPLEX

ID Number(s):
WASTEWATER LICENSING LICENSE WQ0010443002 **PRETREATMENT EPA ID** TX0047261000
STORMWATER PERMIT TXR05M996 **WASTEWATER PERMIT** WQ0010443002
WASTEWATER EPA ID TX0047261 **WASTEWATER AUTHORIZATION** R10443002

Compliance History Period: September 01, 2016 to August 31, 2021 **Rating Year:** 2021 **Rating Date:** 09/01/2021

Date Compliance History Report Prepared: March 28, 2022

Agency Decision Requiring Compliance History: Permit - Issuance, renewal, amendment, modification, denial, suspension, or revocation of a permit.

Component Period Selected: July 29, 2016 to March 28, 2022

TCEQ Staff Member to Contact for Additional Information Regarding This Compliance History.

Name: WH **Phone:** (512) 239-3581

Site and Owner/Operator History:

- 1) Has the site been in existence and/or operation for the full five year compliance period? YES
- 2) Has there been a (known) change in ownership/operator of the site during the compliance period? NO

Components (Multimedia) for the Site Are Listed in Sections A - J

A. Final Orders, court judgments, and consent decrees:
N/A

B. Criminal convictions:
N/A

C. Chronic excessive emissions events:
N/A

D. The approval dates of investigations (CCEDS Inv. Track. No.):

Item 1	August 09, 2016	(1338521)
Item 2	August 10, 2016	(1366126)
Item 3	September 06, 2016	(1378986)
Item 4	September 14, 2016	(1372812)
Item 5	September 16, 2016	(1397703)
Item 6	November 07, 2016	(1384949)
Item 7	December 12, 2016	(1391083)
Item 8	February 08, 2017	(1404592)
Item 9	March 03, 2017	(1411684)
Item 10	March 06, 2017	(1418182)
Item 11	May 05, 2017	(1425775)

1 Date: 12/01/2021 (. J336)
Self Report? NO Classification: Moderate
Citation: 2D TWC Chapter 26, SubChapter A 26.039(b)
30 TAC Chapter 305, SubChapter F 305.125(1)
30 TAC Chapter 327 327.32(b)
Monitoring & Reporting Req, 7.a & 7.b.i PERMIT
Description: Failure to provide notification of any noncompliance which may endanger human health or safety, or the environment.

F. Environmental audits:

N/A

G. Type of environmental management systems (EMSs):

N/A

H. Voluntary on-site compliance assessment dates:

N/A

I. Participation in a voluntary pollution reduction program:

N/A

J. Early compliance:

N/A

Sites Outside of Texas:

N/A