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Kathleen Hartnett White, *Chairman*  
R. B. "Ralph" Marquez, *Commissioner*  
Larry R. Soward, *Commissioner*  
Glenn Shankle, *Executive Director*



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DEC 21 2005  
Lloyd Gosselink

## TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution*

December 20, 2005

TO: Persons on the attached mailing list.

RE: San Jacinto River Authority; TPDES Permit No. 11401-001  
TCEQ Docket No. 2003-1213-MWD; SOAH Docket No. 582-04-1194

### **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 and a draft copy of the permit. Unless a Motion for Rehearing ("MFR" or "motion") is timely filed with the chief clerk, as described below, this action of the Commission will become final and only appealable in district court. 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 20 days after the date a person is notified of the Commission's order on this application. A person is presumed to have been notified on the third day after the date that this order is mailed.

An original and 11 copies of the motion must be sent to the chief clerk at the following address:

LaDonna Castañuela, Chief Clerk  
TCEQ, MC-105  
P.O. Box 13087  
Austin, Texas 78711-3087

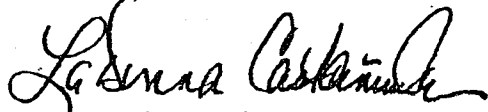
In addition, a copy of the motion must be sent on the same day to each of the individuals on the attached mailing list. A certificate of service stating that copies of the motion was sent to those on the mailing list must also be sent to the chief clerk.

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 or official docket number assigned by the Commission; (3) the date of the order; and (4) a concise statement of each allegation of error.

Unless the time for the Commission to act on the motion is extended, the MFR is overruled by operation of law 45 days after a person is notified of the Commission's order on this application. If the Commission does not receive a motion for rehearing, the permit will be issued and forwarded to appropriate parties.

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

Sincerely,



LaDonna Castañuela  
Chief Clerk

LDC/is

Enclosures

Mailing List  
for  
San Jacinto River Authority; TPDES Permit No. 11401-001  
TCEQ Docket No. 2003-1213-MWD; SOAH Docket No. 582-04-1194

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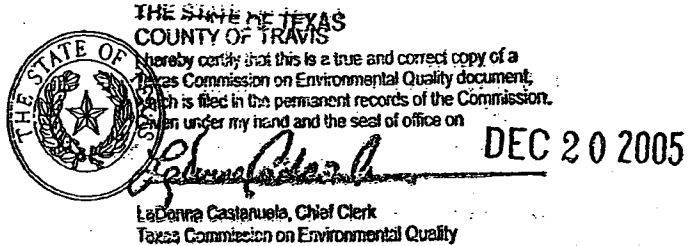
FOR THE CHIEF CLERK:

LaDonna Castañuela, Chief Clerk  
Texas Commission on Environmental Quality  
Office of Chief Clerk MC-105  
P.O. Box 13087  
Austin, Texas 78711-3087

\* The Honorable Shannon Kilgore  
Administrative Law Judge  
State Office of Administrative Hearings  
P. O. Box 13025  
Austin, Texas 78711-3025

\* Courtesy Copy

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



**AN ORDER** Regarding Application By San Jacinto River Authority For Renewal Of TPDES Permit No. 11401-001 in Montgomery County; TCEQ Docket No. 2003-1213-MWD; SOAH Docket No. 582-04-1194

On November 30, 2005, the Texas Commission on Environmental Quality (the Commission or TCEQ) considered the Application from the San Jacinto River Authority for renewal of TPDES Permit No. 11401-001 relating to The Woodlands Wastewater Treatment Facility No. 1 in Montgomery County. The parties to the proceeding are the Executive Director, represented by Kathy H. Brown and Kerrie Qualtrough; the San Jacinto River Authority, represented by Lauren Kalisek and Martin C. Rochelle; and the Office of Public Interest Counsel, represented by Scott A. Humphrey. The application was presented to the Commission with a Proposal for Decision from Shannon Kilgore, an Administrative Law Judge (ALJ) with the State Office of Administrative Hearings (SOAH).

After considering the ALJ's Proposal for Decision, the Commission adopts the following Findings of Fact and Conclusions of Law:

## FINDINGS OF FACT

### Factual Background and Procedural History

1. The San Jacinto River Authority (SJRA or the Authority) operates The Woodlands Wastewater Treatment Plant No. 1 in Montgomery County.
2. The Environmental Protection Agency (EPA) issued a National Pollutant Discharge Elimination System (NPDES) permit for this facility in 1989 (Permit No. TX0054186).
3. In 1991, due to several Whole Effluent Toxicity (WET) test failures from 1989 through 1991, SJRA initiated a toxicity reduction evaluation (TRE) to investigate possible causes of toxicity.
4. In 1993, EPA first proposed imposition of a WET limit in the permit because of the earlier test failures. SJRA requested a hearing to contest the inclusion of the WET limit provision, but the matter was not resolved.
5. In 1995, the Texas Commission on Environmental Quality or its predecessor agency (TCEQ or the Commission) issued wastewater discharge Permit No. 11401-001 for SJRA's facility.
6. On December 11, 1997, SJRA filed an application for renewal of Permit No. 11401-001, and the Executive Director (ED) declared the application administratively complete on August 26, 1998.
7. In June and July 1998, SJRA reported WET test failures. In response, the Authority again initiated a TRE.
8. On September 14, 1998, the Commission received delegation of the (NPDES) program.
9. Also in September 1998, SJRA split its WET test sample between two laboratories; one reported a pass and one reported a failure.

10. The ED requested additional information from SJRA for permit processing due to the NPDES delegation on August 11, 2000.
11. After SJRA provided additional information requested by the ED on August 23, 2000, the ED again declared the Application administratively complete on August 29, 2000, and technically complete on November 16, 2000.
12. The ED prepared a draft permit without a WET limit and sent the draft to EPA, which responded by commenting that the permit needed a WET limit. The ED then added a WET limit to the draft permit, and SJRA protested.
13. SJRA published notice of the Application and Preliminary Decision on February 18, 2001.
14. In June 2001, the ED approved the closure of the Authority's TRE on the basis of a series of passing WET tests indicating a "cessation of lethality."
15. In late 2001 EPA agreed to a permit without a WET limit.
16. The Authority had a WET test failure for November 2001.
17. In January 2002, SJRA split its WET test sample between two laboratories, and one laboratory reported a pass while the other reported a failure.
18. Also in January 2002, EPA contacted TCEQ staff and again asserted that the permit would need to include a WET limit. TCEQ staff then revised the draft permit to include a WET limit.
19. On March 5, 2002, SJRA requested a contested case hearing on the draft permit prepared by the ED and requested a direct referral to SOAH.
20. Following the presentation of additional information to EPA at a public hearing in October 2002, EPA reiterated its position that a WET limit is appropriate.

21. In November 2003 the Commission's Chief Clerk referred the application directly to SOAH for a contested case hearing.
22. The preliminary hearing was held on January 8, 2004 at SOAH's hearings facility located at 300 West Fifteenth Street, Austin, Texas.
23. By order dated February 6, 2004, the ALJ limited the issues to be considered in the hearing to the following:
  - a. the inclusion of a WET limit in the permit;
  - b. the appropriateness of the critical dilution specified in the draft permit;
  - c. the appropriateness of the definition of the "No Observable Effects Concentration" (NOEC);
  - d. the appropriateness of the definition of "violation" of the WET limit;
  - e. the appropriateness of the definition of "passing" a biomonitoring test;
  - f. the appropriateness of the chronic biomonitoring requirements in the draft permit that address potential WET limitations for a separate aquatic species than is presently specified; and
  - g. when a discharge is occurring through both outfalls 001 and 002, whether SJRA is required to perform biomonitoring sampling at both outfalls or only one.
24. By order dated March 29, 2004 the ALJ assigned the burden of proof to the ED with respect to the changes it proposes to SJRA's permit.
25. The hearing on the merits was held February 7-9, 2005.
26. Following the hearing, the ED provided the ALJ and the parties with the most recent version of the revised draft permit by attaching the revised version as Attachment A to the ED's



Closing Argument; this version of the draft permit is now included in the record as ED Exhibit 5.

27. The parties filed their final written closing arguments on April 20, 2005.
28. On April 29, 2005, SJRA filed a Motion to Strike Portions of the Executive Director's Closing Arguments. The record closed when the ED filed a response to the Authority's motion on May 5, 2005.
29. SJRA presently operates the facility under both its federal and state permits.
30. SJRA's facility is presently permitted for an average daily flow not to exceed 6.0 million gallons per day (MGDs) in the interim phase and not to exceed 7.8 million gallons in the final stage.
31. The ED proposes to issue the permit in this proceeding as a Texas Pollutant Discharge Elimination System (TPDES) permit meeting both state and federal discharge requirements.
32. Where EPA raises objections to a draft TPDES permit and the objections are not resolved, EPA takes over the issuance of the federal permit. Under such circumstances, the TCEQ would continue to administer its state permitting program with respect to the facility.

#### **WET Testing and Limits**

33. Chronic WET testing, a type of biomonitoring, attempts to provide information concerning the aggregate chronic toxic effects of effluent on the receiving stream.
34. Chronic biomonitoring assesses whether aquatic life will be affected where the effluent is diluted by the receiving stream, at the edge of the mixing zone.
35. Two kinds of effects are observed and recorded in chronic WET testing – lethality (mortality) or sublethality (decline in growth or reproduction).

36. The WET testing of concern in this case involves exposing certain aquatic organisms to mixtures of effluent and water in five different concentrations (the dilution series), then tracking the survival, reproduction, and growth of the organisms over a series of days – in the case of the tests at issue here, approximately seven days.
37. The organisms used in the tests are the *Ceriodaphnia dubia* (water flea) and the *Pimephales promelas* (fathead minnow).
38. In WET testing using *Ceriodaphnia dubia*, ten organisms – one organism placed in each of ten beakers – are exposed to each effluent dilution.
39. To ensure the reliability of the test results, all test organisms must be of similar age, parentage, and sensitivity. Every day, deaths are recorded and each organism that is still alive is placed in a beaker with fresh (“renewal”) solution.
40. The effluent samples used are 24-hour composite samples, and three samples are used during the course of a 7-day test.
41. The “critical dilution” – one of the five concentrations – is that ratio of effluent to water, usually expressed as a percentage, that represents the concentration of effluent at the edge of the mixing zone when the highest permitted effluent discharge rate is accompanied by the lowest expected instream flow.
42. The current applicable critical dilution for SJRA’s *Ceriodaphnia dubia* testing is 55%.
43. In addition to the organisms exposed to five concentrations of effluent mixed with water, the testing employs a control group of organisms exposed to water with no effluent.
44. To determine whether the observed lethal and sublethal effects in the organisms exposed to effluent concentrations are significant, those effects are compared to the changes observed in the control group. A test failure occurs when this comparison yields a statistically significant difference at the critical dilution.

45. The statistical significance of the difference is determined based on a 95% confidence level – in other words, that there is up to a five percent chance that the degree of difference between the effect at the critical dilution and the control occurred by random chance. The laboratory performing the testing uses a statistical software package to determine whether the testing data demonstrate a statistically significant difference at the critical dilution with a 95% confidence level.
46. Another way of expressing a test failure is to say that the “no observed effect concentration” (NOEC) is lower than the critical dilution. The NOEC is the highest concentration of effluent in water at which no significant effect is observed.
47. If significant effects (as compared to the control) are seen at concentrations below the critical dilution, the effluent is deemed too toxic.
48. For most toxicants, higher concentrations would be expected to cause a greater degree of mortality and impairment of growth and reproduction; conversely, lower concentrations of a toxicant would yield a lesser response – *i.e.*, the ideal dose-response curve would be “monotonic.”
49. Unexpected dose-response curves could suggest inconclusive or unreliable results; such curves might be “red flags” warranting further investigation. However, some nonmonotonic dose-response relationships can be valid and acceptable.
50. WET testing requirements are common and routine in wastewater discharge permits.
51. A WET limit – as opposed to a WET testing requirement – means that a test failure is a violation of the permit that can subject the permit holder to an enforcement action for penalties and other relief.
52. WET limits are not as common as WET testing requirements.

53. WET testing may result in false positives (false failures) in a small percentage of tests.
54. While a WET test failure does not necessarily mean that the effluent is causing adverse instream effects, EPA has determined that WET testing is a good predictor of instream toxicity.

#### Relevant Agency Policies

55. At the time of delegation, the TCEQ and EPA entered into the *Memorandum of Agreement Between the Texas Natural Resource Conservation Commission and the U.S. Environmental Protection Agency Concerning the National Pollutant Discharge Elimination System*, May 5, 1998, (MOA) setting out the procedures by which TCEQ and EPA interact in the administration of the TPDES program.
56. TCEQ and EPA have approved the *Procedures to Implement the Texas Surface Water Quality Standards*, January 2003, RG-194 (Implementation Procedures or IPs) which set forth the procedures by which WET testing results are used to trigger certain permitting actions such as the commencement of a TRE or a WET limit.
  - a. All domestic wastewater treatment facilities with an average permitted flow of one million gallons per day (MGD) must do WET testing.
  - b. Tests are usually required on a quarterly or semi-annual basis.
  - c. When a facility fails a test with respect to lethality, the facility must re-test. If the re-testing also shows significant lethality at the critical dilution, the facility must perform a TRE, including a toxicity identification evaluation, to try to determine and limit the source of the toxicity.
  - d. The purpose of a TRE is to determine the cause and source of toxicity demonstrated in reported WET test failures, to determine the methods to reduce or eliminate the toxicity, and to develop a schedule for taking corrective action.

- e. Where a TRE does not identify a toxicant, the permit may be amended to add a WET limit.
- f. Permittees may cease TRE activities if they demonstrate to the ED that the effluent no longer causes lethality to the test organisms.
- g. Cessation of lethality means no significant lethality at the critical dilution for a period of twelve consecutive months with at least monthly testing.
- h. The cessation of lethality option accommodates situations where operational errors and upsets, spills, or sampling errors triggered the TRE.
- i. Following a finding of cessation of lethality, a WET limit will be added to the permit if the effluent again demonstrates persistent, significant lethality to the same species within a five-year period.

#### **ED's Draft Permit**

- 57. The draft permit proposed by the ED includes language that would require SJRA to comply with an NOEC effluent limitation of 85% for *Ceriodaphnia dubia* within three years of the permit issue date. In other words, the draft permit would establish the critical dilution as 85%, and any test showing the NOEC to be below the 85% concentration level would constitute a permit violation.
- 58. Testing would be done on a quarterly basis.
- 59. Following a test failure, testing frequency would increase to monthly. If monthly testing resulted in no failures for three consecutive months, testing frequency would return to quarterly. On the other hand, if one or more of the monthly tests resulted in a failure, SJRA would be referred for enforcement.

60. The draft permit defines "violation" as a failure to pass the survival endpoint at the critical dilution. In other words, one WET test failure for survival would constitute a violation of the permit.
61. The draft permit contains language allowing the Commission to impose a WET limit after the closure of a TRE for cessation of lethality performed on another type of WET testing, chronic Fathead Minnow testing, on the basis of a single reported test failure.

#### **Imposition of a WET Limit**

62. The ED relies primarily on the following events as the basis for including a WET limit in the permit:
  - ◆ June 1998 – testing showed significant lethality for *Ceriodaphnia dubia*;
  - ◆ July 1998 – testing showed significant lethality for *Ceriodaphnia dubia*;
  - ◆ September 1998 – testing showed significant lethality for *Ceriodaphnia dubia*;
  - ◆ failure of SJRA's TRE activities to identify a toxicant;
  - ◆ November 2001 – testing showed significant lethality for *Ceriodaphnia dubia*;
  - ◆ January 2002 – testing showed significant lethality for *Ceriodaphnia dubia*; and
  - ◆ a number of test failures for sublethality.
63. Since November 1991, SJRA has performed 129 WET tests and reported five failures with respect to lethality for *Ceriodaphnia dubia*.
64. Few permittees in Texas have performed as much WET testing as SJRA has over the years.
65. The WET test failures that gave rise to the TRE performed by SJRA in the early nineties were unrelated to the WET testing events from 1998 through early 2002, and that early toxicity problem was resolved by operational and personnel changes.

66. At or around the time of the 1998 test failures, an odd color was noted in the facility's influent and there was also a fish kill downstream of SJRA's wastewater treatment plant.
67. The TRE triggered by the 1998 test failures did not identify a toxicant.
68. The TRE triggered by the 1998 test failures was halted due to cessation of lethality following 30 consecutive months of testing with no significant lethality reported at the critical dilution.
69. The November 2001 test resulted in an NOEC for survival of 45%. This was a failure at the TCEQ critical dilution of 55%, but a pass at EPA's critical dilution of 45%.
70. The November 2001 test was not carried out according to the applicable protocols.
- The permit required the test to be stopped when 60% of the water fleas in the control had their third brood.
  - On Day 6, 60% of the water fleas in the control had released their third brood.
  - The test was allowed to extend to Day 7.
  - Had the test been terminated on Day 6, the test would not have met the minimum performance criteria specified in the permit and it would have been declared invalid.
  - The permit's performance criteria specified that the average number of young per surviving female in the control had to be at least 15 for the test to be considered valid.
  - The average number of young per surviving female in the control on Day 6, when the test should have been terminated, was only 12.7.
71. The lab that performed the November 2001 test was PBS&J.
72. PBS&J's reference testing indicates that in November 2001 the test organisms were overly stressed and therefore more likely to exhibit negative effects from exposure to effluent than would healthy organisms.

73. The dose-response relationship for the November 2001 test was non-monotonic.
74. The results of the November 2001 test are too unreliable to constitute part of the basis for including a WET limit in SJRA's permit.
75. For the January 2002 test, SJRA split its samples and sent portions of each sample to two different labs for testing.
76. For January 2002, the PBS&J lab reported that the survival NOEC for *Ceriodaphnia dubia* was 45% (a pass under the federal permit but a failure for the Texas critical dilution), while the Sabine River Authority (SRA) lab reported an NOEC of 86%.
77. The difference between the results of the testing at the two labs in January 2002 cannot be explained by the presence of a short-lived toxicant in the first sample that had volatilized by the time the SRA lab commenced testing.
78. Differing results from split samples cast doubt on the validity of the results.
79. The dose-response curve for the PBS&J January 2002 test was non-monotonic.
80. The results of the January 2002 test are too unreliable to constitute part of the basis for including a WET limit in SJRA's permit.
81. In the month between the two most recent failures for lethality – December 2001 – a split sample sent to two labs passed both tests.
82. In addition to the five failures for lethality, since June 1998 the SJRA facility has had approximately 13 failures for sublethality with respect to *Ceriodaphnia dubia*.
83. The sublethal effects by themselves are inadequate evidence of toxicity to trigger a WET limit; their primary significance is their tendency to corroborate any toxicity exhibited in tests for survival.
84. SJRA is in the process of implementing a pretreatment program.



85. Since January 2002, SJRA has been continuing to conduct monthly WET testing; there have been no further failures for lethality in the 34 months of testing (including a number of months with split samples) conducted between January 2002 and November 2004.
86. The evidence failed to show that SJRA's discharges have the reasonable potential to cause or contribute to instream toxicity.
87. The evidence failed to show that, following the termination of a TRE for cessation of lethality, SJRA's effluent has again demonstrated persistent, significant lethality.
88. A WET limit should not be included in SJRA's renewed permit.

#### **Proposed Critical Dilution**

89. The ED's proposed critical dilution of 85% was calculated according to methods established by the Commission in the IPs and should be included in SJRA's renewed permit.

#### **Other Issues**

90. The ED's Revised Draft Permit, if adopted, will resolve the following issues:
- a. the definition of "No Observed Effects Concentration";
  - b. the definition of "passing"; and
  - c. clarification that biomonitoring is not required at both outfalls for the facility when both are being used.

#### **CONCLUSIONS OF LAW**

1. The Commission has jurisdiction over this proceeding pursuant to TEX. WATER CODE ANN. chapters 5 and 26.
2. SOAH has jurisdiction over all matters relating to the conduct of a hearing in this

proceeding, including the preparation of a proposal for decision with findings of fact and conclusions of law, pursuant to TEX. GOV'T CODE ANN. Chapter 2003.

3. Notice of the application and of the hearing were provided in accordance with applicable statutes and Commission rules.
4. The burden of proof in the hearing is with SJRA as the applicant in this proceeding. 30 TEX. ADMIN. CODE § 80.17.
5. The ALJ incorrectly placed the burden of proof at the hearing on the ED. Evidence presented at the hearing preponderates in favor of and supports the Findings of Fact and Conclusions of Law stated herein. 30 TEX. ADMIN. CODE §§ 305.62(d) and 305.63(a)(6).
6. TCEQ regulations provide that surface waters will not be toxic to aquatic life, and that water in the state shall be maintained to preclude adverse toxic effects on aquatic life. 30 TEX. ADMIN. CODE §§ 307.4(d) and 307.6(b)(1), (2), & (4).
7. As a result of a TRE, additional conditions may be established in the permit. Such conditions may include total toxicity limits, chemical specific limits, and/or best management practices designed to reduce or eliminate toxicity. 30 TEX. ADMIN. CODE § 307.6(e)(2)(D).
8. When the permitting authority determines that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative criterion within an applicable State water quality standard, the permit must contain effluent limits for whole effluent toxicity. 40 CFR § 122.44(d)(1)(v); 30 TEX. ADMIN. CODE § 305.531.
9. TCEQ regulations refer to a number of EPA guidance documents for appropriate biomonitoring procedures under various circumstances. 30 TEX. ADMIN. CODE § 307.6(e)(2)(c). One of these is *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, which has been incorporated

- by reference in the federal and Texas rules. 40 CFR Part 136; 30 TEX. ADMIN. CODE § 307.6(e)(2)(c). Another relevant EPA guidance document is *Method Guidance and Recommendations for Whole Effluent Toxicity Testing*, EPA 821-B-00-004 (July 2000).
10. Some nonmonotonic dose-response relationships can be valid and acceptable. *Method Guidance and Recommendations for Whole Effluent Toxicity Testing*, EPA 821-B-00-004 (July 2000).
  11. The WET testing methods established by EPA are adequate, as a regulatory matter, to minimize testing variability. However, regulated entities may challenge the results of individual WET tests. *Edison Electric Institute v. Environmental Protection*, No. 96-1062 (D.C. Cir. Dec. 10, 2004).
  12. A SOAH ALJ may apply an agency policy not incorporated in the agency's rules. 1 TEX. ADMIN. CODE § 155.53.
  13. Nothing in the rules or IPs specifies what a "violation" of a WET limit is or compels the ED to provide for a re-test if such a limit is imposed.
  14. Based on the above Findings of Fact and Conclusions of Law, SJRA's Permit No. 11401-001 should be renewed with the changes to the Executive Director's draft permit that are described below.

#### EXPLANATION OF CHANGES

1. The Commission modified Findings of Fact 34, 35, 38, 66, and 82 as requested by the ED in his exceptions and as agreed to by the ALJ in his 7/21/05 letter.

2. The Commission modified Findings of Fact 86 and 87 and Conclusions of Law 4 and 5 to clarify that the burden of proof in the hearing is with SJRA as the applicant in this proceeding and that the ALJ incorrectly placed the burden of proof at the hearing on the ED.

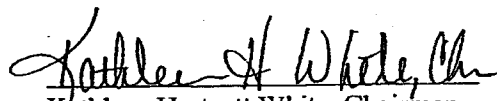
**NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW, THAT:**

1. SJRA's application for renewal of Permit No. 11401-001 is granted with the modifications as described below.
2. The Executive Director's draft permit is amended such that the issued permit will:
  - a. not include provisions imposing a WET limit related to chronic survival testing for *Ceriodaphnia dubia*;
  - b. provide that after termination of a TRE for cessation of lethality in Fathead Minnow testing, a WET limit may be imposed after the permittee reports the failure of a test and a retest; and
  - c. provide for collection of one 24-hour composite sample in Section 2.C.1, 24-Hour Acute Biomonitoring.
3. 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 for want of merit.

4. The Chief Clerk of the Texas Commission on Environmental Quality shall provide a copy of this Order and the attached permit to all parties and, subject to the filing of motions for rehearing, issue the attached permit.
5. 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.
6. The effective date of this Order is the date the Order is final, as provided by 30 TEX. ADMIN. CODE § 80.273 and TEX. GOV'T CODE ANN. § 2001.144.

ISSUED: **DEC 16 2005**

TEXAS COMMISSION ON  
ENVIRONMENTAL QUALITY

  
Kathleen Hartnett White, Chairman



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

TPDES PERMIT NO. 11401-001  
[For TCEQ Office Use Only:  
EPA ID No. TX0054186]

This is a renewal that replaces  
TNRCC Permit No. 11401-001  
issued December 29, 1995 and  
NPDES Permit No. TX0054186  
issued September 1, 1989.

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

TCEQ Docket No. 2003-1213-MWD

San Jacinto River Authority

whose mailing address is

2436 Sawdust Road  
The Woodlands, Texas 77380

is authorized to treat and dispose of wastes from the Woodlands Wastewater Treatment Facility No. 1, SIC Code 4952.

located north of Sawdust Road, approximately 2 miles west of Interstate Highway 45 and 12 miles south of the City of Conroe in Montgomery County, Texas

to Panther Branch; thence to Spring Creek (Outfall 001) or alternatively to Lake "B" (the upper portion of Harrison Lake) on a tributary of Panther Branch; thence to Spring Creek (Outfall 002) in Segment No. 1008 of the San Jacinto River Basin

only according with 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, March 1, 2008.

ISSUED DATE: \_\_\_\_\_

\_\_\_\_\_  
For the Commission.

Outfalls Number 001 or 002

FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning upon the date of issuance 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 7.8 million gallons per day (MGD); nor shall the average discharge during any two-hour period (2-hour peak) exceed 12,500 gallons per minute (gpm).

Effluent Characteristic	Discharge Limitations			Minimum Self-Monitoring Requirements		Totalizing meter
	Daily Avg mg/(lbs/day)	7-day Avg mg/l	Daily Max mg/l	Report Daily Avg. & Daily Max. Measurement Frequency	Sample Type	
Flow, MGD	Report	N/A	Report	Continuous		
Carbonaceous Biochemical Oxygen Demand (5-day)	10 (650)	15	25	Five/week	Composite	
Total Suspended Solids	15 (976)	25	40	Five/week	Composite	
Ammonia Nitrogen	3 (195)	6	10	Five/week	Composite	

- The effluent shall contain a chlorine residual of at least 1.0 mg/l after a detention time of at least 20 minutes (based on peak flow) and shall be monitored daily by grab sample. The permittee shall dechlorinate the chlorinated effluent to less than 0.1 mg/l chlorine residual and shall monitor chlorine residual daily by grab sample after the dechlorination process. An equivalent method of disinfection may be substituted only with prior approval of the Commission.
- The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored five times per week by grab sample.
- There shall be no discharge of floating solids or visible foam in other than trace amounts and no discharge of visible oil.
- Effluent monitoring samples shall be taken at the following location(s): Following the final treatment unit.
- The effluent shall contain a minimum dissolved oxygen of 4.0 mg/l and shall be monitored five times per week by grab sample.
- 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, Subchapter F, "Permit Characteristics and Conditions" as promulgated under the Texas Water Code §§ 5.103 and 5.105, and the Texas Health and Safety Code §§ 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) 122 adopted by reference by the Commission. The following text includes these conditions and incorporates them into this permit. All definitions in Section 26.001 of the Texas Water Code 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 a 1 million gallons per day or greater permitted flow.
- b. Daily average flow - the arithmetic average of all determinations of the daily discharge 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 discharge, 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. Multiple measurements of instantaneous maximum flow within a two-hour period may be compared to the permitted 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. When four samples are not available in a calendar month, the arithmetic average of the four most recent measurements or the arithmetic average (weighted by flow) of all values taken during the month shall be used 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 composite sample unless otherwise specified elsewhere in this 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. Fecal coliform bacteria concentration - the number of colonies of fecal coliform bacteria per 100 milliliters effluent. The fecal coliform bacteria daily average 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 particular period of time. For example in a month's time, where  $n$  equals the number of measurements made; or, computed as the antilogarithm of the sum of the logarithm of each measurement made. For any measurement of fecal coliform bacteria equaling zero, a substituted value of one shall be made for input into either computation method.
3. Sample Type
    - a. Composite sample - for domestic wastewater 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 no closer than two hours apart. 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 no closer than one hour apart.
    - 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 which 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, a monthly effluent report shall be submitted each month, to the location(s) specified on the reporting form or the instruction sheet, 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 reported on an approved TPDES self-report form, Discharge Monitoring Report (DMR) Form EPA No. 3320-1, 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, the Texas Water Code, Chapters 26, 27, and 28, and Texas Health and Safety Code, Chapter 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

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.

### 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 and/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 maybe 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 TPDES self-report form. Increased frequency of sampling shall be indicated on the self-report form.

#### 5. Calibration of Instruments

All automatic flow measuring and/or recording devices and/or 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 Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division.

#### 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. 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 Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division within five working days of becoming aware of the noncompliance. 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 anticipated 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 which 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 Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division 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 Water Quality Management Information Systems Team (MC 224) of the Enforcement Division as promptly as possible. This requirement means to report these types of noncompliance on the approved TPDES self-report form.
8. In accordance with the procedures described in 30 TAC §§ 305.21, 305.22 and 305.23 (relating to Emergency Orders, Temporary Orders and Executive Director Authorizations) 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 Manager of the Water and Multimedia Section (MC 149) of the Enforcement Division 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 section 301 or 306 of the CWA 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 in accordance with 30 TAC Chapter 50 and the application process in accordance with 30 TAC Chapter 281, and relying upon the accuracy and completeness of that information and those representations in accordance with 30 TAC Chapter 305. After notice in accordance with 30 TAC Chapter 39 and opportunity for a hearing in accordance with 30 TAC §§ 55.21-55.31, Subchapter B, "Hearing Requests, Public Comment", 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 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 of 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 which 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 the Texas Water Code Section 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 waters 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, but only if the diversion is also for essential maintenance to assure efficient operation.

- i. The permittee is subject to administrative, civil, and criminal penalties, as applicable, under Texas Water Code §§ 26.136, 26.212, and 26.213 for violations including but not limited to negligently or knowingly violating the federal Clean Water Act, §§ 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 Texas Water Code Chapters 26, 27, and 28, and Texas Health and Safety Code Chapter 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 Texas Water Code Section 7.002.
  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 which are subject neither to effluent limitations in the permit, nor to notification requirements in Monitoring and Reporting Requirements No. 8 and as adopted by 30 TAC § 305.531(a) (relating to Establishing and Calculating Additional Conditions and Limitations for TPDES Permits);
      - 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 and/or expansions of a permitted facility 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. Authorization to continue such activity will terminate upon the effective denial of said application.
    - 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 Texas Water Code § 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 Section 307(a) of the Clean Water Act 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 Section 307(a) of the Clean Water Act 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 Water Quality Applications Team (MC 148) of the Registration & Evaluation 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 § 50.33 (relating to Executive Director Action on Application for Transfer).
  6. Relationship to Hazardous Waste Activities

This permit does not authorize any activity of hazardous waste storage, processing, or disposal which 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 the waters in the state must be specifically authorized in this permit and may require a permit pursuant to Chapter 11 of the Texas Water Code.
  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.

#### 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 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 such as the Commission's "Recommendations for Minimum Process Control Tests for Domestic Wastewater Treatment Facilities." Process control records 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.
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 provisions of 30 TAC §§ 312.1 - 312.13 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 Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing of any closure activity or facility expansion at least 90 days prior to conducting such activity.

- b. Closure activities include those associated with any pit, tank, pond, lagoon, or surface impoundment regulated by this permit.
  - c. As part of the notification, the permittee shall submit to the Municipal Permits Team (MC 148) of the Wastewater Permitting Section of the Water Quality Division, a closure plan which has been developed in accordance with the "Closure Guidance Documents Nos. 4 and 5" available through the Publications Inventory and Distribution Section (MC 195) of the Agency Communications Division.
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 waste treatment fee to the Commission as required by 30 TAC Chapter 305 Subchapter M and an annual water quality assessment fee to the Commission as required by 30 TAC Chapter 320. Failure to pay either fee may result in revocation of this permit.
  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 applications, effluent data, permits, and other data specified in 30 TAC § 305.46, 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.

8. Facilities which 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 percent 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 percent 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 percent 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 judgement 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 Water Quality Division (MC 148) 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 325.
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 percent, unless otherwise authorized by this permit.
11. Facilities which generate industrial solid waste as defined in 30 TAC § 335.1 shall comply with these provisions:
  - a. Any solid waste generated by the permittee during the management and treatment of wastewater, 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) 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 § 335.6(g), to the Corrective Action Section (MC 127) of the Industrial and Hazardous Waste 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 Waste Evaluation Section (MC 129) of the Industrial and Hazardous Waste 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 Chapter 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 and/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 Chapter 335 do not apply, sludge and solid wastes, including tank cleaning and contaminated solids for disposal, shall be disposed of in accordance with Chapter 361 of the Health and Safety Code of Texas.

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**SLUDGE PROVISIONS**

The permittee is authorized to dispose of sludge only at a Texas Commission on Environmental Quality (TCEQ) registered or permitted land application site, commercial land application site or co-disposal landfill. 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 permitted or registered with the TCEQ. This provision does not authorize Distribution and Marketing of sludge. This provision does not authorize land application of Class A 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 Chapter 312 and all other applicable state and federal regulations in a manner which protects public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which 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, which receives the prior approval of the TCEQ for the contaminants listed in Table 1 of 40 CFR Section 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 Registration, Review, and Reporting Division and the Regional Director (MC Region 12) 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, Registration, Review, and Reporting 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 12) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year.

2. Sewage sludge shall not be applied to the land if the concentration of the pollutants exceed the pollutant concentration criteria in Table 1. The frequency of testing for pollutants in Table 1 is found in Section I.C.

TABLE 1

<u>Pollutant</u>	<u>Ceiling Concentration (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 shall be treated by one of the following methods to ensure that the sludge meets either the Class A or Class B pathogen requirements.

- a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. The first 4 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (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. Below are the additional requirements necessary to meet the definition of a Class A sludge.

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 Section 312.82(a)(2)(A) for specific information.

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 degrees 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 percent.

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 Section 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 Section 312.82(a)(2)(C)(iv-vi) for specific information.

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.

Alternative 5 (PFRP) - Sewage sludge that is used or disposed of shall 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.

Alternative 6 (PFRP Equivalent) - Sewage sludge that is used or disposed of shall 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. 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, 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 Section 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 percent.

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 degrees Celsius. Volatile solids must be reduced by less than 17 percent 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 a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent 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 degrees 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 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees 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 percent 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 percent 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 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 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 Section 312.46(a)(1):

<u>Amount of sewage sludge (*) metric tons per 365-day period</u>	<u>Monitoring Frequency</u>
0 ≤ Sludge < 290	Once/Year
290 ≤ Sludge < 1,500	Once/Quarter
1,500 ≤ Sludge < 15,000	Once/Two Months
15,000 ≤ Sludge	Once/Month

(\*) The amount of bulk sewage sludge applied to the land (dry weight basis).

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

**SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A 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 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>	<u>Cumulative Pollutant Loading Rate (pounds per acre)</u>
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>	<u>Monthly Average Concentration (milligrams per kilogram)*</u>
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 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 the Management Requirements in accordance with 30 TAC Section 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 III below 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 Section 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 B sludges, 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 Section 312.82(a) or (b) and the vector attraction reduction requirements in 30 TAC Section 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 Section 312.47 for persons who land apply.

1. 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 Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii), as applicable, and to the permittee's specific sludge treatment activities.
2. The location, by street address, and specific latitude and longitude, of each site on which sludge is applied.
3. The number of acres in each site on which bulk sludge is applied.
4. The date and time sludge is applied to each site.
5. The cumulative amount of each pollutant in pounds/acre listed in Table 2 applied to each site.
6. 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 12) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division, by September 1 of each year the following information:

1. Results of tests performed for pollutants found in either Table 2 or 3 as appropriate for the permittee's land application practices.
2. The frequency of monitoring listed in Section I.C. which applies to the permittee.
3. Toxicity Characteristic Leaching Procedure (TCLP) results.
4. Identity of hauler(s) and TCEQ transporter number.
5. PCB concentration in sludge in mg/kg.
6. Date(s) of disposal.
7. Owner of disposal site(s).
8. Texas Commission on Environmental Quality registration number, if applicable.
9. Amount of sludge disposal dry weight (lbs/acre) at each disposal site.
10. 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.
11. Level of pathogen reduction achieved (Class A or Class B).
12. 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.
13. Vector attraction reduction alternative used as listed in Section I.B.4.
14. Annual sludge production in dry tons/year.
15. Amount of sludge land applied in dry tons/year.
16. The certification statement listed in either 30 TAC Section 312.47(a)(4)(A)(ii) or 30 TAC Section 312.47(a)(5)(A)(ii) as applicable to the permittee's sludge treatment activities, shall be attached to the annual reporting form.

17. 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 Chapter 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 Chapter 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 Section 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 Registration, Review, and Reporting Division and the Regional Director (MC Region 12) 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, Registration, Review, and Reporting 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 12) and the Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 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 12) and Water Quality Compliance Monitoring Team (MC 224) of the Enforcement Division by September 1 of each year the following information:

1. Toxicity Characteristic Leaching Procedure (TCLP) results.
2. Annual sludge production in dry tons/year.
3. Amount of sludge disposed in a municipal solid waste landfill in dry tons/year.
4. Amount of sludge transported interstate in dry tons/year.
5. A certification that the sewage sludge meets the requirements of 30 TAC Chapter 330 concerning the quality of the sludge disposed in a municipal solid waste landfill.
6. Identity of hauler(s) and transporter registration number.
7. Owner of disposal site(s).
8. Location of disposal site(s).
9. 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.

**OTHER REQUIREMENTS**

1. This Category B facility shall be operated and maintained by a chief operator or operator in responsible charge holding a valid Class B certificate of competency or higher issued pursuant to 30 TAC Chapter 325. All shift supervisors and other plant operators shall be certified in accordance with the applicable provisions of Chapter 325. Note, Class D certificates are not renewable at any activated sludge facility, regardless of size, or any trickling filter or RBC facility with a permitted flow greater than 100,000 gallons per day.
2. The facility is not located in the Coastal Management Program boundary.
3. Outfall 001: 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  
Outfall 002: Chronic toxic criteria apply at the edge of the mixing zone. The mixing zone is defined as a volume within a radius of 100 feet from the point of discharge.
4. The permittee is hereby placed on notice that this permit may be reviewed by the Texas Commission on Environmental Quality after the completion of any new intensive water quality survey on Segment No. 1008 of the San Jacinto River Basin and any subsequent updating of the water quality model for Segment No. 1008, in order to determine if the limitations and conditions contained herein are consistent with any such revised model. The permit may be amended, pursuant to 30 TAC Section 305.62, as a result of such review. The permittee is also hereby placed on notice that effluent limits may be made more stringent at renewal based on, for example, any change to modeling protocol approved in the TCEQ Continuing Planning Process.
5. The permittee shall comply with the requirements of 30 TAC Section 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 Section 309.13(e).
6. The permittee shall provide facilities for the protection of its wastewater treatment facilities from a 100-year flood.

CHRONIC BIOMONITORING REQUIREMENTS: FRESHWATER

The provisions of this Section apply to Outfalls 001 and 002 for whole effluent toxicity testing (biomonitoring).

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 utilizing the test organisms, procedures and quality assurance requirements specified in this Part of the 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 the most recent update:
  - 1) Chronic static renewal survival and reproduction test using the water flea (*Ceriodaphnia dubia*) (Method 1002.0 or the most recent update). 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 comes 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 or the most recent update). 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 herein defined as any test failing to satisfy the test acceptability criteria, procedures, and quality assurance requirements specified in the test methods and permit. All test results, valid or invalid, must be submitted as described below.

- c. The permittee shall use five effluent dilution concentrations and a control in each toxicity test. These additional effluent concentrations are 27%, 36%, 48%, 64%, and 85% effluent. The critical dilution, defined as 85% 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 Whole Effluent Toxicity (WET) limit, Chemical-Specific (CS) effluent limits, a Best Management Practice (BMP), additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity events.
- e. Testing Frequency Reduction
  - 1) If none of the first four consecutive quarterly fathead minnow tests demonstrates significant lethal or sub-lethal effects, the permittee may submit this information in writing and, upon approval from the Water Quality Standards Team, reduce the testing frequency to once per year.
  - 2) If one or more of the first four consecutive quarterly fathead minnow tests demonstrates significant sub-lethal effects, the permittee shall continue quarterly testing until four consecutive quarterly tests demonstrate no significant sub-lethal effects. At that time, the permittee may apply for the testing frequency reduction.
  - 3) If one or more of the first four consecutive quarterly fathead minnow tests demonstrates significant lethal effects, the permittee shall continue quarterly testing until the permit is reissued. If a testing frequency reduction had been previously granted and a subsequent test demonstrates significant



lethal effects, the permittee will resume a quarterly testing frequency until the 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 reproduction and survival test; and the growth and survival endpoints in the fathead minnow growth and survival test;
  - 5) a critical dilution CV% of 40 or less for young of surviving females in the water flea reproduction and survival test; and the growth and survival endpoints for the fathead minnow growth and survival 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;
  - 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 Fisher's Exact Test as described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update thereof.
  - 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 methods described in the "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update thereof.
  - 3) The permittee is responsible for reviewing test concentration-response relationships to ensure that calculated test results are interpreted and reported correctly. The EPA manual, "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 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 herein defined as a statistically significant difference at the 95% confidence level between the survival, reproduction, or growth of the test organism(s) in a specified effluent dilution compared to the survival, reproduction, or growth of the test organism(s) in the control (0% effluent).

- 6) The use of NOECs and LOECs assumes either a monotonic (continuous) concentration-response relationship or a threshold model of the concentration-response relationship. For any test result that demonstrates a non-monotonic (non-continuous) response, the NOEC should be determined based on the guidance manual referenced in Item 3 above and a full report will be submitted to the Water Quality Standards Team.
- 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 above-referenced guidance manual will be used when making a determination of test acceptability.
- 8) The Water Quality Standards Team will review test results (i.e., Table 1 and Table 2 forms) for consistency with established TCEQ rules, procedures, and permit requirements.

c. Dilution Water

- 1) Dilution water used in the toxicity tests shall be the receiving water collected at a point upstream of the discharge 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) utilize 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 item 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 item 2.a;
  - b) the test indicating receiving water toxicity was carried out to completion (i.e., 7 days);
  - c) the permittee submitted all test results indicating receiving water toxicity with the reports and information required in Part 3 of this Section.

The synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or a natural water in the drainage basin that is unaffected by the discharge, provided the magnitude of these parameters will not cause toxicity in a synthetic dilution water control that has been formulated to match the pH, hardness, and alkalinity naturally found in the receiving 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 flow-weighted 24-hour composite samples from Outfall 001 or Outfall 002, whichever outfall is discharging at the time the sample is to be collected. The second and third 24-hour composite samples will be used for the renewal of the dilution concentrations for each toxicity test. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportionally to flow, or a sample continuously collected proportionally to flow over a 24-hour operating day.
- 2) The permittee shall collect the 24-hour composite samples such that the samples are representative

of any periodic episode of chlorination, biocide usage, or other potentially toxic substance 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 24-hour composite sample. The holding time for any subsequent 24-hour 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 both outfalls cease 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 effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Part 3.
- 5) The effluent samples shall not be dechlorinated after sample collection.

### 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Water Quality Standards Team (MC 150) of the Water Quality Division. All DMRs, including DMRs with biomonitoring data, should be sent to the Water Quality Compliance Monitoring Team of the Enforcement Division (MC 224).

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition" (EPA-821-R-02-013), or the most recent update, for every valid and invalid toxicity test initiated whether carried to completion or not. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TCEQ personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each biomonitoring test on the Table 1 forms provided with this permit. All Table 1 reports must include the information specified in the Table 1 form attached to 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 on the DMR for the appropriate parameters for valid tests only:
  - 1) For the water flea, Parameter TLP3B, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

- 2) For the water flea, Parameter TOP3B, report the NOEC for survival.
  - 3) For the water flea, Parameter TXP3B, report the LOEC for survival.
  - 4) For the water flea, Parameter TWP3B, enter a "1" if the NOEC for reproduction is less than the critical dilution; otherwise, enter a "0."
  - 5) For the water flea, Parameter TPP3B, report the NOEC for reproduction.
  - 6) For the water flea, Parameter TYP3B, report the LOEC for reproduction.
  - 7) For the fathead minnow, Parameter TLP6C, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 8) For the fathead minnow, Parameter TOP6C, report the NOEC for survival.
  - 9) For the fathead minnow, Parameter TXP6C, report the LOEC for survival.
  - 10) For the fathead minnow, Parameter TWP6C, enter a "1" if the NOEC for growth is less than the critical dilution; otherwise, enter a "0."
  - 11) For the fathead minnow, Parameter TPP6C, report the NOEC for growth.
  - 12) For the fathead minnow, Parameter TYP6C, report the LOEC for growth.
- d. Enter the following codes on the DMR for retests only:
- 1) For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."
  - 2) For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

#### 4. Persistent Toxicity

The requirements of this Part apply only when a test demonstrates a significant effect at the critical dilution. A significant effect is defined as a statistically significant difference, at the 95% confidence level, between a specified endpoint (survival, growth, or reproduction) of the test organism in a specified effluent dilution when compared to the specified endpoint of the test organism in the control. Significant lethality is defined as a statistically significant difference in survival at the critical dilution when compared to the survival of the test organism in the control. Significant sublethality is defined as a statistically significant difference in growth/reproduction at the critical dilution when compared to the growth/reproduction of the test organism 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. The retests shall also be reported on the DMRs as specified in Part 3.d.
- b. If the retests are performed due to a demonstration of significant lethality, and one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5. The provisions of item 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 item 4.a. demonstrates significant lethality, the permittee shall again perform two retests as stipulated in item 4.a.
- d. If the two retests are performed due to a demonstration of significant sublethality, and both retests pass, the permittee shall continue testing at the quarterly frequency until such time that the permittee can invoke the reduced testing frequency provision specified in Part 1.e.
- 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 last test day 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/or effluent data available for review, a sampling and analytical schedule, and a proposed TRE initiation date.
- b. Within 90 days of the last test day 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 Toxicity Reduction Evaluation is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethal effects at the critical dilution for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:
  - 1) **Specific Activities** - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or 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 specific pollutant(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;
  - 3) **Quality Assurance Plan** - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect 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 with due diligence.
  - 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/or suspected pollutant(s) performed during the quarter;
    - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
    - 3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
    - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
    - 5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to 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.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

- 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 (herein as defined below) 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. The permittee may only apply the "cessation of lethality" provision once.

This provision accommodate 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 herein defined as proactive efforts which 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/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates persistent 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/or 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 their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report

shall provide information pertaining to the specific control mechanism(s) selected that will, when implemented, result in reduction of effluent toxicity to no significant lethality at the critical dilution. The report will also provide a specific corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.

- h. Based upon the results of the TRE and proposed corrective actions, this permit may be amended to modify the biomonitoring requirements, where necessary, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify CS limits.

TABLE 1 (SHEET 1 OF 4)  
BIOMONITORING REPORTING  
CERIODAPHNIA DUBIA SURVIVAL AND REPRODUCTION

Dates and Times No. 1 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time  
Composites  
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%	27%	36%	48%	64%	85%
A						
B						
C						
D						
E						
F						
G						
H						
I						
J						
Surv. Mean						
Total Mean						
CV%*						
PMSD	Acceptable Range 13-47					

\*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 ( $p=0.05$ ) than the number of young per adult in the control for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (85%): \_\_\_\_\_ YES \_\_\_\_\_ NO

PERCENT SURVIVAL

Time of Reading	Percent Effluent (%)					
	0%	12.7%	36%	48%	64%	85%
24h						
48h						
End of Test						

2. Fisher's Exact Test:

Is the mean survival at test end significantly less ( $p=0.05$ ) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (85%): \_\_\_\_\_ 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 No. 1 FROM: \_\_\_\_\_ Date Time TO: \_\_\_\_\_ Date Time  
 Composites  
 Collected No. 2 FROM: \_\_\_\_\_ TO: \_\_\_\_\_  
 No. 3 FROM: \_\_\_\_\_ TO: \_\_\_\_\_

Test initiated: \_\_\_\_\_ am/pm \_\_\_\_\_ date

Dilution water used: \_\_\_\_\_ Receiving water \_\_\_\_\_ Synthetic Dilution water

FATHEAD MINNOW GROWTH DATA

Effluent Concentration (%)	Average Dry Weight in milligrams in replicate chambers					Mean Dry Weight	CV%
	A	B	C	D	E		
0%							
27%							
36%							
48%							
64%							
85%							
PMSD	Acceptable Range 12-30						

\* coefficient of variation = standard deviation x 100/mean

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

Is the mean dry weight (growth) at 7 days significantly less (p=0.05) than the control's dry weight (growth) for the % effluent corresponding to significant nonlethal effects?

CRITICAL DILUTION (85%): \_\_\_\_\_ 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%									
27%									
36%									
48%									
64%									
85%									

\* 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 (p=0.05) than the control survival for the % effluent corresponding to lethality?

CRITICAL DILUTION (85%): \_\_\_\_\_ 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 Outfalls 001 and 002 for whole effluent toxicity testing (biomonitoring).

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 the Surface Water Quality Standard, 30 TAC §307.6(e)(2)(B), of greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.
- b. The toxicity tests specified shall be conducted once per six months. The permittee shall conduct the following toxicity tests utilizing 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 the most recent update thereof:
  - 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 in 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 in each dilution.

A valid test result must be submitted for each reporting period. The permittee must report, 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 herein 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/or dilution water shall consist of a standard, synthetic, moderately hard, reconstituted water.
- d. This permit may be amended to require a Whole Effluent Toxicity (WET) limit, a Best Management Practice (BMP), Chemical-Specific (CS) limits, additional toxicity testing, and/or other appropriate actions to address toxicity. The permittee may be required to conduct additional biomonitoring tests and/or a Toxicity Reduction Evaluation (TRE) if biomonitoring data indicate multiple numbers of unconfirmed toxicity 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 item 1.c., the control and/or dilution water shall consist of a standard, synthetic, moderately hard, reconstituted water.
- c. Samples and Composites
  - 1) The permittee shall collect a minimum of one flow-weighted 24-hour composite samples from Outfall 001 or Outfall 002, whichever outfall is discharging at the time the sample is to be collected. A 24-hour composite sample consists of a minimum of 12 effluent portions collected at equal time intervals representative of a 24-hour operating day and combined proportional to flow, or a sample continuously collected proportional to flow over a 24-hour operating day.

- 2) The permittee shall collect the 24-hour composite samples such that the samples are representative of any periodic episode of chlorination, biocide usage, or other potentially toxic substance discharged on an intermittent basis.
- 3) The permittee shall initiate the toxicity tests within 36 hours after collection of the last portion of the 24-hour composite sample. Samples shall be maintained at a temperature of 0-6 degrees Centigrade during collection, shipping, and storage.
- 4) If both outfalls cease 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 required in Part 3 of this Section.
- 5) The effluent samples shall not be dechlorinated after sample collection.

### 3. Reporting

All reports, tables, plans, summaries, and related correspondence required in any Part of this Section shall be submitted to the attention of the Water Quality Standards Team (MC 150) of the Water Quality Division. All DMRs, including DMRs with biomonitoring data, should be sent to the Water Quality Compliance Monitoring Team of the Enforcement Division (MC 224).

- a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this permit in accordance with the Report Preparation Section of "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition" (EPA-821-R-02-012); or the most recent update thereof, for every valid and invalid toxicity test initiated. All full reports shall be retained for 3 years at the plant site and shall be available for inspection by TCEQ personnel.
- b. A full report must be submitted with the first valid biomonitoring test results for each test species and with the first test results any time the permittee subsequently employs a different test laboratory. Full reports need not be submitted for subsequent testing unless specifically requested. The permittee shall routinely report the results of each biomonitoring test on the Table 2 forms provided with this permit. All Table 2 reports must include the information specified in the Table 2 form attached to this permit.
  - 1) Semiannual biomonitoring test results are due on or before January 20th and July 20th for biomonitoring conducted during the previous 6 month period.
  - 2) Quarterly biomonitoring test results are due on or before January 20th, April 20th, July 20th, and October 20th, for biomonitoring conducted during the previous calendar quarter.
- c. Enter the following codes on the DMR 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 on the DMR 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, here defined as a mean mortality of 50% or greater to organisms exposed to the 100% effluent concentration after 24-hours.

- a. The permittee shall conduct 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 additional 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. The retests shall also be reported on the DMRs as specified in Part 3.d.
- b. If one or both of the two retests specified in item 4.a. demonstrates significant lethality, the permittee shall initiate the TRE requirements as specified in Part 5 of this Section.

#### 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/or 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 Toxicity Reduction Evaluation is a step-wise investigation combining toxicity testing with physical and chemical analysis to determine actions necessary to eliminate or reduce effluent toxicity to a level not effecting significant lethality at the critical dilution. The TRE Action Plan shall lead to the successful elimination of significant lethality for both test species defined in item 1.b. As a minimum, the TRE Action Plan shall include the following:
  - 1) Specific Activities - The TRE Action Plan shall specify the approach the permittee intends to utilize in conducting the TRE, including toxicity characterizations, identifications, confirmations, source evaluations, treatability studies, and/or 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(s) and/or source(s) of effluent toxicity, the permittee shall conduct, concurrent with toxicity testing, chemical-specific

analyses for the identified and/or suspected pollutant(s) and/or source(s) of effluent toxicity;

- 3) **Quality Assurance Plan** - The TRE Action Plan should address record keeping and data evaluation, calibration and standardization, baseline tests, system blanks, controls, duplicates, spikes, toxicity persistence in the samples, randomization, reference toxicant control charts, as well as mechanisms to detect 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 with due diligence.
- d. The permittee shall submit quarterly TRE Activities Reports concerning the progress of the TRE. The quarterly TRE Activities Reports are due on or before April 20th, July 20th, October 20th, and January 20th. The report shall detail information regarding the TRE activities including:
- 1) results and interpretation of any chemical-specific analyses for the identified and/or suspected pollutant(s) performed during the quarter;
  - 2) results and interpretation of any characterization, identification, and confirmation tests performed during the quarter;
  - 3) any data and/or substantiating documentation which identifies the pollutant(s) and/or source(s) of effluent toxicity;
  - 4) results of any studies/evaluations concerning the treatability of the facility's effluent toxicity;
  - 5) any data which identifies effluent toxicity control mechanisms that will reduce effluent toxicity to the level necessary to eliminate significant lethality; and
  - 6) any changes to the initial TRE Plan and Schedule that are believed necessary as a result of the TRE findings.

Copies of the TRE Activities Report shall also be submitted to the U.S. EPA Region 6 office.

- 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 (herein as defined below) 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. The permittee may only apply the "cessation of lethality" provision once.

This provision accommodate 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 herein defined as proactive efforts which 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/or effluent treatment.

The permittee may only apply this cessation of lethality provision once. If the effluent again demonstrates persistent 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/or 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 their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE. The report shall specify the control mechanism(s) that will, when implemented, reduce effluent toxicity as specified in item 5.g. The report will also specify a corrective action schedule for implementing the selected control mechanism(s). A copy of the TRE Final Report shall also be submitted to the U.S. EPA Region 6 office.
- h. Within 3 years of the last day of the test confirming toxicity, the permittee shall comply with 30 TAC 307.6.(e)(2)(B), which requires greater than 50% survival of the test organism in 100% effluent at the end of 24-hours. The permittee may petition the Executive Director (in writing) for an extension of the 3-year limit. However, to warrant an extension the permittee must have demonstrated due diligence in their pursuit of the TIE/TRE and must prove that circumstances beyond their control stalled the TIE/TRE.

The requirement to comply with 30 TAC 307.6.(e)(2)(B) may be exempted upon proof 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, the 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, to require a compliance schedule for implementation of corrective actions, to specify a WET limit, to specify a BMP, and/or to specify a CS limit.



TABLE 2 (SHEET 1 OF 2)

WATER FLEA SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	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

95% confidence limits: \_\_\_\_\_

Method of LC50 calculation: \_\_\_\_\_

TABLE 2 (SHEET 2 OF 2)  
FATHEAD MINNOW SURVIVAL

GENERAL INFORMATION

	Time (am/pm)	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

95% confidence limits: \_\_\_\_\_

Method of LC50 calculation: \_\_\_\_\_

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, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit (60 degrees 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 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 (BOD, etc.), 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 degrees Fahrenheit (40 degrees Celsius) unless the Executive Director, upon request of the POTW, approves the alternate temperature limit;
  - f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral 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 comply with the pretreatment requirements in 40 CFR Part 403, as specified in the following schedule of compliance. If the permittee is required to develop a pretreatment program, the final complete package is due 2 months from the date the permittee receives notification from the TCEQ Pretreatment Team indicating completion of the permittee's Activity Nos. 1- 6. (See Activity No. 7.)
  - a. If the permittee does not comply with any of the increments of the progress in the following schedule, the permittee shall submit to the TCEQ Pretreatment Team (MC 148) of the Water Quality Division within 14 days of the activity due date a report, including, at a minimum, the date on which the required activity will be submitted, the reason for the delay, and the steps taken to return to the established schedule.
  - b. Upon approval of a local pretreatment program by the Executive Director, this permit will be modified or amended to incorporate that pretreatment program.
  - c. The permittee may develop and submit a complete pretreatment program at any time before the deadline established in Activity No. 7.
  - d. The permittee may apply for authority to revise categorical pretreatment standards to reflect POTW removal of pollutants in accordance with the requirements of 40 CFR §403.7 at any time.
  - e. 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.

- f. The permittee shall provide adequate notification to the Executive Director in care of the Wastewater Permitting Section (MC 148) of the Water Quality Division, in writing, within 30 days subsequent to the permittee's knowledge of the following:
- (1) 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
  - (2) Any substantial change in the volume or character of pollutants being introduced into the treatment works.

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

ACTIVITY NUMBER	ACTIVITY	DATE
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| 1. | Submit to the TCEQ Pretreatment Team (MC 148) of the Water Quality Division results of an industrial user survey which consists of a qualitative analysis of pollutants being contributed by all industrial sources in its entire municipal system (including all treatment plants). The industrial users should be asked to provide information on the type and approximate quantity of pollutants discharged into the system. This information may be derived from knowledge of the facility's process, and should not require any sampling at the source. | 2 months from the effective date of permit |
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The TCEQ Pretreatment Team will notify the permittee within 60 days of receipt of results of the industrial user survey, whether the permittee will be required to continue the program past Activity No. 1. If pretreatment program development is necessary, the permittee will be required to continue the program past Activity No. 1 within 30 days after the effective date of notification. If notified that a pretreatment program is not necessary, the permittee will submit to the TCEQ Pretreatment Team (MC 148) of the Water Quality Division an update of its industrial user survey, documenting changes in industrial flow and/or characteristics and new contributing industries when next reapplying for this TPDES permit.

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| 2. | Submit to the TCEQ Pretreatment Team (MC 148) of the Water Quality Division a design of a sampling, inspection and reporting program which will implement the requirements of 40 CFR §§403.8 and 403.12.  | 4 months from the effective date of notification to continue pretreatment program development |
| 3. | Submit to the TCEQ Pretreatment Team (MC 148) of the Water Quality Division an evaluation of the financial programs, revenue sources, equipment and staffing, which will be employed to implement the pretreatment program (as required by 40 CFR Parts §§403.8(f)(3) and 403.9(b)(3)). | 6 months from the effective date of notification to continue pretreatment program development |

ACTIVITY NUMBER	ACTIVITY	DATE
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| 4. | <p>Submit to TCEQ Pretreatment Team (MC 148) of the Water Quality Division the results of an influent pollutant scan of a 24-hour composite sample to determine all pollutants being contributed to the system. The type of scan to be performed is the basic priority pollutant scan of the 126 pollutants plus any other additional pollutants designated in the TCEQ Surface Water Quality Standards, 30 TAC Chapter 307. All sampling, analyses and method detection limits must be done in accordance with 40 CFR Part 136. This scan will also serve as the initial scan necessary for developing technically based local limits (Activity No. 5 as follows).</p> <p>(a) From the qualitative information supplied by the industrial users in Activity No. 1 and the quantitative information collected in the pollutant scan, the permittee shall determine which industrial users may be discharging pollutants which may affect the operation of the POTW(s) or pass through untreated.</p> <p>(b) Sampling and analysis to quantify the pollutants discharged by the industrial users identified in the investigation of (a) above, shall be completed.</p> | 6 months from the effective date of notification to continue pretreatment program development |
| 5. | <p>Submit to the TCEQ Pretreatment Team (MC 148) of the Water Quality Division a complete technically based local limits (TBLL) submission package as required by 40 CFR §403.8(f)(4). Technically based local limits should be developed in accordance with "EPA Region 6 Technically Based Local Limits Development Guidance." The technical development must demonstrate that the TBLLs attain the Texas Surface Water Quality Standards [30 TAC Chapter 307] in surface waters of the State and are adequate to prevent pass through of pollutants, inhibition of or interference with the treatment facility, worker health and safety problems, and sludge contamination.</p>   | 9 months from the effective date of notification to continue pretreatment program development |

ACTIVITY NUMBER	ACTIVITY	DATE
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| 6. | <p>40 CFR §403.8(f)(1) requires POTWs to apply and enforce the requirements of Sections 307(b) and (c), and 402(b)(8) and (9) of the Clean Water Act and any regulations implementing those sections. Submit to TCEQ Pretreatment Team(MC 148) of the Water Quality Division:</p> <ul style="list-style-type: none"> <li>iii. a statement from the city solicitor, a city official acting in a comparable capacity, or the city's independent counsel, that the POTW has the authority to carry out the program;</li> <li>iv. a copy of any statute, ordinance, regulation, contract, agreement, or other authority that will be relied on by the POTW to administer the program;</li> <li>v. a statement reflecting the endorsement of or approval by the local boards or bodies responsible for supervising and/or funding the program; and</li> <li>vi. any additional documents required in multi-jurisdictional situations for administration of the program.</li> <li>vii. an enforcement response plan that shall contain detailed procedures indicating how the POTW will investigate and respond to instances of industrial user noncompliance. The plan shall contain, at a minimum, the aspects defined in 40 CFR §403.8(f)(5).</li> </ul> | <p>10 months from the effective date of notification to continue pretreatment program development</p>  |
| 7. | <p>Submit to the TCEQ Pretreatment Team (MC 148) of the Water Quality Division a complete pretreatment program (and removal credit approval, if desired and appropriate) as required by 40 CFR §403.9. The complete pretreatment program shall include a compilation of all previously submitted pretreatment program activities as finally amended and supplemented (i.e. Activities Nos. 1- 6).</p>   | <p>Two months from the date the permittee receives notification from the TCEQ indicating completion of the permittee's Activity Nos. 1 - 6</p> |

Upon notification by the TCEQ Pretreatment Team of completeness of the submitted program, the permittee is required to submit an official request for program approval, including four (4) copies, three (3) bound and one (1) unbound, of the program deemed to be complete.