



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

MAR 09 2006

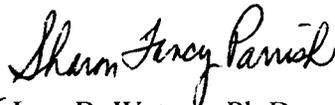
Ms. L'Oreal Stepney, Director
Water Quality Division (MC-145)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Dear Ms. Stepney:

The Environmental Protection Agency (EPA) appreciates the opportunity to provide recommendations on the upcoming revision of the document titled, *Procedures to Implement the Texas Surface Water Quality Standards*. Our comments are enclosed and include several items that were not resolved in the current version. EPA provided recommendations for the revision of the *Texas Surface Water Quality Standards* in December 2005.

We look forward to continuing work with you and your staff on the protection of water resources. If you have any questions, please contact Jane at (214) 665-7135, Claudia at (214) 665-6464 or staff in the NPDES Permits Branch or Ecosystems Protection Branch

Sincerely,


for Jane B. Watson, Ph.D.
Chief

Ecosystems Protection Branch (6WQ-E)



Claudia Hosch

Chief

NPDES Permits Branch (6WQ-P)

cc: Sidne Tiemann, TCEQ - Water Quality Assessment Section (MC-150)

**EPA recommendations for revisions to
*Procedures to Implement the Texas Surface Water Quality Standards***

General Comment

The proposed revisions include a number of instances where case-by-case decisions will be made. The Environmental Protection Agency (EPA) recognizes the need for flexibility in regulatory permitting decisions and has no objection to the State establishing implementation on a case-by-case basis where there are special conditions or circumstances. However, since permit conditions in State-administered National Pollutant Discharge Elimination System (NPDES) programs must adhere to both state water quality standards and the Clean Water Act (CWA), EPA believes it is important to include a general statement in the Implementation Procedures clearly establishing that case-by-case permitting decisions are subject to EPA approval (e.g., Page 44, Deriving Permit Limits for Human Health Protection; Page 52, Once-Through Cooling Water Discharges; Page 62, Alternate Analytical Test Methods; Page 66, Screening Procedures and Permit Limits for Total Dissolved Solids; Page 77, (WET) Test Frequency; Page 91, TDS Toxicity in Chronic and 48-Hour Acute Tests; Page 91, Toxicity Attributable to Ammonia).

Determining Water Quality Uses and Criteria

Page 3, Unclassified Waters. EPA recommends revising the second sentence under “Perennial Waters” as follows: “In accordance with results from statewide ecoregion studies, the critical low flow in unclassified perennial streams in the eastern and southern portions of Texas (shown as area “A” on Figure 1, page 6) may be modified ~~are assigned dissolved oxygen criteria~~ as described in 30 TAC §307.7(b)(3)(A)(ii)” and in the section of this document entitled “Eastern and Southern Portions of the State” on page 10. The caption for figure 1 should also be modified.

Where a discharge creates a perennial flow in an intermittent stream, the reach below the discharges should be assumed to have an aquatic life use and protected at the appropriate level for conventional and toxic pollutants. The federal regulation at 40 CFR §131.10(g)(2) for designation of uses states “natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violation of State water conservation requirements to enable uses to be met.” EPA recommends that the additional language be included in the Implementation Procedures to address this issue.

Antidegradation

Page 26, General Provisions (last paragraph); page 27, Applicability to Specific Parameters “Listings based on narrative standards”; and, page 28, Procedures for Discharges to Listed Water Bodies (first paragraph). These provisions include language that is inconsistent with the federal regulations cited at 40 CFR §122.44(d) and 40 CFR §131.12. Limitations must control

all pollutants that may be discharged at levels that will cause or contribute to an exceedance of a state water quality standard. In addition, the antidegradation policy must be implemented so that the quality of waters necessary to support designated and presumed uses are maintained. Therefore, in these cases, controls (i.e., permit limitations) to prevent additional loadings from new and existing dischargers are required if the listed pollutant is present in the effluent.

Mixing Zones and Critical Conditions

Pages 40-43, Critical Conditions for Aquatic Life Protection. As discussed above, where an effluent discharge creates a perennial flow, the reach below the discharges should be assumed to have an aquatic life use.

Toxic Pollutants

Pages 51-85. We recommend that TCEQ consider the development of policy and procedures related to implementation of bioaccumulative pollutants which may accumulate in bottom sediments and fish tissue. This is particularly important since existing human health criteria are derived using bioconcentration factors rather than bioaccumulation factors.

Pages 62-67, Establishing Permit Limits for Toxic Pollutants without Criteria. When calculating permit limits for toxic pollutants without criteria, the state should screen the reported value against both the MAL (if available) and a screening value (to protect aquatic life, human health or both) in order to evaluate the water quality significance. If the reported value can be quantitatively supported (i.e., the methodology was appropriate to arrive at a definitive value below the "default MAL"), monitoring and permit limits should be considered.

Pages 67-70, Correcting for Background Concentrations. We recommend including sources of background data in this section. Permit writers should evaluate readily available sources of ambient data, such as TCEQ's Surface Water Quality Monitoring database, to determine if background data for appropriate parameters are available for permit development.

Whole Effluent Toxicity Testing (Biomonitoring)

As proposed by EPA Region 6 in several letters and meetings during 2005, EPA believes it is necessary for TCEQ to revise its whole effluent toxicity (WET) permitting procedures. This will require that TCEQ modify its implementation procedures to ensure full compliance with federal regulations at 40 CFR §122.44(d)(1) with respect to developing a predictive reasonable potential process for WET limits and to begin incorporating WET limits for sub-lethal effects (such as growth and/or reproduction). EPA expects TCEQ permits to be issued with the required changes by January 2007. EPA is working on updates to the various WET language templates and these will be provided for TCEQ's review and comment in the near future. Since the TCEQ water quality standards already provide for protection of aquatic life at the sub-lethal effects, the implementation procedures should be revised with respect to WET limits for sub-lethal effects.

Pages 101-102, Applicability. EPA recommends that TPDES permits for minor dischargers include WET testing (and limits as appropriate) where: 1) reasonable potential for instream toxicity exists due to the discharge of potentially toxic levels of chlorine, ammonia, or other toxic compounds, and, 2) the facility discharges directly to a receiving stream designated as critical habitat for, or is known to support an aquatic species listed as threatened or endangered.

Regarding chlorine discharges from minor facilities, TPDES permits for minor privately-owned treatment works (POTW) discharge facilities often include a requirement that the facility maintain a total chlorine residual of 1- 4 mg/l prior to final discharge. Minor POTWs that discharge these levels of residual chlorine to receiving waters without significant dilution constitute a serious potential for instream toxicity. EPA regulations do not exclude minor discharges from toxicity requirements. EPA and TCEQ have addressed potential toxicity from minor discharges, so a precedent exists to support modifications to the Implementation Procedures.

EPA's Post Third-Round NPDES Permitting Strategy prioritizes permit issuance and limits with the first priority being facilities with known or suspected toxicity problems. Chlorine is specifically mentioned in the following excerpt:

Chlorine: Permits for facilities with the potential for a continuous discharge of chlorine will include water quality-based effluent limits for Total Residual Chlorine. Water quality-based limits will be derived from the state water quality standards giving consideration to appropriate dilution factors, state implementation procedures or federal criteria if no state standard has been approved.

TCEQ should revise the Implementation Procedures and permitting practices to include either WET testing or dechlorination requirements and total residual chlorine limits for those minor POTW (< 1.0 MGD design flow) facilities which may pose a toxic threat based on available dilution. We believe that a basis for this modification already exists on page 101 in the Implementation Procedures in the following bullets for domestic discharges:

The [TCEQ] requires WET testing of domestic wastewater dischargers that have **any** of the following conditions:

- an average permitted flow of 1 MGD or greater
- a final phase of their permit with a design flow of 1 MGD or greater
- an approved pretreatment program with significant industrial users discharging into their collection systems
- **the potential to cause toxicity in the receiving water.** [emphasis added]

Pages 105-107, WET Testing Frequencies. This section should be clarified to reflect that the minimum WET monitoring frequency starts out at once per quarter for each new permit cycle (i.e., every fifth year). It should also be clarified to reflect that the frequency reduction does not apply to facilities which were previously monitoring for the life of the permit at a frequency of once per quarter.

Page 111, Toxicity Reduction Evaluations (TREs). This section should be revised to clarify the process by which a sub-lethal TRE and limits will be required. An approach similar to that used for lethality effects would be appropriate.

Pages 113-114, Toxicity Control Measures. This section should be revised to explain how TCEQ will assess reasonable potential for WET limits for lethal and sub-lethal effects in a manner that meets all applicable state and federal requirements. The state's current practice for establishing WET limits does not meet the requirements of the CWA or federal regulations at 40 CFR §122.44(d)(1)(ii) and (iv). The regulation is specific in requiring a reasonable potential determination during permit development and including WET limits where reasonable potential exists. The discharge of toxics in toxic amounts is to be controlled to preclude instream toxicity, that is, permit limits must be placed in NPDES permits to ensure toxic discharges which may impact aquatic life do not occur. The current WET permitting procedures allow multiple toxic events to occur before a multi-year toxicity study is performed, followed by a compliance schedule of, usually, three years, before a permit limit becomes effective. To allow permittees time to become familiarized with WET and toxicity studies, EPA Region 6 followed this practice when it first began implementing WET requirements in permits. However this practice does not comply with the permitting regulations, and Region 6 can no longer support its use. Region 6 has developed and is using a predictive reasonable potential determination procedure that it believes meets the minimum federal requirements. TCEQ may use this procedure or develop an equivalent one for EPA's review.

Pages 113-114, Toxicity Control Measures (Chronic and 48-Hour Acute). Please note that federal regulations at 40 CFR §122.44.d.1(v) require the permitting authority to demonstrate in the permit fact sheet that the chemical-specific (CS) limit or best management practice (BMP) is adequate to prevent toxicity before it can be substituted for a WET limit. Where a CS or BMP is substituted for a WET limit, the WET testing frequency must be adequate to ensure that the alternate limit is working.

Page 125, Toxicity Attributable to Diazinon. Under item 2, TCEQ should clarify that effluent monitoring for Diazinon must be performed concurrently with WET testing to ensure that data collected is meaningful. In the last paragraph, TCEQ must clarify that if sub-lethal or lethal toxicity persists, the permittee will resume the TRE. TCEQ may also want to include a discussion regarding the use of piperonyl butoxide (PBO) to neutralize Diazinon toxicity when an additional toxicant is suspected. (Also see comment below for Table 9)

TPDES Storm Water Permits

Page 130, Discharges to Impaired Waters. Under "Constituents of Concern," language in the first paragraph must be revised to read "...TMDL or TMDL implementation plan is only eligible..." to ensure compliance with federal regulations and to ensure that permits for reissuance or major amendments for existing dischargers include TMDL requirements. If a

TMDL has been approved by EPA, permits must be issued in accordance with the TMDL, regardless of whether a separate implementation plan will be developed. Permits must establish controls where the discharge of pollutants have the reasonable potential to cause or contribute to the impairment of the water body. In addition, permits must also establish conditions to ensure consistency with the requirements of an approved water quality management plan approved by EPA, as cited in 40 CFR §122.44(d)(6).

Site-Specific Standards and Variances

Page 135, Coordinating with EPA. The provision states that EPA will confer with the U.S. Fish and Wildlife Service. It is not clear if this term refers to the review of the permit, the variance or both items. Although EPA coordinates with the Services on draft TPDES permits, consultation under §7 of the Endangered Species Act is still required on revisions to water quality standards where there may be an effect on federally listed species. It may not be possible to complete ESA consultation on the variance within the 45-day review period of the draft permit. A determination of “approvable” can usually be made within 45 days. Also, the public comment period on the TPDES permit must be completed before EPA approves a variance to the water quality standards.

Page 136, Temporary Standards and page 139, UAAs for Typical Sites. The provisions for Temporary Standards and UAAs are acceptable; however, an important part from 40 CFR §131.10(g) has not been included in the bullets for “natural, ephemeral or low-flow conditions or water levels prevent the attainment of the use.” The federal regulation includes the above language plus the following “unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violation of State water conservation requirements to enable uses to be met.” EPA recommends that the additional language be included in the Implementation Procedures and will consider this factor in review of temporary standards and UAAs.

Pages 143-144, Site-specific Numeric Standards for Aquatic Life (Bioavailability of specific toxic substances of concern, as determined by water-effect ratio tests or other analyses approved by the agency). TCEQ may wish to include some of the recent policy decisions such as use of the streamlined method for saltwater WERs and use of 48-hour tests with *Americamysis bahia* with copper nitrate as the spiking solution

Page 146, Site-Specific Standards for Total Toxicity (Indigenous aquatic organisms that may have different responses to particular toxic materials). It would be useful to cite the updated procedures for recalculating aquatic life criteria found in Appendix B of EPA’s guidance document, *Interim Guidance on Determination and Use of Water-Effect Ratios for Metals*, EPA-823-B-94-001, 1994.

Appendix C

Table 3 - Locations of Federally Endangered and Threatened Aquatic and Aquatic-Dependent Species in Texas.

One of TCEQ's response comments on an earlier version of the Implementation Procedures stated that Table 3 represented only the critical concern species/watersheds plus the piping plover. The Implementation Procedures should acknowledge this limitation and that other aquatic and aquatic-dependant species are found in Texas. If Table 3 is based on the *Hydrologic Database for Federally-Listed and Candidate Species* in Texas, several inland water bodies where the interior least tern, the piping plover or the whooping crane have found should be added. These include the water bodies in the following segments: 0201, 0202, 0203, 0204, 0205, 0206, 0207, 0214, 0804 and 0805.

The 2005 "Hydrologic database" includes several unclassified water bodies in segments 1427 and 1430 for the Barton Springs salamander. Also, "Toyah Creek" (segment 2311) should be included in Reeves County for the Pecos Gambusia. The interior least tern may be associated with water bodies in segments 2303, 2304, and 2305. For the Devils River minnow, the "Hydrologic database" also lists Pinto Creek and Pinto Springs in segment 2304 and the following unclassified water bodies in segment 2309: Dolan Creek, Dolan Spring, Finegan Spring, Pecan Spring, and Phillips Creek. Toyah Creek in segment 2311 is listed for the Pecos Gambusia. The Pecos assimnea snail was listed as endangered in August 2005 and critical habitat has been designated in Diamond Y draw and East Sandia spring in segment 2311.

Table 8 - Minimum Analytical Levels for Permit Application Screening and Table 9 - Analytical Methods for the Determination of Pollutants Regulated by 30 TAC §307.6.

EPA Headquarters and Region 6 are nearing completion of an updated list of Minimum Quantification Limits (MQLs). Clean techniques for mercury and other metals (method 1600 series), pesticides, and volatile and semivolatile organics are included to replace less sensitive methods. We recommend including the revised MQLs in both Tables 8 and 9 and will provide this document under separate cover as soon as it is available.

TCEQ must either revise Table 8 and Table 9 to incorporate EPA method 614 (MAL, 0.1 ug/l; MDL, 0.012 ug/l) or include this method on page 125, Toxicity Attributable to Diazinon.