

Jon Niermann, *Chairman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 25, 2024

TO: Persons on the attached mailing list

RE: City of Liberty Hill

TCEQ Docket No. 2021-0999-MWD; SOAH Docket No. 582-22-1222

TPDES Permit No. WQ0014477001

Decision of the Commission on Application.

The Texas Commission on Environmental Quality ("TCEQ" or "Commission") has made a decision to grant the above-referenced application. Enclosed with this letter is a copy of the Commission's order. Unless a Motion for Rehearing ("MFR" or "motion") is timely filed with the chief clerk, this action of the Commission will become final. A MFR is a request for the Commission to review its decision on the matter. Any motion must explain why the Commission should review the decision.

Deadline for Filing Motion for Rehearing.

A MFR must be received by the chief clerk's office no later than the 25th day after the date that the Commission's order on this application is signed. The date of signature is indicated on the last page of the enclosed order.

Motions may be filed in accordance with the requirements in Senate Bill 1267 (84th Regular Session, effective September 1, 2015) and Texas Government Code § 2001.146 with the chief clerk electronically at www.tceq.texas.gov/goto/efilings or by filing an original and 7 copies with the Chief Clerk at the following address:

Laurie Gharis, Chief Clerk
TCEQ, MC-105
P.O. Box 13087
Austin, Texas 78711-3087
Fax: 512/239-3311

In addition, a copy of the motion must be sent on the same day to each of the individuals on the attached mailing list as indicated by an asterisk (*). A certificate of service stating that copies of the motion were sent to those on the mailing list must also be sent to the chief clerk. The procedures for filing and serving a MFR and responses are located in 30 TAC § 80.272, Texas Governmental Code § 2001.146 as revised by Senate Bill 1267 (84th Regular Session, effective September 1, 2015), and 30 TAC §§ 1.10 and 1.11. The hardcopy filing requirement is waived by the General Counsel pursuant to 30 TAC § 1.10(h).

The written motion must contain (1) the name and representative capacity of the person filing the motion; (2) the style and official docket number assigned by SOAH and official docket number assigned by the Commission; (3) the date of the order; (4) the particular findings of fact or conclusions of law that are the subject of the complaint and any evidentiary or legal ruling claimed to be erroneous; and (5) the legal and factual basis for the claimed error.

Unless the time for the Commission to act on the MFR is extended, the MFR is overruled by operation of law at 5:00 p.m. on the 55th day after the date that the Commission's order on this matter is signed.

If you have any questions or need additional information about the procedures described in this letter, please call the Public Education Program, toll free, at 1-800-687-4040.

Sincerely,

A handwritten signature in black ink that reads "Laurie Gharis". The signature is written in a cursive, flowing style.

Laurie Gharis
Chief Clerk

LG/mt

Enclosure

City of Liberty Hill
TCEQ Docket No. 2021-0999-MWD; SOAH Docket No. 582-22-1222
TPDES Permit No. WQ0014477001

FOR THE APPLICANT:

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INTERESTED PERSON(S):

See attached list.

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via electronic mail:

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FOR THE STATE OFFICE OF
ADMINISTRATIVE HEARINGS
via eFile Texas:

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The Honorable Rachelle Robles
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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER GRANTING THE APPLICATION BY CITY OF LIBERTY HILL FOR RENEWAL OF TPDES PERMIT NO. WQ0014477001 IN WILLIAMSON COUNTY, TEXAS; SOAH DOCKET NO. 582-22-1222; TCEQ DOCKET NO. 2021-0999-MWD

On March 28, 2024, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of the City of Liberty Hill (Applicant or City), for a renewal of Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0014477001 in Williamson County, Texas. A Supplemental Proposal for Decision (PFD) on Remand was presented by Administrative Law Judges (ALJ) Meitra Farhadi and Rachelle Nicolette Robles with the State Office of Administrative Hearings (SOAH), who conducted an evidentiary hearing on remand on July 26-28, 2023, in Austin, Texas via Zoom videoconferencing.

After considering the PFD, the Commission makes the following findings of fact and conclusions of law.

I. FINDINGS OF FACT

Application

1. Applicant filed its application (Application) to renew its TPDES permit with the Commission on September 5, 2018.
2. The Application requested continued authorization to discharge treated domestic wastewater from a municipal wastewater treatment plant, the Liberty Hill Regional Wastewater Treatment Facility (Facility), SIC Code 4952, located approximately 8,800 feet southeast of the intersection of U.S. Highway 29 and U.S. Highway 183 in Williamson County, Texas, 78641, into the South Fork San Gabriel River (River) in Segment No. 1250 of the Brazos River Basin.
3. The Application requested continued authorization to treat domestic wastewater and discharge that treated wastewater from the proposed Facility at a daily average flow not to exceed 2.0 million gallons per day (MGD) in the interim phase, and a daily average flow not to exceed 4.0 MGD in the final phase.

4. The Executive Director (ED) of the Commission declared the Application administratively complete on November 9, 2018.
5. The ED completed the technical review of the Application, prepared a draft permit (Draft Permit), and made it available for public review and comment.

Background

6. In 2003, the Lower Colorado River Authority and the Brazos River Authority submitted the original wastewater permit application to authorize the Facility to treat, pipe, and discharge effluent directly to the River.
7. The original permit authorized the discharge of proposed effluent in an Interim I phase at 0.4 MGD, Interim II phase at 0.8 MGD, and Final phase at 1.2 MGD, and with an effluent limit in all phases of 0.5 mg/L of Total Phosphorus (TP) and an effluent reporting requirement for Total Nitrogen (TN).
8. The original permit also included language in the “Other Requirements” section of the permit requiring the permit holder to conduct nutrient input and response monitoring. This study was to evaluate the effectiveness of the discharge limitations and could result in, if warranted, the assignment of more stringent permit controls in future permit actions.
9. The permit was transferred to the City in 2012 and was subsequently amended such that the phases were an Interim I phase at 0.4 MGD, Interim II phase at 1.2 MGD, and Final phase at 4.0 MGD, with an effluent limit in the interim phases of 0.5 mg/L of TP and in the Final phase at 0.15 mg/L of TP.
10. The Draft Permit would constitute a renewal with minor amendment, in that it would authorize the continued discharge of treated wastewater effluent from the Facility directly to the River, in an Interim phase at 2.0 MGD and Final phase at 4.0 MGD, and with an effluent limit in all phases of 0.15 mg/L of TP.

Draft Permit

11. The Facility is a membrane bioreactor (MBR) facility. Treatment units in the Interim phase include an 0.8 MGD MBR facility which consists of a package headworks unit with screening, grit, and grease removal, an anaerobic tank, an anoxic tank, a pre-aeration tank, and two MBR units. The MBR plant uses the same alum feed system, ultraviolet light (UV) disinfection system, and step aeration treatment units as the previously operated sequencing batch reactor (SBR) facility. The Facility also has a sludge storage tank and a belt press sludge processing unit. A 1.2 MGD MBR facility identical to the 0.8 MGD MBR facility has been built to reach the Interim phase capacity of 2.0 MGD design flow rate. It will consist of two anaerobic tanks, two anoxic tanks, two pre-aeration tanks, and five MBR units. For the Final phase, an additional 2.0 MGD facility, identical to the Interim phase

facility, will be built to bring the total plant capacity up to 4.0 MGD. In addition, the 0.4 MGD SBR facility will be decommissioned.

12. The effluent limitations in the Draft Permit are as follows for all phases or as noted:

Parameter	30-Day Average in mg/L	30-Day Average in lb/day (interim phase)	30-Day Average in lb/day (final phase)	7-Day Average mg/L	Daily Maximum mg/L
CBOD5	5	83	167	10	20
TSS	5	83	167	10	20
NH3-N	2	33	67	5	10
NO3-N	16.6	277	554	N/A	35.2
TN	Report	Report	Report	N/A	Report
TP	0.15	2.5	5	0.3	0.6
DO (minimum)	5	N/A	N/A	N/A	N/A
<i>E. coli</i> , CPU or MPN per 100 ml	126	N/A	N/A	N/A	399

13. In the Interim phase, the average discharge during any two-hour period (2-hour peak) shall not exceed 4,514 gallons per minute (gpm). In the final phase, the average discharge during any two-hour period (2-hour peak) shall not exceed 9,028 gpm.
14. The permittee shall utilize an UV system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the ED.

Notice and Jurisdiction

15. The Notice of Receipt of Application and Intent to Obtain Water Quality Permit was published on December 2, 2018, in the *Williamson County Sun*.
16. The Application was determined technically complete on March 12, 2020.
17. The Combined Notice of Application and Preliminary Decision and Notice of Public Meeting was published on July 15, 2020, in the *Williamson County Sun*.
18. A public meeting was held on August 17, 2020, via videoconference.
19. The public comment period ended at the close of the public meeting on August 17, 2020.
20. Sharon Cassady, Terry Ira Cassady, Stephanie Morris, Daniel Morris, and Jeff Wiles, among others, timely filed formal Public Comments and Requests for a Contested Case Hearing.
21. The ED filed its Response to Comments with the Chief Clerk on June 15, 2021.

22. On October 6, 2021, the Commission considered during its open meeting the requests for hearing and requests for reconsideration. After evaluation of all relevant filings, the Commission determined that Sharon Cassady, Terry Ira Cassady, Stephanie Morris, Daniel Morris, and Jeff Wiles were affected persons and were entitled to a contested hearing.
23. At its October 6, 2021, open meeting, the Commission determined to refer the hearing requests filed by Jon and Carolyn Ahrens, David and Louise Bunnell, Gerald and Susan Harkins, Carrol Holley, Jessica Jensen, LaWann Tull, and Mark Tummons to SOAH for a determination on whether they qualified as affected persons.
24. At its October 6, 2021, open meeting, the Commission considered the issues to be referred to SOAH.
25. On October 19, 2021, the Commission issued an Interim Order granting certain hearing requests, referring certain hearing requests to SOAH, denying certain hearing requests, and referring the Application to SOAH for a contested hearing on the following ten issues (Referred Issues):
 - A) Whether the draft permit is protective of water quality, groundwater, and uses of the receiving waters of the South Fork San Gabriel River in accordance with the Texas Surface Water Quality Standards, including recreational use and with consideration of the maximum volume of the proposed discharge;
 - B) Whether the draft permit includes adequate provisions to protect the health of the requesters and their families and aquatic and terrestrial wildlife;
 - C) Whether the draft permit adequately addresses nuisance conditions, including odor, in accordance with 30 Texas Administrative Code § 309.13(e);
 - D) Whether the draft permit includes appropriate provisions to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 Texas Administrative Code § 307.4, including aquatic nutrient limitations;
 - E) Whether the draft permit should be denied or altered based on Applicant's compliance history;
 - F) Whether the draft permit should be denied or altered in consideration of the need for the facility in accordance with Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options;
 - G) Whether the draft permit complies with applicable antidegradation requirements;
 - H) Whether the draft permit requires adequate licensing requirements for the operator of the facility and adequate requirements regarding operator supervision;

- I) Whether the draft permit includes adequate provisions to protect the requesters' use and enjoyment of their property; and
 - J) Whether the draft permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.
26. At its October 6, 2021, open meeting, the Commission also denied all requests for reconsideration and set the maximum duration of the hearing at 180 days from the date of the preliminary hearing until the date the PFD is issued by SOAH.
27. On February 16, 2022, notice of the preliminary hearing was published in the *Williamson County Sun*. On February 23, 2022, an amended notice of the preliminary hearing was published in the *Williamson County Sun*. Known parties received mailed notice. The notice included the time, date, and place of the hearing, as well as the matters asserted, in accordance with the applicable statutes and rules.

Proceedings at SOAH

28. On March 28, 2022, a preliminary hearing was convened in this case via videoconference by SOAH ALJ Meitra Farhadi. The following parties, represented by counsel, appeared and were admitted as parties: Applicant; the ED; Office of Public Interest Council (OPIC); and Stephanie Morris. Self-represented individuals admitted as parties were: Daniel Morris, Jeff Wiles, Jon and Carolyn Ahrens, David and Louise Bunnell, Gerald and Susan Harkins, Frank and LaWann Tull, Andrew and Elizabeth Engelke, Pamela Sylvest, Joanne and John Swanson, Tom and Valerie Erikson, Carolyn and Donnie Dixon, and Sharon, Terry Ira, and Jackson Cassady. Subsequently, all of the self-represented individuals except for Daniel Morris and Jeff Wiles hired counsel and were represented collectively as the "Bunnell Protestants." Daniel Morris withdrew as a party in advance of the hearing on the merits, and Jeff Wiles did not participate in the hearing on the merits.
29. The Administrative Record was admitted into the record as Applicant's Exhibits AR-1, AR-2, AR-3, AR-4, AR-5, AR-6, and AR-7, and the ALJ determined that jurisdiction was established. By agreement, the 180-day deadline for the PFD was extended to October 24, 2022, to accommodate the parties' desired procedural schedule.
30. On May 20, 2022, Protestant Stephanie Morris filed a motion to certify to the Commissioners a question, pursuant to 30 Texas Administrative Code § 80.131, as to whether an antidegradation analysis under 30 Texas Administrative Code § 307.5 was required for Applicant's permit renewal that is the subject of this docket. After briefing by all interested parties, the ALJ denied the motion by order dated June 15, 2022.
31. SOAH ALJs Meitra Farhadi and Rachelle Nicolette Robles convened a prehearing conference via videoconference on July 13, 2022. All parties appeared through their

respective representatives and the ALJs addressed pending motions and matters of hearing organization.

32. The ALJs convened a hearing on the merits via Zoom videoconference on July 20, 2022, and concluded on July 22, 2022. The record ultimately closed on August 23, 2022, the date on which the last post-hearing written arguments were filed.
33. On October 24, 2022, the ALJs issued a Proposal for Decision (Initial PFD) recommending that the Application be approved with modifications to the Draft Permit.
34. On February 8, 2023, the Commission considered the ALJs' Initial PFD during an open meeting and voted to remand the matter to SOAH for additional proceedings.
35. The Commission issued an Interim Order on February 13, 2023, remanding the case to SOAH "for the parties to present additional evidence to determine the Total Phosphorus effluent limit necessary to comply with the Texas Surface Water Quality Standards. Under the Standards, the total phosphorus effluent limit should prevent excessive algal growth that impairs an existing use of the receiving water and should prevent the degradation of water quality by more than a *de minimis* amount."
36. ALJs Meitra Farhadi and Rachelle Nicolette Robles convened a prehearing conference on remand via Zoom videoconference on March 29, 2023.
37. On March 30, 2023, the ALJs issued Order No. 11, memorializing the preliminary hearing on remand, granting motion to compel, and adopting the parties' agreed procedural schedule on remand for this case.
- 37A. On July 21, 2023, the ALJs convened a prehearing conference via videoconference. All parties appeared through their respective representatives and the ALJs addressed pending motions, including objections and motions to strike, and matters pertinent to the remand hearing organization.
38. ALJs Meitra Farhadi and Rachelle Nicolette Robles convened the hearing on the merits on remand (Remand Hearing) via Zoom videoconference on July 26-28, 2023.
39. On August 2, 2023, the ALJs issued Order No. 13, granting Applicant's motion to withdraw party status of Jeffrey Wiles for not participating in the proceedings.
40. On August 17, 2023, the ALJs issued Order No. 15, denying Applicant's motions for conference and reconsideration of the ALJs' decision to strike portions of Applicant's prefiled testimony.
41. The record closed on September 14, 2023, the date on which the last post-hearing written arguments were filed.

Referred Issues Related to Regulatory Water Quality Standards

Issue A: Whether the Draft Permit is protective of water quality, groundwater, and uses of the receiving waters of the South Fork San Gabriel River in accordance with the Texas Surface Water Quality Standards, including recreational use and with consideration of the maximum volume of the proposed discharge.

Issue D: Whether the Draft Permit includes appropriate provisions to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 Texas Administrative Code § 307.4, including aquatic nutrient limitations.

Issue G: Whether the Draft Permit complies with applicable antidegradation requirements.

42. The Texas Surface Water Quality Standards (TSWQS) are intended to maintain the quality of water in the state in order to be protective of public health and enjoyment, and terrestrial and aquatic life, and to consider other environmental and economic resources.
43. The TSWQS designate uses for the state's surface waters and establish narrative and numerical water quality standards to protect those uses.
44. The TCEQ has adopted standard procedures to implement the TSWQS, which are set forth in "Procedures to Implement the Texas Surface Water Quality Standards (RG 194)" (IPs).
45. The TSWQS and IPs are used to set permit limits for wastewater discharges.
46. The TSWQS do not contain numerical criteria for nutrients, including phosphorus and nitrogen.
47. Under the TSWQS, surface water must be maintained in an aesthetically attractive condition.
48. Under the TSWQS, nutrients from permitted discharges must not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed, or attainable use.
49. An existing use is one that is currently being supported by a specific water body or that was attained on or after November 28, 1975.
50. A designated use is one assigned to specific water bodies in Appendix A, D, or G of 30 Texas Administrative Code § 307.10.
51. A presumed use is one that is assigned to generic categories of water bodies, but these are superseded by designated uses.

52. An attainable use is one that can be reasonably achieved by a water body in accordance with its physical, biological, and chemical characteristics, whether it is currently meeting that use or not.
53. Under the TSWQS, surface water must be essentially free of floating debris and suspended solids that are conducive to producing adverse responses in aquatic organisms or putrescible sludge deposits or sediment layers that adversely affect benthic biota or any lawful uses.
54. Under the TSWQS, waste discharges must not cause substantial and persistent changes from ambient conditions of turbidity or color.
55. The TCEQ's Antidegradation Policy provides that for Tier 1 review, existing uses and water quality sufficient to protect those existing uses must be maintained. For Tier 2, no activities subject to regulatory action that would cause degradation of waters that exceed fishable/swimmable quality are allowed unless it can be shown to TCEQ's satisfaction that the lowering of water quality is necessary for important economic or social development.
56. A permit may not cause or contribute to a violation of applicable water quality standards, including state narrative criteria.
57. The River is Segment 1250 in the Brazos River Basin. The designated uses for Segment 1250 are primary contact recreation one, high aquatic life use, public water supply, and aquifer protection.
58. Primary contact recreation one consists of activities that are presumed to involve a significant risk of ingestion of water, such as wading by children, swimming, water skiing, tubing, surfing, handfishing, kayaking, canoeing, and rafting.
59. A high aquatic life use has the following attributes: 1) highly diverse habitat; 2) usual association of regionally expected species; 3) the presence of sensitive species; 4) high diversity; 5) high species richness; and 6) a balanced to slightly imbalanced trophic structure.
60. Under the TSWQS, Segment 1250 is subject to numerical criteria for dissolved oxygen (DO). The 24-hour average criterion for DO is 5.0 mg/L and the 24-hour minimum is 3.0 mg/L. These criteria become 5.5 mg/L and 4.5 mg/L, respectively, during the spawning season.
61. Under the TSWQS, Segment 1250 is subject to numerical maximum criteria for dissolved minerals such as total dissolved solids, chloride, and sulfate that must be maintained such that existing, designated, presumed, and attainable uses are not impaired. The criteria for Segment 1250 are as follows: 350 mg/L for total dissolved solids, 50 mg/L for chloride, and 50 mg/L for sulfate.

62. TCEQ screening determined that the discharge would exceed the instream standards. Because of this, the Draft Permit requires the City to conduct a study to determine the sources of TDS in the influent to see if it can be reduced that way, as opposed to imposing a limit on TDS in the Draft Permit.
63. The River in the area of the outfall is a predominantly wide, shallow, limestone riverbed, with low harmonic mean flow and low background levels of nutrients in the water, such as phosphorus and nitrogen, making the water sensitive to nutrient enrichment and particularly susceptible to overgrowth of algae.
64. Upstream of the outfall, the water in the River is clear, the limestone riverbed with a thin layer of chalky-white sediment composed of calcium carbonate precipitates is visible, and the river contains very little filamentous algae. There are also golden-brown diatoms and other native, microscopic algae and microbes that form a thin layer on the stream bottom.
65. Conditions upstream of the outfall, where the river is unaffected by the effluent, are typical of naturally occurring conditions in low-nutrient Hill Country streams and what would be expected of naturally occurring conditions in the River.
66. Background levels of phosphorus in the South Fork San Gabriel River upstream of the outfall, where the river is unaffected by the effluent, are at or below 0.01 mg/L.
67. The existing uses of the South Fork San Gabriel River include fishing, swimming, wading, tubing, and paddling.
68. Algae is a type of aquatic vegetation. Significant algae grows at the outfall and persists at least 3.83 miles downstream of the outfall.
69. The City's effluent discharge from the Facility is the predominant cause of the algae found at and downstream of the outfall.
70. Phosphorus, nitrate-nitrogen, and ammonia nitrogen all contribute to the growth of algae in the river.
71. The quantity of the algae growth is excessive, such that it impairs wading, swimming, fishing, paddling, and other recreational uses.
72. The quantity and geographical extent of the algae growth causes the river to be aesthetically unattractive for several miles.
73. The algal bloom downstream of the outfall is related to the outfall and not the other potential sources.
74. The presence of algae can cause levels of DO in a water body to rise during the day due to photosynthesis by the vegetation, which produces oxygen, and to drop at night.

75. For a continuous four-month period between December 2021 and March 2022, Applicant discharged effluent that averaged between 1.36 and 1.463 MGD with concentrations of phosphorus between 0.06 and 0.081 mg/L.
76. In April and May 2022, the City spent weeks cleaning the algae from the area immediately around and downstream of the outfall; however, the algae grew back within days and weeks.
77. Staff performed DO modeling based on the Draft Permit limits for carbonaceous biochemical oxygen demand, ammonia nitrogen, and DO using QUAL-TX.
78. Indirect impacts, such as from algae or TP, are not taken into account under the QUAL-TX model.
79. Nutrients, such as TP and the resultant effect of algae, do affect the DO in a stream.
80. Neither Staff nor Applicant performed any nutrient modeling for the Draft Permit.
81. The QUAL-TX model did not take swings in DO levels over a 24-hour period of time into account.
82. The QUAL-TX model is intended to evaluate the 24-hour average DO criteria.
83. The QUAL-TX model is not used for modeling nutrients or evaluating the potential impacts of nutrients on a water body.
84. The QUAL-TX model does not provide any information as to whether the DO minimum standard will be met.
85. For the DO criteria to be met, sufficiently protective nutrient limits, like TP, must also be included in the permit.
86. The record evidence fails to demonstrate that the Draft Permit's proposed 0.15 mg/L TP limit will achieve the DO criteria for the River.
87. Water Quality Analysis Simulation Program (WASP) is a water quality model that has been developed by the United States Environmental Protection Agency. It is specifically designed to predict, among other things, algae responses to nutrient loads.
88. The City of Austin implemented a calibrated WASP model for the River specifically to characterize the predicted occurrence of algae in response to Applicant's effluent discharge.
89. Based on a maximum effluent discharge of 1.2 MGD at 0.1 mg/L TP, the WASP model concluded that the River will be high in nutrients and algae and have lower dissolved

oxygen below the outfall, and that nuisance benthic algae levels are predicted to occur most of the time.

- 89A. The best available information indicates that a TP limit of no more than 0.02 mg/L would be necessary to maintain high quality, clear water, high dissolved oxygen, and excellent aquatic animal habitat conditions in the River.
90. The IPs provide that when screening indicates that a reduction of effluent TP is needed, an effluent limit is recommended based on reasonably achievable technology-based limits, with consideration of the sensitivity of the site. Higher or lower limits may be recommended based on site-specific mitigating factors.
91. The IPs state that considerations for nutrient impacts should focus on TP rather than nitrogen for a number of reasons, including that less data on TN has been collected in Texas reservoirs, streams, and rivers; and available waste treatment technologies make reducing phosphorus more effective than reducing nitrogen as a means of limiting algal production.
92. The IPs state that permit renewals may be evaluated for potentially significant concentrations of TP (and if appropriate, TN) on a case-by-case basis.
93. Under Applicant's current permit, at the Interim phase of 1.2 MGD and 0.5 mg/L total phosphorus, the phosphorus loading amounts to 5 pounds per day.
94. Under the Draft Permit, total loading of phosphorus will increase from the Interim phase at 2.0 MGD and 2.5 pounds per day of phosphorus, to 5 pounds per day in the Final phase at 4.0 MGD.
95. Effluent discharge pursuant to the limitations of the Draft Permit will cause algae to continue to grow in similar quantities and to persist for a similar distance downstream as is present today under Applicant's current permit.
96. The algae that will grow under the Draft Permit will be excessive and will impair existing, designated, and attainable uses, including recreational uses and high aquatic life use, in the River for multiple miles.
97. The algae that will grow under the Draft Permit will cause the River to be aesthetically unattractive at and downstream of the outfall, for multiple miles.
98. The effluent limit of 0.15 mg/L TP in the Draft Permit will not prevent the excessive growth and accumulation of aquatic vegetation in the River, nor will it maintain the aesthetic parameters of the South Fork San Gabriel River.
99. Protestants failed to rebut the prima facie demonstration that the effluent limits in the Draft Permit are protective of groundwater.

100. An antidegradation review was completed in 2013 for the current permit.
101. The 2013 antidegradation review involved a mathematical error. The 7Q2 flow used was 0.15 cubic feet per second (cfs) instead of 0.1 cfs, and the harmonic mean flow used was 0.4 cfs instead of 0.2 cfs.
102. The effect of the effluent on the stream was therefore underestimated in the 2013 antidegradation review.
103. The 2013 antidegradation review has also been shown to be inadequate, based upon the widespread degradation of the South Fork San Gabriel River at and downstream of the City's effluent discharge point since the permit analyzed in the 2013 review became effective.
104. The Commission has the discretion to conduct an antidegradation review for permit renewal applications that do not seek an increase in pollutants.
105. No antidegradation review was performed for this Application.
106. Applicant did not seek permission from the Commission to degrade the water quality of the River as necessary for important economic or social development.

On Remand

107. No antidegradation review was performed on remand.
- 107A. The Protestants' water samples used to recommend a TP effluent limit of 0.015 mg/L for the Draft Permit were analyzed by the Center for Reservoir and Aquatic Systems Research analytical lab at Baylor University, which is not a laboratory certified by the National Environmental Laboratory Accreditation Program (NELAP) in accordance with 30 Texas Administrative Code Chapter 25.
108. For a continuous period between December 2022 and April 2023, Applicant discharged effluent that averaged concentrations of phosphorus between 0.05 and 0.08 mg/L.
109. [Deleted]
110. Biological changes to sensitive diatoms will begin at concentrations between 0.01 and 0.015 mg/L of TP.
111. Diatoms are a key element of the structure and function of the South Fork San Gabriel River. As the diatom population declines, conditions become ideal for their replacement by pollution-tolerant, weedy species such as nuisance filamentous green algae.

- 111A. A discharge of no more than 0.02 mg/L TP during low flow periods will support recreational uses by preventing nuisance algae growth.
- 111B. A discharge of effluent at the volumes to be permitted [or contemplated] under the renewal permit would be expected to reduce aquatic life, aesthetics, and recreational conditions in this part of the River during low flow conditions if TP exceeds 0.02 mg/L.
112. The TP effluent limit necessary to prevent excessive algal growth that impairs high aquatic life use is 0.02 mg/L.
113. The TP effluent necessary to prevent excessive algal growth that impairs primary contact recreation use is 0.02 mg/L.
114. The TP effluent limit necessary to prevent the lowering of water quality by more than a *de minimis* amount is 0.02 mg/L.
115. Therefore, the TP effluent limit necessary to comply with the TSWQS is 0.02 mg/L.

Referred Issues Related to Wildlife and Health Protection

Issue B: Whether the draft permit includes adequate provisions to protect the health of the requesters and their families and aquatic and terrestrial wildlife.

116. One of the purposes of the TSWQS is to maintain the quality of water in the state consistent with public health and enjoyment.
117. The proposed discharge will not adversely impact the health of the requesters, their families, and aquatic and terrestrial wildlife.

Referred Issues Related to Nuisance Issues

Issue C: Whether the draft permit adequately addresses nuisance conditions, including odor, in accordance with 30 TAC§ 309.13(e)

Issue I: Whether the draft permit includes adequate provisions to protect the requesters' use and enjoyment of their property

118. The Facility's wastewater treatment plant units are located at least 150 feet from the nearest property line.
119. The Facility does not contain lagoons with zones of anaerobic activity.
120. Applicant will own the buffer zone, the area between the Facility and the nearest property line.

121. [Deleted]

122. The algae growth in the River, which is caused by the effluent, impairs the ability of requesters to enjoy their property by impairing their ability to enjoy the river in an aesthetically attractive condition, the smells of decaying algae in the river impair the ability of requesters to enjoy spending time outdoors on their property, the algae growth impairs the ability of requesters to go swimming, wading, and fishing in the river from their property, and the algae impairs the ability of requesters to observe wildlife from their property.

123. Considering Applicant's compliance history, revisions to the Draft Permit are warranted to address nuisance odor conditions caused by the decay of the excessive algae in the River so that it does not interfere with the use and enjoyment of properties downstream.

Referred Issues on Effects on Permit of Compliance History and Regionalization Policy

Issue E: Whether the draft permit should be denied or altered based on the Applicant's compliance history.

Issue F: Whether the draft permit should be denied or altered in consideration of the need for the facility in accordance with Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options.

124. The Facility and Applicant each had a "satisfactory" compliance rating, as determined by the standards of 30 Texas Administrative Code chapter 60.

125. The TCEQ has the authority to alter the terms of Applicant's Draft Permit.

126. The City has agreed, since August 21, 2018, to three administrative orders entered by TCEQ.

127. The 2018 administrative order covered allegations of eight different violations of permit limits in a 10-month period beginning in December 2015, and three of the eight involved phosphorus.

128. The 2020 administrative order alleged eight permit violations in a 19-month period beginning in November 2016. One of those violations included 50 separate exceedances of permit limits, 11 of which involved phosphorus.

129. The 2022 administrative order dealt with nine alleged exceedances of permit limits in an 11-month period beginning in September 2019. Six of the exceedances involved phosphorus.

130. Videos, photographs, and eye-witness testimonies in the record establish that the operation of the City's wastewater plant has badly degraded the River for at least several miles downstream of the plant's outfall.
131. The total flow in the Final phase should remain at 4.0 MGD.
132. The policy of the Texas Water Code is to encourage and promote the development and use of regional and areawide waste collection, treatment, and disposal systems.
133. [Deleted]
134. An increase in population growth in the area served by the Facility results in an increased demand for wastewater collection, treatment, and disposal.
135. Applicant needs the requested levels of 4.0 MGD in order to effectively provide its services.

Referred Issues Related to Permit Terms Referring to Facility Management and Monitoring

Issue H: Whether the draft permit requires adequate licensing requirements for the operator of the facility and adequate requirements regarding operator supervision.

Issue J: Whether the draft permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.

136. The TCEQ has the authority to require permit conditions or provisions to address any concerns with an applicant's compliance history, as it had with the addition of requiring Applicant to enter into a contract with a third-party operator.
137. Applicant's system is currently classified as a Category B system and must have a chief operator with an operator license of a Class B or higher.
138. The ED may increase the treatment facility classification, and as a result, the required chief operator license, for facilities which include unusually complex processes or present unusual operation or maintenance conditions.
139. The Draft Permit requires Applicant be supervised by a third-party to ensure it is complying with the terms of its permit.
140. The record did not demonstrate that the Applicant's MBR Facility is an unusually complex process or presents unusual operation or maintenance conditions.

141. Considering Applicant's compliance history, a revision to the Draft Permit is warranted, requiring the third-party operator to conduct effluent monitoring at least twice per month and that this effluent data be included in calculating daily averages.
142. Considering Applicant's compliance history, history of algae growth at and below the outfall, and the ecologically sensitive nature of the River, particularly to nutrient enrichment, a revision to Item No. 9 in the "Other Requirements" section in the Draft Permit is warranted, modifying the language to require Applicant to include parameters from the initial permit issued in 2004.
143. [Deleted]

Transcription Costs

144. Reporting and transcription of the hearing on the merits was warranted because the hearing lasted for three days.
145. Each of the non-agency parties, Applicant, Protestant Morris, and the Bunnell Protestants, were represented by outside legal counsel.
146. Both Applicant and Protestant Morris hired expert witnesses for the hearing.
147. Applicant is a municipality.
148. Protestant Morris is represented by a non-profit legal aid organization that provides free legal services to low-income Texans.
149. The Bunnell Protestants consist of a small group of neighbors.
150. The total cost paid by Applicant for recording and transcribing the initial hearing on the merits, two copies of the transcript prepared on a five-day turnaround, and rough draft dailies of the transcript each day, was \$9,797.25.
151. Applicant ordered same-day rough drafts and for the transcript to be expedited on a five-day turnaround schedule, without conferring with other parties.
152. Protestant Morris ordered a copy of the transcript from the initial hearing at a cost of \$2,243.90.
153. Transcript costs cannot be assessed against the ED or OPIC because they are statutory parties who are precluded from appealing the decision of the Commission.
154. The City's poor compliance history and the extensive degradation of the River as a result of the City's discharge, led to Protestants opposing this permit renewal application.

155. The failure of the City to meet its burden in the initial hearing led to the Remand Hearing.
156. Applicant should pay the full cost of the reporting and transcription costs for both the initial and the remand hearing on the merits and reimburse Protestant Morris for transcript costs incurred.

II. CONCLUSIONS OF LAW

1. TCEQ has jurisdiction over this matter. Tex. Water Code chs. 5, 26.
2. SOAH has jurisdiction to conduct a hearing and to prepare a PFD in contested cases referred by the Commission under Texas Government Code § 2003.047.
3. Notice was provided in accordance with Texas Water Code §§ 5.114 and 26.028; Texas Government Code §§ 2001.051 and .052; and 30 Texas Administrative Code chapter 39.
4. The Application is subject to the requirements in Senate Bill 709, effective September 1, 2015. Tex. Gov't Code § 2003.047(i-1) through (i-3).
5. Applicant's filing of the Administrative Record established a prima facie demonstration that: (1) the Draft Permit meets all state and federal legal and technical requirements; and (2) a permit, if issued consistent with the Draft Permit, would protect human health and safety, the environment, and physical property. Tex. Gov't Code § 2003.047(i-1); 30 Tex. Admin. Code §§ 80.17(c)(1), .117(c)(1), .127(h).
6. To rebut the prima facie demonstration established by the Administrative Record, a party must present evidence that (1) relates to one of the Referred Issues; and (2) demonstrates that one or more provisions in the Draft Permit violates a specifically applicable state or federal requirement. See Tex. Gov't Code § 2003.047(i-2); 30 Tex. Admin. Code §§ 80.17(c)(2), .117(c)(3).
7. Protestants rebutted the prima facie demonstration by presenting evidence demonstrating that one or more provisions in the Draft Permit violate a specifically applicable state or federal requirement that relates to a matter referred by the TCEQ. 30 Tex. Admin. Code § 80.17(c)(2).
8. If a party rebuts the prima facie demonstration, Applicant and the ED may present additional evidence to support the Draft Permit. Tex. Gov't Code § 2003.047(i-3); 30 Tex. Admin. Code §§ 80.17(c)(3), .117(c)(3).
9. Applicant retains the burden of proof on the issues regarding the sufficiency of the Application and compliance with the necessary statutory and regulatory requirements. 30 Tex. Admin. Code § 80.17(a).

10. The standard of proof is by a preponderance of the evidence. *Granek v. Texas St. Bd. of Med. Examiners*, 172 S.W.3d 761, 777 (Tex. App.—Austin 2005, no pet.); *Southwestern Pub. Servs. Co. v. Pub. Util. Comm'n of Tex.*, 962 S.W.2d 207, 213-14 (Tex. App.—Austin 1998, pet. denied).
11. The Remand Hearing was to allow the parties to present additional evidence on specified issues. The process of rebutting a prima facie case has previously occurred. Applicant was not entitled to another presumption.
12. The Draft Permit is protective of groundwater.
13. The Draft Permit will not be protective of water quality and will not protect uses of the receiving waters under the TSWQS because it would allow significant increases in nutrient pollutants to be discharged into the River, leading to reduced DO, algae blooms, and an impairment of the designated uses.
14. The Draft Permit does not include appropriate provisions to protect against excessive growth of algae and comply with the aesthetic parameters and requirements of 30 Texas Administrative Code § 307.4, including aquatic nutrient limitations.
- 14A. The Commission may accept environmental testing laboratory data and analyses for use in Commission decisions regarding any matter under the Commission's jurisdiction relating to permits or other authorizations only if the data and analyses are prepared by an environmental testing laboratory accredited by the Commission. Similarly, an environmental testing laboratory must be accredited according to 30 Texas Administrative Code Chapter 25 if the laboratory provides analytical data that is used for a Commission decision relating to a permit authorization. 30 Tex. Admin. Code §§ 25.1 and 25.4.
15. The Draft Permit does not comply with the TCEQ's antidegradation requirements. 30 Tex. Admin. Code § 307.5.
- 15A. 30 Texas Administrative Code § 309.13(e) requires a permit applicant to comply with one of three options for abating nuisance odors: a 500-foot buffer zone to the nearest property line for lagoons with zones of anaerobic activity or a 150 foot buffer zone to the nearest property line for all other wastewater treatment plant units; the implementation of an approved nuisance odor prevention plan; or an enforceable restriction against constructing residential structures within any part of a buffer zone not owned by the plant.
16. The Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code § 309.13(e).
17. Applicant did not establish by a preponderance of the evidence that the Draft Permit includes adequate provisions to protect the requesters use and enjoyment of their properties.

18. Applicant established by a preponderance of the evidence that the Draft Permit includes adequate provisions to protect the health of the requesters and their families and aquatic and terrestrial wildlife.
19. The TCEQ has the authority to amend the Draft Permit in light of compliance concerns, even if the facility or person has a satisfactory compliance rating.
20. The compliance history of the City at this facility, notwithstanding the “satisfactory” compliance ratings of the City and the facility, raises compliance concerns and presents circumstances that dictate it is appropriate to alter the terms of the Draft Permit.
21. Applicant has shown the need to be able to discharge a maximum amount of 4.0 MGD.
22. Applicant did not establish by a preponderance of the credible evidence that the Draft Permit includes sufficient operational, monitoring, and reporting requirements.
- 22A. The Texas Water Code gives TCEQ permissive authority to deny or alter the terms and conditions of the proposed permit terms on consideration of need, including expected volume and quality of the influent and the availability of existing or proposed areawide or regional waste collection, treatment, and disposal systems. Texas Water Code § 26.0282.
23. [Deleted]
24. No transcript costs may be assessed against the ED or OPIC because the TCEQ’s rules prohibit the assessment of any cost to a statutory party who is precluded by law from appealing any ruling, decision, or other act of the Commission. 30 Tex. Admin. Code § 80.23(d)(2).
25. Factors to be considered in assessing transcript costs include: the party who requested the transcript; the financial ability of the party to pay the costs; the extent to which the party participated in the hearing; the relative benefits to the various parties of having a transcript; and any other factor which is relevant to a just and reasonable assessment of the costs. 30 Tex. Admin. Code § 80.23(d)(1).
26. Considering the factors in 30 Texas Administrative Code § 80.23(d)(1), no reporting or transcription costs should be assessed or allocated against the Protestants, but rather Applicant should bear all reporting and transcription costs from both the initial and remand proceedings, including those already paid for by Protestant Morris.
27. Protestants produced sufficient evidence that demonstrates a Total Phosphorus effluent limit of 0.02 mg/L or lower is necessary in all phases in order for the Liberty Hill Draft Permit to meet all Texas Surface Water Quality Standards and comply with the State Antidegradation Policy. 30 Tex. Admin. Code §§ 307 *et seq.*

III. EXPLANATION OF CHANGES

1. The Commission did not agree with the ALJs' recommendation to lower the TP effluent limit in the Draft Permit to 0.015 mg/L. The Commission noted that the ALJs based their proposed TP limit on testimony by Dr. Ryan King indicating that 0.015 mg/L is necessary to maintain natural conditions in the River. However, the TSWQS do not require that the effluent limit maintain existing background conditions in the receiving waters. The standards prohibit the excessive growth of algae that will impair existing, designated, presumed, and attainable uses and degradation of water quality by more than a *de minimis* extent. 30 Tex. Admin. Code §§ 307.4(e) and 307.5(b)(2). The Commission also noted that Dr. King's work is based on data from a lab that is not certified by the National Environmental Laboratory Accreditation Program in accordance with 30 TAC Chapter 25, and that neither the TSWQS nor IPs set effluent limits based on a "tipping point."

Based on the testimony of Protestant witnesses Dr. Jan Stevenson and Dr. Lauren Ross, the Commission determined that the evidence in the record supports that a TP effluent limit of 0.02 mg/L will comply with the TSWQS. Dr. Stevenson testified that a discharge of no more than 0.02 mg/L TP during low flow periods will support recreational uses by preventing excessive algal growth and would not reduce aquatic life, aesthetics, and recreational conditions of the River. *Ex. SM-Stevenson-1-R at 12-13*. Similarly, Dr. Ross testified that a TP effluent limit of 0.02 mg/L would be protective of the uses of the River under the same conditions occurring upstream of the City's outfall. *Ex. SM-Ross at 28-29*. Therefore, the Commission determined that a TP limit of 0.02 mg/L would not cause excessive algae growth or degrade water quality in the River by more than a *de minimis* extent.

To effectuate the Commission's decision to not adopt the ALJs' recommended 0.015 mg/L TP effluent limit and instead establish a 0.02 mg/L TP effluent limit in the Draft Permit, the Commission amended Findings of Fact (FOF) Nos. 86, 89, 112-115; Conclusion of Law (COL) No. 27; and Ordering Provision No. 1. The Commission also added new FOF Nos. 89A, 107A, 111A, and 111B; new COL No. 14A; and deleted FOF No. 109.

2. The Commission amended FOF No. 123 because the ALJs found that the Facility complies with the odor abatement requirements in 30 TAC § 309.13(e). *Initial PFD at 68-69*. The revision to this FOF clarifies that although the City's Facility complies with the TCEQ's odor abatement rules, amendment of the TP effluent limit is necessary to address nuisance odor conditions caused by the decay of the excessive algae in the River so that it does not interfere with the use and enjoyment of properties downstream.
3. The Commission did not agree with the ALJs' recommendation to require the City to hire a Class A operator for the Facility. During the February 8, 2023, Agenda, the Commission noted that the City's Facility falls within the classification of a Category B facility pursuant to 30 TAC § 30.350(e), and the ED may increase the treatment facility classification for facilities which include unusually complex processes or presents unusual operation or maintenance conditions. The Commission determined that the evidentiary record did not

demonstrate that the City's MBR Facility is an unusually complexed process or presents unusual operation or maintenance conditions. Therefore, the Commission amended FOF No. 140 and Ordering Provision No. 1, and deleted COL No. 23.

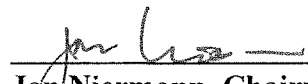
4. The Commission agreed with the ALJs' recommendation in the initial PFD to require the City to conduct a nutrient sampling plan to study the effect the nutrients in its discharge is having on the receiving waters. Although this recommendation was removed in the ALJs' proposed order filed after the remand hearing, the Commission determined to reinstate that requirement so that it mirrors the language in the 2004 permit that requires the permittee to conduct a study of nutrients and algal growth in the receiving stream for at least two years after discharge under the terms of this renewed permit. Accordingly, the Commission amended FOF No. 142 and Ordering Provision No. 1.
5. The Commission did not agree with the ALJs' recommendation to require the City to post the City's monitoring information on a public website. Although the Commission noted that public posting of this information would be a good practice in this case considering the substantial public interest, it declined to impose that obligation in the Draft Permit because there are no regulatory or statutory requirements to do so. Accordingly, the Commission deleted FOF No. 143 and amended Ordering Provision No. 1.
6. The Commission added FOF No. 37A regarding the prehearing conference held after the remand of this matter. The ALJs recommended this additional FOF in their letter replying to exceptions dated January 22, 2024.
7. The Commission changed FOF Nos. 121 and 133 to COL Nos. 15A and 22A, respectively, and amended Ordering Provision No. 3 to clarify that the ED's response to comments is adopted to the extent it does not conflict with the Commission's order. The Commission also made other non-substantive grammatical and formatting changes to improve the readability of the Final Order.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW, THAT:

1. The Application by the City of Liberty Hill for Texas Pollutant Discharge Elimination System Permit No. WQ0014477001 is approved and the attached permit is issued with the following modifications:
 - a TP effluent limit of 0.02 mg/L for all phases; and
 - a modification of the study outlined in "Other Requirements" Item No. 9, to include a nutrient sampling plan that mirrors language in the 2004 permit that requires the permittee to conduct a study of nutrients and algal growth in the receiving stream for at least two years after discharge under the terms of this renewed permit.

2. The City shall pay all of the transcription costs for both the Initial and Remand proceedings and shall reimburse Protestant Morris \$2,243.90.
3. The Commission adopts the ED's Response to Public Comment in accordance with 30 Texas Administrative Code section 50.117 to the extent it does not conflict with the Commission's order.
4. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied.
5. The effective date of this Order is the date the Order is final, as provided by Texas Government Code § 2001.144 and 30 Texas Administrative Code § 80.273.
6. TCEQ's Chief Clerk shall forward a copy of this Order to all parties.
7. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any provision shall not affect the validity of the remaining portions of this Order.

**TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY**



Jon Niermann, Chairman

4/23/24

Date Signed

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TPDES PERMIT NO.
WQ0014477001
[For TCEQ office use only - EPA I.D.
No. TX0126195]

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

This is a renewal that replaces TPDES
Permit No. WQ0014477001 issued on
September 22, 2015.

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

City of Liberty Hill

whose mailing address is

926 Loop 332
Liberty Hill, Texas 78642

is authorized to treat and discharge wastes from the Liberty Hill Regional Wastewater
Treatment Facility, SIC Code 4952

located approximately 8,800 feet southeast of the intersection of U.S. Highway 29 and U.S.
Highway 183 in Williamson County, Texas 78641

to South Fork San Gabriel River in Segment No. 1250 of the Brazos 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: April 23, 2024


For the Commission

INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTSOutfall Number 001

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 2.0 MGD, nor shall the average discharge during any two-hour period (2-hour peak) exceed 4,514 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (83)	10	20	30	Five/week	Composite
Total Suspended Solids	5 (83)	10	20	30	Five/week	Composite
Ammonia Nitrogen	2 (33)	5	10	15	Five/week	Composite
Nitrate-Nitrogen	16.6 (277)	N/A	35.2	99.6	Two/week	Composite
Total Nitrogen	Report (Report)	N/A	Report	N/A	Two/week	Composite
Total Phosphorus	0.02 (0.33)	0.04	0.08	0.12	Five/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.5 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 5.0 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 REQUIREMENTSOutfall Number 001

1. During the period beginning upon the completion of expansion to the 4.0 million gallons per day (MGD) facility 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 9,028 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations				Min. Self-Monitoring Requirements	
	Daily Avg mg/l (lbs/day)	7-day Avg mg/l	Daily Max mg/l	Single Grab mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type
Flow, MGD	Report	N/A	Report	N/A	Continuous	Totalizing Meter
Carbonaceous Biochemical Oxygen Demand (5-day)	5 (167)	10	20	30	Five/week	Composite
Total Suspended Solids	5 (167)	10	20	30	Five/week	Composite
Ammonia Nitrogen	2 (67)	5	10	15	Five/week	Composite
Nitrate-Nitrogen	16.6 (554)	N/A	35.2	99.6	Two/week	Composite
Total Nitrogen	Report (Report)	N/A	Report	N/A	Two/week	Composite
Total Phosphorus	0.02 (0.67)	0.04	0.08	0.12	Five/week	Composite
<i>E. coli</i> , colony-forming units or most probable number per 100 ml	126	N/A	399	N/A	Daily	Grab

2. The permittee shall utilize an Ultraviolet Light (UV) system for disinfection purposes. An equivalent method of disinfection may be substituted only with prior approval of the Executive Director.
3. The pH shall not be less than 6.5 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 5.0 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. 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 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, 2023, 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 and the permit number(s);
 - ii. the bankruptcy court in which the petition for bankruptcy was filed; and

- iii. 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 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 221) 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.

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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 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 Sewage Sludge. This provision does not authorize the permittee to land apply sludge on property owned, leased or under the direct control of the permittee.**

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge 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.
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 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 disposal practice.

B. Testing Requirements

1. Sewage sludge 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 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 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 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 11) 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 11) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30th of each year. Effective December 21, 2020, 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. Sewage sludge 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 pathogen requirements.

- a. For sewage sludge to be classified as Class A 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 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 sewage sludge may be classified a Class A sewage sludge 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 criteria for

sewage sludge.

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 sludge is land applied:

- i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.
- ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains 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 sewage sludge when the sewage sludge remains 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 sewage sludge.
- v. Animals shall not be allowed to graze on the land for 30 days after application of sewage sludge.
- vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge 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 sewage sludge.
- viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.
- ix. Land application of sludge 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. Sewage sludge shall be injected below the surface of the land.
- ii. No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is 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 sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10 -

- i. Sewage sludge 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 sewage sludge that is incorporated into the soil is Class A or Class AB with respect to pathogens, the sewage sludge 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 sewage sludge (*) 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 sewage sludge 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 treatment process or processes at the facility: preliminary operations (e.g., sludge 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 for disposal at a landfill) and whether the material is ultimately conveyed off-site in bulk or in bags.

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE 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 pathogen reduction requirements as defined above in Section I.B.3.

C. Management Practices

1. Bulk sewage sludge 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 sewage sludge 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 sewage sludge 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 sewage sludge sold or given away. The information sheet shall contain the following information:
 - a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land.
 - b. A statement that application of the sewage sludge 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 sewage sludge application rate for the sewage sludge 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 sewage sludge 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 sewage sludge is 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 sewage sludge 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 sewage sludge.
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 sewage sludge disposal practice.

E. Record keeping Requirements

The sludge 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 sewage sludge 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 sludge, 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 sewage sludge is 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 sewage sludge or a sewage sludge 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 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 sludge is applied.
 - c. The number of acres in each site on which bulk sludge is applied.
 - d. The date and time sludge is 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 sludge 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 11) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30th of each year the following information. Effective December 21, 2020, 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 treatment process or processes at the facility: preliminary operations (e.g., sludge 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 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 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 sludge, 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 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 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 sewage sludge is applied.
 - c. The date and time bulk sewage sludge is applied to each site.
 - d. The cumulative amount of each pollutant (i.e., pounds/acre) listed in Table 2 in the bulk sewage sludge applied to each site.
 - e. The amount of sewage sludge (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
DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL**

- A. The permittee shall handle and dispose of sewage sludge 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 disposed in a municipal solid waste landfill.
- B. If the permittee generates sewage sludge and supplies that sewage sludge 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 disposal practice.
- D. Sewage sludge 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 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 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 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 11) 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 11) and the Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30 of each year.

- E. Sewage sludge 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 11) and Compliance Monitoring Team (MC 224) of the Enforcement Division by September 30th of each year the following information. Effective December 21, 2020, 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 treatment process or processes at the facility: preliminary operations (e.g., sludge 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. Toxicity Characteristic Leaching Procedure (TCLP) results.
3. Annual sludge production in dry tons/year.
4. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
5. Amount of sludge transported interstate in dry tons/year.
6. A certification that the sewage sludge 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 TRANSPORTED TO ANOTHER FACILITY FOR FURTHER PROCESSING

These provisions apply to sludge that is transported to another wastewater treatment facility or facility that further processes sludge. These provisions are intended to allow transport of sludge to facilities that have been authorized to accept sludge. These provisions do not limit the ability of the receiving facility to determine whether to accept the sludge, 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 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 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 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.
2. For sludge 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 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 11) and Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 30th of each year. Effective December 21, 2020, 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 treatment process or processes at the facility: preliminary operations (e.g., sludge 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 production;
3. the amount of sludge 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.

TCEQ Revision 01/2016

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 permittee shall contract with a wastewater system operations company ("third-party") holding a valid 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, to operate this Category B facility.

If the permittee changes third-party contractors for operation of its wastewater treatment plant, it shall provide the TCEQ Wastewater Permitting Section (MC 148) and the TCEQ Regional Office (MC Region 9) notification of the change and a copy of the contract with the third-party that will operate the facility on a contract basis for review to ensure compliance with the terms and conditions of this permit, within forty-five (45) days of the permittee signing the contract.

3. The third-party must document its presence at the facility for a minimum of one hour per day, seven days per week, and must be otherwise available by telephone or pager seven days per week. Records of the third-party's presence at the facility must be maintained (signed logbook) and available at the facility for inspection by authorized representatives of the commission or local regulatory authorities for at least three years.

The third-party must submit a copy of the signed logbook each month, to the TCEQ Regional Office (MC Region 11), by the 20th day of the following month.

4. If the third-party gives notice that it wishes to terminate the contract with the permittee, or if for any reason the third-party is no longer servicing the permitted facility, the permittee must notify the TCEQ Regional Office (MC Region 11) as soon as it is aware of the break in service. Included in the notice shall be an action plan to replace the current third-party with another qualified third-party.
5. The permittee must submit copies of all self-reported effluent monitoring performed by the third-party and certified copies of all lab analysis each month, to the TCEQ Regional Office (MC Region 11), by the 20th day of the following month.
6. The third-party shall inspect the facility daily and maintain at the plant site a record of these inspections. These records shall be available at the plant site for inspection by authorized representatives of the commission for at least three years. During this daily inspection, the

proper operation and maintenance of the batch/membrane reactors, the chemical addition system for phosphorus removal and the disinfection system shall be checked for compliance with the ammonia-nitrogen, nitrate-nitrogen, total phosphorus and *E. coli* bacteria effluent limits. The permittee shall also check for any sewage sludge that may be discharged with the effluent; in which case appropriate measures shall be taken immediately by the permittee to prevent its occurrence.

7. The facility is not located in the Coastal Management Program boundary.
8. Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone is defined as 300 feet downstream and 100 feet upstream from the point of discharge.
9. The permittee shall conduct a TDS, chloride, and sulfate source identification and reduction study. Within 180 days of permit issuance, the permittee shall submit a TDS, chloride, and sulfate source identification and reduction study work plan to the TCEQ Compliance Monitoring Team (MC 224) and the TCEQ Water Quality Standards Implementation Team (MC 150). The TCEQ may disapprove or modify the work plan within 60 days of receipt, with no response being equivalent to approval. The work plan shall include: identification of influent TDS, chloride, and sulfate sources, control options, (e.g., BMPs, pretreatment requirements), effluent sampling at a minimum frequency of once per week, reduction goals, and annual progress reporting. Sampling shall be conducted during periods representative of typical influent TDS, chloride, and sulfate concentrations. The duration of the study shall be 3 years from the date of implementation and annual progress reports shall be submitted by December 31st of each year to the TCEQ Compliance Monitoring Team (MC 224) and copy furnish the TCEQ Water Quality Standards Implementation Team (MC 150).
10. The permittee shall comply with the requirements of 30 TAC § 309.13(a) through (d). In addition, by ownership of the required buffer zone area, the permittee shall comply with the requirements of 30 TAC § 309.13(e).
11. The permittee shall provide facilities for the protection of its wastewater treatment facility from a 100-year flood.
12. 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, daily may be reduced to 5/week in all 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.
13. Prior to construction of the Final phase wastewater treatment facility, 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 Pages 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 2.0 MGD wastewater treatment facility, in accordance with 30 TAC § 217, Design Criteria for Domestic Wastewater Systems. A summary transmittal approval letter was issued April 30, 2020 (Log No. 0519/041).

14. The permittee shall notify the TCEQ Austin Regional Office (MC Region 11) and the Applications Review and Processing Team (MC 148) of the Water Quality Division, in writing at least forty-five (45) days prior to the completion of the new Final phase wastewater treatment facility on Notification of Completion Form 20007.
15. The permittee shall conduct a study of nutrients and algal growth in the receiving stream. The scope of this study shall include sampling for nutrient concentrations (nitrogen and phosphorus) in the treated effluent and the receiving stream. A minimum of three sampling stations in the receiving stream shall be established, with at least one station located upstream of the proposed discharge point and two stations downstream. Within 180 days of permit issuance, the permittee shall submit a nutrient and algal growth monitoring work plan to the TCEQ Compliance Monitoring Team (MC-224) and cc'ed to the Standards Implementation Team (MC 150). The TCEQ may disapprove or modify the work plan within 60 days of receipt, with no response being equivalent to approval. All field measurements, sample collections, and analytical methods shall conform to guidelines set forth in the latest version of the Surface Water Quality Monitoring Procedures, Volume 1 and Volume 2. The duration of the study shall be 3 years from the date of implementation and shall include at least one year of sampling when the reduced 0.02 mg/L total phosphorus limits are in effect. Annual progress reports shall be submitted by December 31st of each year to the TCEQ Compliance Monitoring Team (MC-224) and cc'ed to the Standards Implementation Team (MC 150).

CONTRIBUTING INDUSTRIES AND PRETREATMENT REQUIREMENTS

1. The following pollutants may not be introduced into the treatment facility:
 - a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, waste streams with a closed-cup flash point of less than 140° Fahrenheit (60° Celsius) using the test methods specified in 40 CFR § 261.21;
 - b. Pollutants which will cause corrosive structural damage to the POTW, but in no case shall there be discharges with a pH lower than 5.0 standard units, unless the works are specifically designed to accommodate such discharges;
 - c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference;
 - d. Any pollutant, including oxygen-demanding pollutants (e.g., biochemical oxygen demand), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
 - e. Heat in amounts which will inhibit biological activity in the POTW, resulting in Interference, but in no case shall there be heat in such quantities that the temperature at the POTW treatment plant exceeds 104° Fahrenheit (40° Celsius) unless the Executive Director, upon request of the POTW, approves alternate temperature limits;
 - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause Interference or Pass Through;
 - g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
 - h. Any trucked or hauled pollutants except at discharge points designated by the POTW.
2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Clean Water Act, including any requirements established under 40 CFR Part 403 [*rev. Federal Register/ Vol. 70/ No. 198/ Friday, October 14, 2005/ Rules and Regulations, pages 60134-60798*].
3. The permittee shall provide adequate notification to the Executive Director, care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, within 30 days subsequent to the permittee's knowledge of either of the following:
 - a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Clean Water Act if it were 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.

Any 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 July 2007

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 31%, 41%, 55%, 74%, and 98% effluent. The critical dilution, defined as 98% 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.
 - 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 "o."
 - 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 "o."
 - 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "o."

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 1 OF 4)

BIOMONITORING REPORTING

CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times Date Time Date Time
 Composites No. 1 FROM: _____ TO: _____
 Collected No. 2 FROM: _____ TO: _____
 No. 3 FROM: _____ TO: _____

Test initiated: _____ am/pm _____ date

Dilution water used: _____ Receiving water _____ Synthetic Dilution water

NUMBER OF YOUNG PRODUCED PER ADULT AT END OF TEST

REP	Percent effluent					
	0%	31%	41%	55%	74%	98%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Survival Mean						
Total Mean						
CV%*						
PMSD						

*Coefficient of Variation = standard deviation x 100/mean (calculation based on young of the surviving adults)

Designate males (M), and dead females (D), along with number of neonates (x) released prior to death.

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 (98%): _____ YES _____ NO

PERCENT SURVIVAL

	Percent effluent					
Time of Reading	0%	31%	41%	55%	74%	98%
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 (98%): _____ 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

No. 1 FROM: _____ Date _____ Time _____ TO: _____ Date _____ Time _____

No. 2 FROM: _____ Date _____ Time _____ TO: _____ Date _____ Time _____

No. 3 FROM: _____ Date _____ Time _____ TO: _____ Date _____ Time _____

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%							
31%							
41%							
55%							
74%							
98%							
PMSD							

* Coefficient of Variation = standard deviation x 100/mean

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 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 (98%): _____ 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%									
31%									
41%									
55%									
74%									
98%									

* 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 (98%): _____ 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. 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, a chemical-specific limit, or other appropriate actions to address toxicity. The permittee may be required to conduct a toxicity reduction evaluation (TRE) after multiple toxic events.

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 Part 1.c., the control and dilution water shall consist of standard, synthetic, moderately hard, reconstituted 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.

- 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

