TCEQ and TSSWCB Move to Strengthen State's Work on Bacteria TMDLs

On September 27, the Texas Commission on Environmental Quality (TCEQ) and the Texas State Soil and Water Conservation Board (TSSWCB) met jointly to strengthen their efforts to clean up waters impaired by bacteria, and to renew their partnership to improve the environment through TMDLs and watershed plans.

Partnership Agreement Strengthened

At the meeting, the TCEQ and the TSSWCB strengthened their partnership to preserve the quality of water resources by updating the cooperation agreement between the two agencies. The agreement provides a framework for collaboration between the two agencies and describes the programmatic mechanisms the agencies will employ to develop and implement TMDLs and watershed plans.

Task Force Named

The Board and Commission also established the Task Force on Bacteria TMDLs. Bacteria accounted for 47 percent of the impairments listed in the 2002 Texas Water Quality Inventory and 303(d) List.

The Task Force, chaired by Dr. Allan Jones with the Texas Water Resources Institute, is charged with:

- examining approaches that other states use to develop and implement bacteria TMDLs;
- recommending cost-effective and time-efficient methods for developing TMDLs;
- recommending effective approaches for developing implementation plans;
- evaluating the variety of models and bacteria-source-tracking methods available for developing TMDLs and implementation plans, and recommending under what conditions certain methods are more appropriate; and
- developing a roadmap for further scientific research needed to reduce uncertainty about how bacteria behave under different water conditions in Texas.

Task Force members include Drs. George DiGiovanni with Texas Agricultural Experiment Station-El Paso, Larry Hauck with the Texas Institute for Applied Environmental Research, Joanna Mott with Texas A&M University-Corpus Christi, Hanadi Rifai with the University of Houston, Raghavan Srinivasan with Texas A&M University, and George Ward with the University of Texas at Austin.

The Task Force has 120 days to complete its assessment and report back to the Commission and Board. Stakeholders with expertise on the issues will have ample opportunity to provide information to the Task Force. Additionally, local, state, and federal agencies with authorities related to bacteria and water quality support its efforts.

The Board and the Commission will use the Task Force's recommendations to keep Texas at the forefront in implementing water quality prevention and abatement projects that lead to cleaner water and safer recreation.

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.

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

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WATER QUALITY DIVISION

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

Subject: Revisions to Whole Effluent Toxicity components of the TPDES program

Dear Ms. ~~Stepney~~ L'Oreal:

In my letter dated February 24, 2005, I requested that each State work with Region 6 to develop a mutually acceptable strategy directed toward implementing a predictive approach to determining reasonable potential for whole effluent toxicity (WET). I also requested the Region 6 states to begin developing requirements to establish WET limits for sub-lethal effects (e.g., growth or reproduction), where required by applicable water quality standards, to fully comply with NPDES regulations at 40 CFR Part 122.44(d)(1).

As you know, EPA Office of Water's Permitting for Environmental Results (PER) process identified the lack of these program components as a significant weakness in the Region 6 NPDES permitting program. To ensure the program is in full compliance with Federal regulations, Region 6 and its states must incorporate these permitting practices into their NPDES permits.

During the transitional period, EPA has been actively supporting our states through various activities, including: Region 6 / State WET meeting (April 6, 2005); technical assistance visits to each state agency on revising its rules and implementation procedures; public outreach via presentations at the annual meetings for the New Mexico Municipal Wastewater Association, the Oklahoma City MS4 conference and the Arkansas Environment Federation; and a two-day state of the science NPDES WET workshop at Region 6 in Dallas. Region 6 is committed to working closely with you to answer questions, resolve impediments to State NPDES WET program revisions and to provide any support you and your staff may need to implement these requirements.

I am enclosing a copy of the final EPA Region 6 NPDES WET Implementation Strategy. It has been implemented in EPA Region 6 issued permits since May 2005. I encourage TCEQ to adopt a similar strategy to be implemented in TPDES permits.

Please provide me with a status update, by April 1, 2006, on the WET revision initiative within your agency, including identification of milestones that will allow TCEQ to complete the tasks necessary to implement the revisions in NPDES permits issued beginning January, 2007. Failure to fully adopt all WET requirements in a timely manner places both the TCEQ and Region 6 at risk with respect to administration of the NPDES permitting program. My staff and I are fully committed to assisting TCEQ in any way we can in developing and implementing your strategy. If you have questions or would like to discuss this further you may call me or your staff may contact Claudia Hosch at (214) 665-6464 or via e-mail at hosch.claudia@epa.gov.

Sincerely,

Miguel I. Flores
Director
Water Quality Protection Division

Enclosure

cc: Mr. Martin Maner, ADEQ
Mr. Chuck Brown, LDEQ
Ms. Marcy Leavitt, NMED
Mr. Derek Smithee, OWRB
Mr. Jon Craig, ODEQ

bcc:	Division Reading File	6WQ
	Branch Reading File	6WQ-P
	Bill Honker	EPA R6, WPD
	David Gillespie	EPA R6, ORC
	Claudia Hosch	EPA R6, NPB
	Willie Lane	EPA R6 NPB
	Phillip Jennings	EPA R6, NPB
	James Hanlon	EPA, OWM
	Linda Boornazian	EPA, OWM/WPD
	Thomas Laverty	EPA OWM/WPD
	Stephen Sweeney	EPA OGC

EPA Region 6 WET Permitting Strategy

May, 2005

This strategy is designed to implement regulatory requirements established in 1989 and guidance developed since that time. The Clean Water Act and federal regulations at 40 CFR § 122.44(d)(1) establish the basis for whole effluent toxicity (WET), or biomonitoring, requirements for wastewater discharge permits issued under the NPDES permitting program. The applicable federal regulations require that the permitting authority determine, during the permit development period, whether the reasonable potential exists for an effluent to cause or contribute to an excursion above a State's narrative or numeric criterion for the protection of aquatic life. If reasonable potential is found to exist, WET limits must be included in the permit. A chemical-specific limit may be established in lieu of a WET limit where the permitting authority demonstrates, in the fact sheet, that the chemical limit will preclude toxicity at unacceptable levels. All available, valid and relevant information will be used in making permitting decisions. EPA Region 6 WET permitting practices follow the current agency policy on independent applicability.

References to sub-lethal effects in this document apply only to chronic testing. Where the permit establishes 7-Day Chronic test requirements, the reasonable potential analysis will be performed for both lethal and sub-lethal effects. Where the permit establishes 48-Hour Acute test requirements, the reasonable potential analysis will be performed on lethal effects.

Applicability

WET requirements are established for all Region 6 discharges classified as majors (e.g., POTW $\geq$ 1.0 mgd design flow) with the exception of once-through, non-contact cooling water discharges to which no chemical treatment is added. WET requirements will also be applied on a case-by-case basis to minor discharges with known or suspected toxic potential, or which are designed to discharge $\geq$ 0.5 mgd with a chlorine residual. As an option in such cases, WET testing may not be required if the permittee agrees to a compliance schedule to install dechlorination to meet a non-detect total residual chlorine limit.

Reasonable Potential

As applicable, reasonable potential to cause or contribute to an exceedance of State narrative criteria for the protection of aquatic life will be determined by the method established in EPA's Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, second printing (see Box 3-2, page 53). This approach is also provided in federal regulations pertaining to wastewater discharges into the Great Lakes, at 40 CFR § 132, Appendix F, Procedure 6. Where a facility does not intend to significantly alter the effluent quality or quantity during the permit term, has a critical dilution of 90% or greater, has performed quarterly testing and has demonstrated no significant lethal or sub-lethal effects during the previous five-year period, a finding of no reasonable potential may be made.

WET Limits

A WET limit is a permit control required where the reasonable potential exists for an exceedance of the State water quality criteria for protection of aquatic life and a specific toxicant has not been identified and controlled via a toxicity reduction evaluation (TRE). If, during permit development, reasonable potential is found to exist for lethal and/or sub-lethal effects, WET limits will be included in the permit. A compliance schedule of up to three years duration can be included. The minimum monitoring frequency for species under a WET limit is once per quarter for the life of the permit. WET limits may be removed from a permit after the first five years in effect, based on a demonstration of no lethal or sub-lethal affects during that period.

Monitoring Frequencies

Facilities with WET Limits

Normally, the minimum monitoring frequency for species under a WET limit is once per quarter for the first five years after a WET limit goes into effect.

Major Dischargers

For major dischargers, the *minimum* monitoring frequency for WET is once per quarter for the invertebrate and vertebrate test species, with a potential reduction in testing frequency after completing one year of testing with no lethal or sub-lethal effects (see Region 6 WET Monitoring Frequency Guidance, 06/30/00). Some facilities pose a more significant concern (e.g., POTWs $\geq$ 20 mgd and petroleum/chemical refineries) and have historically been required to perform WET monitoring on a quarterly basis, for at least one test species, for the life of the permit. The minimum WET monitoring frequency reduction option does not apply to these discharges.

Minor Dischargers

Testing frequencies for minor dischargers and dischargers with a critical dilution of <1.0% will be established on a case-by-case basis.

All Dischargers

When a test failure occurs, the monitoring frequency will automatically increase to once per month for the next three months. The purpose of this testing is to determine whether toxicity is present at a level and frequency that will provide toxic samples to use in performing a toxicity reduction evaluation (TRE). The additional tests are not performed for the purpose of confirming whether the original test failure was 'real.' If no additional test failures occur during the three-month period, the testing frequency will return to once per quarter for the life of the permit or until another test failure occurs. If multiple intermittent test failures occur, a TRE may be required, and the testing frequency may be increased for the affected test species.

Toxicity Reduction Evaluations / Toxicant Identification Evaluations (TREs/TIEs)

Where reasonable potential is not demonstrated and the permit is issued with WET monitoring requirements only, the permit will contain trigger language to require a TRE. A TRE is a 28-month study to identify sources and controls for toxicants in effluents. A TIE is a set of effluent manipulations that is used to identify specific toxic compounds in a sample known to be toxic. EPA does require TREs but does not typically require TIEs. Generally, permittees are allowed latitude in choosing how they proceed through a TRE and come into compliance. A TRE will usually result in either WET limits (if a specific toxicant is not identified, confirmed and controlled), or chemical limits. In some cases a best management practice (BMP) may be included as a permit control. If additional testing indicates that a chemical-specific limit or a BMP does not result in controlling toxicity, and reasonable potential exists; the permit then will be revised to include WET limits.

Lethal Effects

Region 6 will implement TREs and limits for lethal effects as it has historically. A TRE for lethal effects is triggered by failure in a scheduled test followed by failure in one or more tests performed during the following period of increased frequency.

Sub-Lethal Effects

Due to the potential difficulty of resolving toxicity related, in some cases, to identifying toxicants responsible for sub-lethal effects, EPA Region 6 will take a graduated approach to TREs and implementation of WET limits where significant sub-lethal effects are demonstrated only in effluent concentrations greater than 75% effluent. Where significant effects are demonstrated at effluent concentrations of 75% or less, aggressive TREs have demonstrated a high degree of success. While TREs may still be required, Region 6 will implement limits for sub-lethal limits at the 80% effluent level at this time. A TRE for sub-lethal effects is triggered by failure in a scheduled test followed by sub-lethal failures in two or more tests performed during the following period of increased frequency.

IN ADDITION:

1. Where WET testing has demonstrated a significant toxic effect within two years of the RP determination made during permit development, and the facility has not completed significant relevant improvements, a WET limit will be incorporated into the permit because that data would still be valid and representative, and would indicate that reasonable potential continues to exist.

2. Where there are < 10 test results per species at the time of permitting; and RP is found to exist based solely on the paucity of data, the Agency and permittee may agree to include a permit condition to allow up to twelve months to develop the additional test data necessary to perform another RP determination, using all the data, to determine whether a WET limit is necessary or not.

3. State agencies authorized to administer the NPDES permitting program will decide whether to change results reporting from NOECs to Toxic Units (TUs). EPA Region 6 recommends the use of TUs to simplify the reasonable potential calculation.

4. EPA will consider an alternative WET reasonable potential determination procedure should an agency authorized to administer the NPDES permitting program formally submit one for review. EPA anticipates no basis to delay permitting decisions pending such reviews/revisions.

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

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

April 13, 2006

Mr. Miguel I. Flores, Director
Water Quality Protection Division, 6WQ
United States Environmental Protection Agency, Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Re: Revisions to Whole Effluent Toxicity (WET) Components of the Texas Pollutant Discharge Elimination System Program (TPDES)

Dear Mr. ~~Flores~~: Miguel

Thank you for forwarding the U.S. Environmental Protection Agency (EPA) Region 6 WET Permitting Strategy with a letter dated March 9, 2006. In that letter, you requested that the Texas Commission on Environmental Quality (TCEQ) provide a status update, by April 1, 2006, on initiating the EPA Region 6 WET Permitting Strategy. The update is to include identification of milestones that will allow the TCEQ to implement the revisions in TPDES permits by January 2007.

Major components of the EPA Region 6 WET Permitting Strategy are (1) imposition of sublethal testing for all phases of the WET process, and (2) imposition of WET limits based on "reasonable potential," in accordance with EPA's 1991 guidance document entitled *Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001*.

As the TCEQ staff have indicated in earlier discussions, we have concerns about the impacts and feasibility of implementing this policy. The TCEQ expressed similar concerns in the attached comment letter, dated March 30, 2005, on EPA's proposed National Whole Effluent Toxicity Implementation Guidance.

The appropriate venue for TCEQ to evaluate and consider implementing the EPA Region 6 WET Permitting Strategy will be during the upcoming review of the TCEQ *Procedures to Implement the Texas Surface Water Quality Standards, RG-194, January 2003* (IPs). This review will be conducted in conjunction with a major review of the Texas Surface Water Quality Standards rule (Title 30, Chapter 307 of the Texas Administrative Code). The review will include substantial input from an advisory workgroup and opportunities for public written and oral comment. The TCEQ may have additional specific comments on the EPA Region 6 WET Permitting Strategy as we conduct a public review of our current permitting process.

The TCEQ has started the review process by requesting preliminary public comment on the existing IPs in the Texas Register on January 27, 2006, with a comment period that closed on March 1, 2006. The TCEQ has also received comments on the IPs from the EPA Region 6 in a letter dated March 9, 2006. The TCEQ staff are currently evaluating the comments that were received on the IPs. Over the next several months, the TCEQ staff will request to initiate rulemaking to review and revise the Texas Surface Water Quality Standards and IPs. There will be a more defined schedule when rulemaking is formally initiated by the TCEQ, and we expect the review to be well underway by January 2007. However, the overall revision process will still be ongoing during most of 2007.

In the interim, the TCEQ will continue to develop and issue TPDES permits in accordance with the existing IPs until subsequent revisions are approved by the TCEQ and by the EPA. If the EPA requires elements of the EPA Region 6 WET Strategy to be included in TPDES permits prior to revising the IPs, the TCEQ will have several concerns. An example is the EPA's requirement to include a sublethal toxicity reduction evaluation as one of the provisions for issuing a recently drafted TPDES permit.

During the upcoming review of the IPs, TCEQ staff intend to conduct a thorough evaluation of the EPA Region 6 WET Permitting Strategy, the EPA's guidance on WET in the 1991 Technical Support Document, and the EPA Region 6 comment letter on the IPs. Past revisions of the IPs have exercised flexibility in addressing the EPA guidance, in order to establish procedures that are in accordance with other TPDES procedures and rules. We recognize that procedures must meet the requirements of the EPA regulations and the federal Clean Water Act, but we anticipate that EPA will afford similar appropriate flexibility in future revisions of the IPs. As in past revisions of the IPs, TCEQ staff intend to coordinate closely with staff at EPA Region 6 to develop mutually acceptable WET procedures.

I look forward to continuing dialogue on these important water quality issues. I will be glad to further discuss our overall coordination and WET testing approaches with you or you may contact L'Oreal Stepney, of my staff at (512)-239-1321 or if by correspondence, include MC148 in the letterhead address below.

Sincerely,

Dan Eden

Dan Eden, Deputy Director
Office of Permitting, Remediation and Registration
Texas Commission on Environmental Quality

Enclosures

Notice of Draft Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion

[Federal Register: August 9, 2006 (Volume 71, Number 153)]
[Notices]
[Page 45560-45564]
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[DOCID:fr09au06-85]

ENVIRONMENTAL PROTECTION AGENCY
[EPA-HQ-OW-2006-0656, FRL-8207-3]

Notice of Draft Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion

AGENCY: Environmental Protection Agency (EPA).
ACTION: Notice of availability and request for comments.

SUMMARY: EPA announces the availability of draft guidance for implementing the water quality criterion for methylmercury and requests comments on the draft guidance. The draft document provides technical guidance to states, territories, and authorized tribes exercising responsibility under Clean Water Act (CWA) section 303(c) on how to use EPA's fish tissue-based methylmercury criterion recommendation in developing their own water quality standards for methylmercury and in implementing these standards in Total Maximum Daily Loads (TMDLs) and National Pollutant Discharge Elimination System (NPDES) permits. The guidance document does not impose any legally binding requirements on any entity. It provides various technical and policy approaches to implementing the criterion. These approaches are recommendations only. States, territories and authorized tribes may choose to implement other technically-sound approaches that are consistent with the CWA and EPA's implementing regulations.

DATES: Comments must be received on or before October 10, 2006.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-HQ-OW-2006-0656, by one of the following methods:

- http://www.regulations.gov: Follow the on-line instructions for submitting comments.
- E-mail: ow-docket@epa.gov.
- Mail: Water Docket, Environmental Protection Agency, Mailcode: 4101T, 1200 Pennsylvania Ave., NW, Washington, DC 20460.

Please include a total of four copies.

• Hand Delivery: EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC 20460. Please include a total of four copies. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA-HQ-OW-2006-0656. EPA's policy is that all comments received will be included in the public docket without change and may be made available online at http://www.regulations.gov, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through http://www.regulations.gov or ow-docket@epa.gov. The http://www.regulations.gov website is an ``anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through http://www.regulations.gov your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at http://www.epa.gov/epahome/dockets.htm

Docket: All documents in the docket are listed in the http://www.regulations.gov index. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically

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http://www.regulations.gov or in hard copy at the Water Docket, EPA/DC, EPA West, Room B102, 1301 Constitution Ave., NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426).

Note: The EPA Docket Center suffered damage due to flooding during the last week of June 2006. The Docket Center is continuing to operate. However, during the cleanup, there will be temporary changes to Docket Center telephone numbers, addresses, and hours of operation for people who wish to make hand deliveries or visit the Public Reading Room to view documents. Consult EPA's Federal Register notice at 71 FR 38147 (July 5, 2006) or the EPA Web site at http://www.epa.gov/epahome/dockets.htm for current information on docket operations, locations and telephone numbers. The Docket Center's mailing address for U.S. mail and the procedure for submitting comments to http://www.regulations.gov are not affected by the flooding and will remain the same.

FOR FURTHER INFORMATION CONTACT: Jim Pendergast, Standards and Health Protection Division, Office of Water, (4305T), Environmental Protection

Agency, 1200 Pennsylvania Ave., NW, Washington, DC, 20460; telephone number: 202-566-0398; fax number: 202-566-0409; e-mail address: Pendergast.jim@epa.gov.

SUPPLEMENTARY INFORMATION:

I. General Information

A. Does this Action Apply to Me?

Entities potentially interested in today's notice are those that discharge or release mercury and methylmercury to surface waters, and federal, state, tribal, and local authorities that regulate methylmercury levels in surface water. Categories and entities interested in today's notice include but are not limited to:

Category	Examples of potentially affected entities
State/Local/Tribal Government.....	States, municipalities, tribes.
Industry.....	Mining, coal-fired power generation, other industries using mercury in their processing

This table is not intended to be exhaustive. Other types of entities not listed in the table may also be interested.

B. What Should I Consider as I Prepare My Comments for EPA?

1. Submitting CBI. Do not submit this information to EPA through http://www.regulations.gov or e-mail. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disk or CD ROM that you mail to EPA, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is claimed as CBI). In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

2. Tips for Preparing Your Comments. When submitting comments, remember to:

- Identify the docket number and other identifying information (subject heading, Federal Register date and page number).
- Follow directions--The agency may ask you to respond to specific questions or organize comments by referencing a Code of Federal Regulations (CFR) part or section number.
- Explain why you agree or disagree; suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.

• Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

• Make sure to submit your comments by the comment period deadline identified.

II. Background and Today's Action

A. What Is Methylmercury and Why Are We Concerned About It?

Mercury occurs naturally in the earth's crust and cycles in the environment as part of both natural and human-induced activities. The amount of mercury mobilized and released into the biosphere has increased since the beginning of the industrial age. Most of the mercury in the atmosphere is elemental mercury vapor, which circulates in the atmosphere for up to a year, and, hence, can be widely dispersed and transported thousands of miles from sources of emission. Most of the mercury in water, soil, sediments, plants, and animals is in the form of inorganic mercury salts and organic forms of mercury (e.g., methylmercury). Methylmercury most often results from microbial activity in wetlands, the water column, and sediments and is the form of mercury that presents the greatest risk to human health. Divalent mercury, when bound to airborne particles, is readily removed from the atmosphere by precipitation and is also dry deposited. Even after it deposits, mercury commonly returns to the atmosphere either as a gas or associated with particles, and redeposits elsewhere. As mercury cycles between the atmosphere, land, and water, mercury undergoes a series of complex chemical and physical transformations, many of which are not completely understood.

Exposure to methylmercury can result in a variety of health effects in humans. Children who are exposed to low concentrations of methylmercury prenatally might be at risk of poor performance on neurobehavioral tests, such as those measuring attention, fine motor function, language skills, visual-spatial abilities, and verbal memory. (NRC 2000, USEPA 2002, USEPA 2005). The primary route by which the U.S. population is exposed to methylmercury is through the consumption of fish containing methylmercury. For most people, methylmercury exposure from consumption of fish and shellfish is not a health concern. Yet, the exposure levels at which neurological effects have been observed in children can occur via maternal consumption of fish (rather than high-dose poisoning episodes) (USEPA 2005). The risks from methylmercury in fish and shellfish depend on the amount of fish and shellfish eaten and the levels of methylmercury in the fish and shellfish. Therefore, the Food and Drug Administration (FDA) and the Environmental Protection Agency (EPA) are advising women who may become pregnant, pregnant women, nursing mothers, and young children to avoid some types of fish and eat fish and shellfish that are lower in methylmercury. You can find more information about this joint Federal advisory on EPA's Web site at http://www.epa.gov/waterscience/fish.

In 2000, the National Academy of Sciences (NAS)/National Research Council (NRC) reviewed the health studies on methylmercury (NRC 2000). In its review of the literature, NRC found neurodevelopmental effects to be the most sensitive endpoints and appropriate for establishing a

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methylmercury Reference Dose (RfD) (NRC 2000). EPA defines an RfD as ``an estimate (with uncertainty spanning perhaps an order of magnitude) of a daily oral exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. On the basis of the NRC report,

EPA established an RfD of 0.0001 mg/kg per day (0.0001 milligram of methylmercury per day for each kilogram of a person's body mass) in 2001 (USEPA 2002). EPA believes that exposures at or below the RfD are unlikely to be associated with appreciable risk of deleterious effects. It is important to note, however, that the RfD does not define an exposure level corresponding to zero risk; methylmercury exposure near or below the RfD could pose a very low level of risk that EPA deems to be non-appreciable. It is also important to note that the RfD does not define a bright line, above which individuals are at risk of adverse effects (USEPA 2005). NAS determined that EPA's RfD ``is a scientifically justified level for the protection of public health.''

With regard to other health effects of methylmercury, some recent epidemiological studies in men suggest that methylmercury is associated with a higher risk of acute myocardial infarction, coronary heart disease, and cardiovascular disease in some populations. Other recent studies have not observed this association. The studies that have observed an association suggest that the exposure to methylmercury might attenuate the beneficial effects of fish consumption (USEPA 2005). There also is some recent evidence that exposures of methylmercury might result in genotoxic or immunotoxic effects. Other research with less corroboration suggests that reproductive, renal, and hematological impacts could be of concern. There are insufficient human data to evaluate whether these effects are consistent with methylmercury exposure levels in the U.S. population (USEPA 2005).

B. What Is the Current Methylmercury Criterion?

In a January 8, 2001, Federal Register notice (66 FR 1344), EPA announced the availability of its recommended water quality criterion for methylmercury. The methylmercury water quality criterion is derived from the methylmercury RfD (described above) and data about the target population to be protected (i.e., exposure parameters and assumptions). The equation for calculating the methylmercury fish tissue residue water quality criterion for the protection of human health is:
[GRAPHIC]
[TIFF OMITTED]
TN09AU06.006

Where:

TRC = Fish tissue residue criterion (mg methylmercury/kg fish tissue) for freshwater and estuarine fish and shellfish
RfD = Reference Dose (based on non-cancer human health effects). For methylmercury the RfD is 0.0001 mg/kg BW-day (0.1 ug/kg BW-day)
RSC = Relative source contribution (subtracted from the RfD to account for marine fish consumption) estimated to be 2.7 x 10-5 mg/kg BW-day
BW = Human body weight default value of 70kg (for adults)
FI = Fish intake at trophic level (TL) i (i = 2, 3, 4); total default intake is 0.0175 kg fish/day for general adult population. Trophic level breakouts for the general population are: TL2 = 0.0038 kg fish/day; TL3 = 0.0080 kg fish/day; and TL4 = 0.0057 kg fish/day.

This equation and all values used in the equation are described in Water Quality Criterion for the Protection of Human Health, Methylmercury (USEPA 2001b). This equation is essentially the same equation used in the 2000 Human Health Methodology to calculate a water quality criterion for a pollutant that may cause non-cancer health effects, but is rearranged to solve for a protective concentration in fish tissue rather than in water. Thus, the equation does not include a

bioaccumulation factor (BAF) or drinking water intake value (methylmercury exposure from drinking water is negligible (USEPA 2001a)). Incorporating the relevant values into the above equation, EPA obtained a fish tissue concentration (TRC) of 0.3 mg methylmercury/kg fish as the concentration in fish tissue that should not be exceeded. EPA's preference is for states and authorized tribes to use local or regional consumption rates, if these would better reflect the target populations.

C. What Is The Draft Implementation Guidance?

In the 2001 Federal Register notice of the availability of EPA's recommended water quality criterion for methylmercury, EPA stated that it would develop associated procedures and guidance for implementing the criterion. We are issuing that draft guidance today. The guidance will assist states in developing a water quality criterion for methylmercury in their water quality standards. States can either adopt EPA's recommended criterion or another criterion that is scientifically defensible and consistent with the Act and its implementing regulations. 40 CFR 131.11(a)(2).

This guidance document presents suggested approaches to criteria adoption and implementation. These approaches are recommendations and do not represent the only technically defensible approaches. The discussion in the guidance document is intended solely as guidance. This guidance does not change or, substitute for, applicable sections of the CWA or EPA's regulations; nor is it a regulation itself. Thus, it does not impose legally binding requirements on EPA, states, authorized tribes, or the regulated community and may not apply to a particular situation. EPA, state, territorial, and tribal decision makers retain the discretion to adopt approaches on a case-by-case basis that differ from this guidance where appropriate.

D. Why Did EPA Draft This Guidance?

The methylmercury criterion is expressed as a fish and shellfish tissue value, and this raises both technical and programmatic implementation questions. EPA expects that, as a result of the revised methylmercury water quality criterion, together with a more sensitive method for detecting mercury in effluent and the water column, and increased monitoring of previously unmonitored waterbodies, the number of waterbodies that states report on CWA section 303(d) lists as impaired due to methylmercury contamination might continue to increase. Development of water quality standards, NPDES permits, and TMDLs present challenges because these activities typically have been based on a water concentration (e.g., as a measure of mercury levels in effluent). This guidance addresses issues associated with states and authorized tribes adopting the new water quality criterion into their water quality standards programs and implementation of the revised water quality criterion in TMDLs and NPDES permits. Further, because atmospheric deposition serves as a large source of mercury for many waterbodies, implementation of the criterion involves coordination across various media and program areas.

E. What Does the Draft Guidance Recommend?

For states and authorized tribes exercising responsibility under CWA section 303(c), this document provides technical guidance on how they might want to use the recommended 2001 fish tissue-based criterion to develop their own water quality standards for

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methylmercury. States and authorized tribes may decide to adopt the EPA recommended methylmercury fish tissue-based criterion based on the national default fish consumption rate or translate the tissue value to a water column value through use of methylmercury BAFs. If a state or authorized tribe decides to translate the fish tissue criterion to a water column criterion, EPA recommends three approaches for relating a concentration of methylmercury in fish tissue to a concentration of methylmercury in ambient water: (1) Deriving site-specific methylmercury BAFs; (2) using bioaccumulation models; and (3) using EPA's draft default methylmercury BAFs. All three approaches have limitations, such as the amount of data necessary to develop a BAF. This guidance discusses the advantages and limitations of each approach.

States and authorized tribes may also consider calculating their own fish tissue criteria or adopting site-specific criteria for methylmercury to reflect local or regional fish consumption rates or relative source contributions. This guidance also discusses variances and use attainability analyses relating to methylmercury.

This document describes analytical methods for determining the concentrations of mercury and methylmercury in both tissue and water. These methods can detect mercury and methylmercury in tissue and water at very low levels--well below the levels of the previous criterion for mercury in the water column and the current criterion of methylmercury in fish tissue. This document also provides guidance for field sampling plans, laboratory analysis protocols, and data interpretation that is based on previously published EPA guidance on sampling strategies for contaminant monitoring. This guidance also describes how states can assess the attainment of water quality criteria and protection of designated uses by comparing sampling data to water quality criteria.

This guidance also discusses approaches for the development of TMDLs for waterbodies impaired by mercury. This includes approaches for TMDLs for waterbodies where much of the mercury is from atmospheric sources and suggestions regarding how such TMDLs can take into account ongoing efforts to address sources of mercury, such as programs under the Clean Air Act (CAA) and pollution prevention activities.

EPA's Technical Support Document for Water Quality-based Toxics Control (TSD), EPA 505/2-90-001, explains how to implement criteria expressed in terms of pollutant concentrations in water in NPDES permits. States that decide to implement the methylmercury tissue criterion as a water concentration for NPDES permits should continue to use the TSD guidance. However, for states that decide to implement the methylmercury tissue criterion directly, that is, without translating it into a water column value, the TSD doesn't provide relevant guidance. Today's draft guidance also includes a recommended approach for directly incorporating the methylmercury tissue criterion in NPDES permits.

F. Are There Particular Issues on Which EPA is Requesting Comment?

EPA requests comments only on the draft methylmercury criterion implementation guidance. EPA is not requesting comments on the 2001 methylmercury criterion itself. Although EPA solicits comment on the entire draft guidance, it is particularly interested in the following topics:

1. Implementation Approach for NPDES Permits Where the Criterion Is Implemented as a Fish Tissue Value

Today's guidance presents a recommended approach for directly incorporating the methylmercury tissue criterion in NPDES permits. This approach does not rely upon a state developing a bioaccumulation factor

to convert the methylmercury tissue criterion into a water concentration equivalent. The approach recommends that facilities that use, accept or receive mercury into their wastewaters develop mercury minimization plans. For discharges that are small contributors of mercury to a watershed or do not use mercury in their processes, the approach recommends that current permit effluent levels remain constant. EPA expects that most facilities will fall into this category due to significant loadings from other sources (e.g., air deposition, abandoned mines). For discharges that are significant contributors of mercury to a watershed and use mercury in their processes, the approach recommends that permit effluent limits ensure the attainment of water quality standards. EPA expects that few dischargers should fall into this category. For new or increased discharges, the approach recommends that permit effluent limits hold watershed loadings constant using antidegradation principles.

EPA solicits comment on the recommendations for directly incorporating the methylmercury tissue criterion in NPDES permits. The draft guidance recommends that a permitting authority could reasonably conclude that reasonable potential exists if two conditions are present (1) The NPDES permitted discharger has mercury in its effluent at a quantifiable level and (2) fish tissue from the waterbody into which the discharger discharges exceeds the fish tissue water quality criterion. EPA specifically solicits comment on alternate methods, based on using other information, for determining that there is reasonable potential to exceed the water quality standard where fish tissue data show that the methylmercury tissue criterion in a water quality standard is achieved.

2. Applying Water Quality Variances on a Watershed or State-Wide Basis

Traditionally, states establish water quality variances that are specific to a pollutant and a facility. EPA recognizes that, for mercury, there are situations where a number of NPDES dischargers are located in the same area or watershed and the justification supporting granting a variance applies to all of the dischargers. Two states, Ohio and Michigan, have already developed variances that apply to multiple discharges for mercury. Today's guidance encourages states and authorized tribes to consider establishing a multiple-discharger variance for a group of dischargers collectively.

EPA solicits comment on whether it should discuss multi-discharge, watershed, or state-wide variances in the final guidance.

G. References Cited

NRC (National Research Council). 2000. Toxicological effects of methylmercury. Committee on the Toxicological Effects of Methylmercury. National Academy Press. Washington, DC.

USEPA (U.S. Environmental Protection Agency). 1991. Technical Support Document for Water Quality-based Toxics Control. EPA 505/2-90-001. U.S. Environmental Protection Agency, Office of Water Enforcement and Permits and Office of Water Regulations and Standards.

USEPA (U.S. Environmental Protection Agency). 2001a. Water quality criteria: Notice of Availability of water quality criterion for the protection of human health: Methylmercury. U.S. Environmental Protection Agency, Office of Water, Washington, DC. Fed. Regist., 66:1344.

USEPA (U.S. Environmental Protection Agency). 2001b. Water quality criterion for the protection of human health: Methylmercury. EPA-823-R-01-001. U.S. Environmental Protection Agency, Office of Water, Washington, DC.

USEPA (U.S. Environmental Protection Agency). 2002. Integrated Risk Information System (IRIS). Methylmercury. U.S. Environmental Protection Agency, Office

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of Research and Development, National Center for Environmental Assessment. USEPA (U.S. Environmental Protection Agency). 2005. Regulatory Impact Analysis of the Clean Air Mercury Rule. Final Report. EPA-452/R-05-003. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Air Quality Strategies and Standards Division, Research Triangle Park, NC.

Dated: August 3, 2006.
Benjamin H. Grumbles,
Assistant Administrator for Water.
[FR Doc. 06-6803 Filed 8-8-06; 8:45 am]
BILLING CODE 6560-50-P

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Last updated on Monday, August 14th, 2006
URL: http://www.epa.gov/fedrgstr/EPA-WATER/2006/August/Day-09/w6803.htm

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:

In preparation for the next triennial revision to the *Texas Surface Water Quality Standards*, we have reviewed the 2000 water quality standards. Enclosed are our recommendations for the upcoming revisions. Our suggestions include input from the Environmental Protection Agency (EPA) staff in the following programs: wastewater permitting, source water protection, monitoring and assessment, total maximum daily load, beaches and wetlands protection. Additionally, EPA's recommendations reflect input provided in recent years by the U.S. Fish and Wildlife Service. We are providing a copy of these comments to the U.S. Fish and Wildlife Service which may provide additional recommendations for the triennial revision.

Please note that the positions described in our enclosed comments are preliminary in nature and do not constitute a disapproval or determination by EPA under Clean Water Act §303(c). Approval/disapproval decisions will be made by the Region following adoption of new/revised standards by the state and submittal to EPA. Any determination pursuant to Clean Water Act §304(c)(4)(B) may only be made by the Administrator.

EPA will provide recommendations for revisions on the document titled *Procedures to Implement the Texas Surface Water Quality Standards* by separate letter. We look forward to continuing work with you and your staff on the protection of water resources. If you have any questions, please contact me at (214) 665-7135 or have your staff contact Diane Evans (214) 665-6677.

Sincerely,

Jane B. Watson
Chief
Ecosystems Protection Branch (6WQ-E)

Enclosures

cc: Mark Fisher, TCEQ - Water Quality Assessment Section (MC-150)
Allen White, U.S. Fish and Wildlife Service

EPA recommendations for 2006 revision of *Texas Surface Water Quality Standards*

Section 307.3. Definitions and Abbreviations

1. §307.3(a)(13). Critical low flow. EPA recommends the state use 7Q10 as the flow criteria for aquatic life protection and the 30Q5 flow for implementation of human health criteria for non-carcinogens.

2. §307.3(a)(42). Public water supply use. We suggest the adding the following language to this definition or to the public water supply use in §307.7(b)(2)(A)(i) to support the core principles of TCEQ's and EPA's source water protection programs: "Under this designation, conventional drinking water treatment for naturally occurring pollutants may be required prior to use. Protection efforts focused on man-made sources of pollution will be adequate to ensure that the quality of source water will not be degraded such that additional treatment beyond that which is needed to address naturally-occurring pollutant concentrations will be required prior to use." Also, the language inserted in §307.7(b)(2)(A)(i) of the 2000 standards ("exhibit characteristics that would allow them to be used as the supply source") could be inserted in this definition.

3. §307.3(a)(65). Toxicity. Effects of dissolved salts in source waters on aquatic life are excluded from the definition. EPA recommends that an additional definition for "osmotic imbalance" be included to address excessive levels of specific ions or changes in the natural ratios of ionic components. Such imbalance and excessive concentrations, resulting in stress (which may cause lethal and/or sub-lethal effects to aquatic organisms) is a particular concern in the case of brine discharges.

4. §307.3(a)(69). Wetland. EPA recommends modifying the fourth sentence as follows: "The term 'wetland' does not include irrigated acreage used as a farmland, unless wetland characteristics remain under normal conditions after irrigation operations cease; a man-made wetland...."

5. §307.3(a)(70). Wetland water quality functions. We recommend modifying this definition to read "...habitat for aquatic life and wildlife."

6. Definitions for terms such as "bioaccumulation factor" (BAF) and "relative source contribution," and the acronyms, may be appropriate depending on how the human health criteria in §307.6 are revised.

7. EPA recommends that a definition of "source water" be added to the TX WQS to complement the definition of Public water supply use. The following is an example definition: "water resources that are currently or may be used as a source of drinking water."

8. EPA recommends that a definition and acronym for "Ground water under the direct influence of surface water (GWUDI)" be added to the TX WQS. Public water supply wells that are determined to be GWUDI are often sited in close proximity to surface water bodies, which are protected through water quality standards. Since these wells are often hydrologically-connected to

the surface water body, the quality of the surface water will have a direct influence on the quality of water produced by the well. For the purpose of protecting public health, such wells are treated the same as surface water sources under the Safe Drinking Water Act as amended in 1996. If these wells are used as a source of public drinking water supply, the surface water body should receive the same level of protection as provided in segments with a surface water intake. The following is provided as an example definition: "a phrase used to describe any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions."

§307.4. General Criteria

9. §307.4(b)(5). EPA recommends the development of numeric standards, or detailed implementation provisions, to limit changes in turbidity or color.

10. §307.4(e). Nutrients. EPA supports the adoption of numeric nutrient criteria for reservoirs and is currently reviewing draft criteria for 30 "least impacted" resevoirs.

11. §307.4(f) Temperature. EPA recommends the development of numeric standards to ensure that a balanced aquatic community can exist, outside of the mixing zones, in power plant cooling reservoirs.

§307.6. Toxic Materials

12. §307.6(c)(2). Criteria for several substances in Table 1 were recalculated for the 1988 WQS revision by removing data for species not expected to be found in Texas waters (while continuing to meeting the minimum requirements for criteria development found in EPA procedures). In EPA's 1994 water effects ratio guidance (*Interim Guidance on Determination and Use of Water-Effects Ratio for Metals*), expanded procedures for recalculating aquatic life criteria are included in Appendix B. The newer recalculation process should be used for any proposed aquatic life criteria which are recalculated.

13. §307.6(c)(4). Chemical specific criteria would be more appropriate for addressing ammonia and chlorine toxicity. Most facilities are required to monitor more frequently for chemical pollutants than whole effluent toxicity (WET), and WET is not monitored for most minor discharges. Also, direct measurement is more representative of potential impacts. Both of these chemicals degrade and break down in preparation for and during toxicity tests, thus direct measurements are a better indicator of potential risks to aquatic life. The language in the Implementation Procedures under "Federally Endangered and Threatened Species" can provide additional protection in water bodies with listed species, but will not include other stream segments which may be impacted by minor dischargers.

Table 1 - Aquatic life Criteria

14. EPA has issued revised aquatic life criteria under CWA §304(a) as shown in the table below and recommends the proposal of updated values in the TX WQS.

	freshwater criteria (ug/l)		saltwater criteria (ug/l)		source
parameter	acute	chronic	acute	chronic	
arsenic (d)	340	150			1
cadmium (d)	$e^{(1.0166[\ln(hardness)]-3.924)}$	$e^{(0.7409[\ln(hardness)]-4.719)}$	40	8.8	2
chromium (d) (trivalent)	$e^{(0.819[\ln(hardness)]+3.7256)}$	$e^{(0.819[\ln(hardness)]+0.6848)}$			1
copper	$e^{(0.9422[\ln(hardness)]-1.700)}$	$e^{(0.8545[\ln(hardness)]-1.702)}$	4.8	3.1	1,3
dieldrin	0.24	0.056			1
endrin	0.086	0.036			1
hexachloro-cyclohexane (Lindane)	0.9515				1
mercury (II) (d)	1.4 *	0.77 *	1.8 *	0.94 *	1
nickel (d)	$e^{(0.846[\ln(hardness)]+2.255)}$	$e^{(0.846[\ln(hardness)]+0.0584)}$			1
tributlytin	0.46	0.072	0.42	0.0074	4
zinc (d)	$e^{(0.8473[\ln(hardness)]+0.884)}$	$e^{(0.8473[\ln(hardness)]+0.884)}$			1

(d) dissolved

* The freshwater mercury criteria do not account for bioaccumulation. Also, the saltwater criteria do not consider the final residue value which was used in EPA's 1985 criteria document. See footnotes ee and hh in EPA's criteria table at http://www.epa.gov/waterscience/criteria/wqcriteria.html

1. U.S. EPA. 1996. *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water*. Office of Water. EPA-820-B-96-001. Washington, D.C. 112 pp.. (not available on-line)

2. U.S. EPA. 2001. *2001 Update of Ambient Water Quality Criteria for Cadmium*. Office of Water. EPA-822-R-01-001. Washington, D.C. 166 pages. http://www.epa.gov/waterscience/criteria/aqualife/cadmium/index.html

3. This recommended water quality criterion was derived in Ambient Water Quality Criteria Saltwater Copper Addendum (Draft, April 14, 1995) and was promulgated in the Interim final National Toxics Rule (60FR22228-222237, May 4, 1995).

4. U.S. EPA. 2004. *Ambient Aquatic Life Water Quality Criteria for Tributyltin (TBT) - Final.* Office of Water. (EPA-822-R-03-031). Washington, D.C. 138 pp. http://www.epa.gov/waterscience/criteria/tributyltin/

15. EPA has published draft aquatic life criteria documents for atrazine, diazinon, copper and nonylphenol. If any final criteria documents for these substances are published in sufficient time to allow consideration by TCEQ and the stakeholders workgroup(s), we recommend adoption of these criteria.

Table 3 - Human health criteria

16. The arsenic criterion for water and fish consumption is based on the Safe Drinking Water Act (SDWA) regulation of 50 ug/l. EPA recommends that TCEQ propose the updated value of 10 ug/l for arsenic, which was promulgated under the Safe Drinking Water Act in 2001 and has an effective date in January 2006.

17. EPA recommends adjusting the dioxin criteria toxic equivalency factors (TEFs) for 1,2,3,7,8-PeCDD from 0.5 to 1.0. Also, the list of congeners should include OCDD and OCDF. The TEF for these compounds changed from 0.001 to 0.0001. We also support the use of TEFs for polychlorinated biphenyls (PCBs) for human health criteria. Sources of information on TEFs for dioxin and PCBs include:

http://www.epa.gov/toxteam/pcbid/tefs.htm
EPA guidance and information on TEFs for PCBs (website also includes link to chapter 9 of a draft EPA reassessment of dioxin (May 2000))

http://www.sph.umich.edu/dioxin/who_tef_values.pdf
University of Michigan listing of TEFs published by World Health Organization (WHO)

http://www.who.int/ipcs/publications/en/exe-sum-final.pdf
WHO 1998 - executive summary of *Assessment of the health risk of dioxins: re-evaluation of the Tolerable Daily Intake (TDI)* - see Table 3

http://www.epa.gov/waterscience/humanhealth/method/
Technical Support Document vol.1: Risk Assessment for EPA's Human Health Methodology (2000) - see chapter 2.3.6.

http://www.epa.gov/science1/pdf/ec01006.pdf
EPA Science Advisory Board 2001 review of the EPA Office of Research and Development reassessment of dioxin (first link above)

18. In 2001, EPA published a fish tissue-based methylmercury criterion of 0.3 mg/kg for protection of human health. We recommend the adoption of this criterion in Table 3 for consumption of freshwater and saltwater fish. The criteria document is available at: http://www.epa.gov/waterscience/criteria/methylmercury/index.html

19. Since the information in footnote ‡ only applies to mercury, either this symbol should be removed for the chlordane criteria or the bioconcentration factor (BCF) and FDA action limit for chlordane should be included.

20. EPA recommends that TCEQ consider the adoption of human health criteria for the following substances:

antimony	dimethyl phthalate
anthracene	ethylbenzene
bis(2-chloroethyl) ether	hexachlorocyclopentadiene
di-n-butyl phthalate	manganese
o-dichlorobenzene	nickel
m-dichlorobenzene	phenol
3,3'-dichlorobenzidine	1,1,2,2-tetrachloroethane
dichloromethane	1,1,2-trichloroethane
1,2-dichloropropane	thallium
di(2-ethylhexyl)phthalate	toluene
2,4-dimethylphenol	zinc

These substances were reported in the 2003 Toxic Release Inventory as discharged to surface waters in Texas. The total amount discharged in the state is included in the attached spreadsheet (enclosure 2), along with information from EPA's Integrated Risk Information System (IRIS) database. EPA has published criteria under CWA §304(a) for these substances. For nickel, manganese and zinc, EPA's criteria recommendations are based on organoleptic effects rather than the reference doses found in IRIS. The spreadsheet also identifies discharged substances for which a cancer potency factor (q1*) or reference dose (RfD) is included in IRIS, but EPA has not published recommended criteria. The level of confidence in the q1* or RfD value for each substance is provided in the spreadsheet.

<u>§307.6(d)(3)(A)-(H)</u>

21. In November 2000, EPA published updated procedures for calculating human health criteria in *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000).* Some components of the revised human heath methodology, such as the use of the 3/4 power body weight scaling factor, have been included in the 2000 TX WQS. EPA recommends incorporation of the other features where data are available. These include: revised procedures for calculating cancer potency factors and reference doses; expanded calculation of derivation for lipid values; accounting for other sources of exposure (e.g., food or air); and, use of BAFs in place of BCFs.

EPA's updated human health methodology uses a default freshwater fish consumption rate of 17.5 g/day for recreational fishers. This value is based on a U.S. Department of Agriculture study conducted in 1994-1996 and includes consumption of both freshwater and saltwater species. A

technical support document[1] for the 2000 human methodology includes data compiled by geographic region (see Appendix A, table A-19 for "west south central region"). A website maintained by the U.S. Department of Agriculture - Agricultural Research Service includes more recent studies on food consumption and several options for obtaining data (please see http://www.ars.usda.gov/main/site_main.htm?modecode=12-35-50-00. EPA recommends that TCEQ consider the national default value or results from other available studies for the calculation of updated human health criteria.

22. EPA's IRIS database is still the source for updated cancer potency factors and reference doses. For the water quality standards program, this information was compiled in 2002 as part of list of factors used to calculate EPA's §304(a) recommendations (see link for "Human Health Criteria Calculation Matrix" at http://www.epa.gov/waterscience/standards/wqcriteria.html). In 2003, EPA published updated values for 15 substances, but the matrix document from 2002 was not revised. The factors used to calculate the 2003 criteria are found in the Federal register notice published on December 31, 2003 (see table on page 4 - adobe format works best).

23. In the review of the 2000 TX WQS, an error was discovered in the calculation of the BCF for some substances. In the TCEQ calculations, BCFs were corrected to a lipid concentration of 3%. However, the BCFs obtained from EPA's criteria documents for several substances were already corrected to a lipid concentration of 3%. These include the following compounds: acrylonitrile, aldrin, benzo(a)anthracene, benzo(a)pyrene, chromium, chrysene, endrin, heptachlor epoxide, hexachlorobenzene, hexachlorocyclohexane (alpha), hexachlorocyclohexane (beta), hexachlorocyclohexane (gamma), hexachloroethane, pentachlorobenzene, pentachlorophenol, and toxaphene. Where BAFs are not available and BCFs are retained, this error must be corrected in the triennial revision.

24. §307.6(e). Total toxicity. EPA recommends adding language to the last sentence stating that chronic toxicity will also be precluded in water with seasonal aquatic life uses.

§307.7. Site-specific Uses and Criteria

25. §307.7(b)(1). The contact and noncontact recreation uses for freshwater and saltwater includes the term "should not exceed." Based on recent litigation, use of this phrase or similar language such as "absolute maxima" or "absolute minima" may not be appropriate where a state assesses data differently that what is expressed in the standards. When a state has "shall not exceed" language in its standards, but uses a binomial probability approach in the actual assessment of data, which allows for a predetermined number of exceedances of criteria before an impairment is identified, a possible inconsistency exists. EPA encourages TCEQ to examine how it uses implementation language when describing numeric criteria in its standards, and assure that assessment criteria used in other documents is consistent with that language.

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[1]U.S. EPA. 1998. *Ambient Water Quality Criteria Derivation Methodology Human Health Technical Support Document Final Draft*. EPA/822/B-98/005. July 1998. Office of Science and Technology. Washington, D.C. 383 pp

26. §307.7(b)(1)(A)(i). The single sample criterion of 394 colonies/100 ml for the *E. coli* was calculated using a standard deviation based on state-specific data, as recommended in EPA's criteria document. In 2000, data for *E. coli* was limited to 126 stations in seven river basins. The average of the log standard deviations from the 126 stations was 0.53. These stations include sites in two tidal segments and 31 segments/reaches listed for impairment of the contact recreation use on the state's 2002 §303(d) list (prepared after the adoption of the 2000 TX WQS). EPA recalculated the average log standard deviation without the stations in tidal or listed segments and the same value of 0.53 was obtained. The stations were also evaluated using the 2000 §303(d) list and a similar result was obtained (average log standard deviation of 0.54 which produces a single sample criterion of 405 per 100 ml). Since TCEQ and other state and local agencies have collected additional data for *E. coli* at freshwater stations in recent years, EPA recommends recalculation the log standard deviation. Also, options such as using data from least-disturbed reference conditions should be considered.

27. §307.7(b)(1)(B)(i). The enteroccoci criterion of 89 per 100 ml in the 2000 TX WQS is based on EPA's Quality Criteria for Water - 1986, EPA 440/5-86-001 (the "Gold Book"); however, the recommended value for freshwater was inadvertently adopted in the TX WQS. Additionally, the Gold Book contains errors on the single sample enterococci maximum for moderate use areas (82% confidence level) for both freshwater and marine water. The correct criterion in marine waters for the moderate use level is 158 per 100/ml. EPA recommends that the state correct the single sample maximum enterococci criterion for saltwater in the triennial revision.

The State has flexibility on assigning intensity of use categories to coastal recreation waters. The 2000 TX WQS applies the moderate level of use to all waters. However, the Texas General Land office has designated numerous swimming beaches in the State and it would be appropriate to assign a single sample maximum consistent with a 75% confidence level for most of these designated beach areas. Chapter IV (B)(4) of the preamble to the federal regulation for *Water Quality Standards for Coastal and Great Lakes Recreation Waters* includes more discussion on this issue (see http://www.epa.gov/fedrgstr/EPA-WATER/2004/November/Day-16/w25303.htm).

If sufficient information has been collected from saltwater segments to calculate a standard deviation, an alternate value for the single sample maximum may be appropriate. EPA's regulation cited above includes the following information on calculation of site-specific standard deviations in the jurisdictions covered by the rule (see 40 CFR §131.41(c)(3)):

> "To compute the site-specific log standard deviation in a statistically meaningful way as explained in the preamble to the proposed rule (69 FR 41727), today's rule requires that the States and Territories collect at least 30 samples in a single recreation season."

This would have to be done on an individual water-by-water basis; however, there is some flexibility in combining information from several sampling stations.

28. §307.7(b)(1)(C). This provision allows the use of fecal coliform bacteria in developing effluent limits for wastewater discharges, which is currently acceptable. EPA has recently proposed methods for the analysis of *E. coli* and enterococci bacteria in wastewater. If these methods are finalized in time for consideration for this revision, modifications to this language or the standards implementation procedures may be appropriate.

29. §307.7(b)(3)(B)(iii). EPA recommends the addition of language to allow the use of risk-based tissue concentrations for shellfish when these values are lower than the action levels established by U.S. Food and Drug Administration.

30. §307.7(b)(5). We recommend that Appendix A of the standards identify which segments are designated for the seagrass propagation use. The current and historical distributions of seagrasses in Texas are fairly well known, so this would be a feasible task. We also encourage TCEQ to consider applying the seagrass propagation use not only to locations where seagrasses currently exist, but also where they existed historically, and where their restoration is thought to be achievable.

We also recommend developing narrative or numeric criteria to protect the seagrass propagation use. There is a good basic understanding of the light requirements of seagrasses and actual criteria for light could be established in the near future. We believe sufficient information of the relative importance of suspended solids, chlorophyll a, and other light absorbing and light scattering substances, in controlling the light regime in seagrass beds is available. In addition, criteria are needed to protect seagrasses from excessive epiphytic algal growth, and from the effects of excessive macro-algal growth in general in seagrass beds. This may require nutrient criteria. Investigation over the next few years to set appropriate criteria to protect seagrasses from nutrient stressors is recommended. In recent years, data has been collected by the University of Texas Marine Science Institute as part of a Regional Environmental Assessment Program funded by EPA. Also, the coastal seagrass monitoring program coordinated by the Texas Parks and Wildlife Department may yield valuable data.

It would also be useful to specify the wetlands water quality function use for existing segments with substantial wetlands components and stand-alone wetlands which would benefit from additional WQS protection.

§307.8 Application of Standards

31. §307.8(b) Mixing zones. EPA recommends including a size limitation(s) for mixing zones in the standards and the development of procedures to prevent the overlap of mixing zones in segments with multiple dischargers (as referenced in §307.8(b)(7)).

32. §307.8(b)(4). This provision states that "water quality standards do not apply to treated effluents at the immediate point of discharge." However, in the case of low dilution receiving waters, this may be necessary.

33. §307.8(b)(8). An additional level of protection for sources of drinking water if the following sentence were to be added: "A mixing zone shall not include any public water supply well that has been determined by the State to be under the direct influence of surface water and connected to the mixing zone." Staff in TCEQ's Water Supply Division have investigated all public water supply wells that are suspected to be hydrologically-connected to surface water and maintain an inventory of those wells. The TCEQ Public Drinking Water Section has locational data for these wells for implementation of this language if adopted.

§307.9. Determination of Standards Attainment

34. §307.9(c)(3)(A) Non-tidal flowing streams. Although the dissolved oxygen criteria are applicable to the mixed surface layer, most streams in Texas are completely mixed. EPA recommends clarifying this provision to state that the dissolved oxygen criteria apply to the entire water column unless there is stratification, at which point the criteria apply to the mixed surface layer. Also, it would be beneficial to include language to indicate that vertical profiles for dissolved oxygen will be measured through the entire water column in deeper streams, similar to that found in the 1997 TX WQS. This information is useful in data analysis and for evaluation of water bodies which are potentially stratified as a result of anthropogenic sources.

35. §307.9(c)(3)(C). Tidal waters. The 1997 TX WQS included separate provisions for bays and tidal streams, which EPA believes is appropriate to describe standards attainment procedures in these two different types of ecosystems. As suggested for non-tidal streams, EPA recommends adding language to state that the dissolved oxygen criteria apply to the entire water column in the absence of stratification and that vertical profiles of the entire water column will be measured in tidal streams and bays. The term "composite" may need clarification or revision to be consistent with the TCEQ's guidance for collecting and assessing data since the state's monitoring procedures include both instantaneous sampling and 24-hour sampling for dissolved oxygen. Also, "composite" sampling usually refers collection of water for chemical analyses rather than measurements for field parameters.

Appendix A - Site-specific Uses and Criteria for Classified Segments

36. Segment 0615 - Angelina River/Sam Rayburn Reservoir. EPA disapproved the intermediate aquatic life use and the dissolved oxygen criterion of 4.0 mg/l for this reach in June 2001. The high aquatic life use and associated dissolved oxygen criterion of 5.0 mg/l should be inserted for segment 0615. The boundaries for segment 0615, which were established in the 2000 TX WQS, have been approved.

37. Segment 1006 - Houston Ship Channel and segment 1007 - Houston Ship Channel/Buffalo Bayou Tidal. As stated during previous triennial revisions, EPA strongly recommends that aquatic life uses be adopted for segments 1006 and 1007 of the Houston Ship Channel. Data has been collected to demonstrate that an aquatic life use is justified. In accordance with this recommendation the dissolved oxygen standards should be evaluated. Increasing the dissolved oxygen standards from 1.0 mg/l to 2.0 mg/l for 1007 and from 2.0 to 3.0 for segment 1006 are

recommended to protect the actual aquatic life use. The adoption of uses and revised standards would allow a transition to a dissolved standard of 4.0 mg/l and high quality aquatic life use for segment 1005. The present transition from a standard of 2.0 mg/l to 4.0 mg/l may result in impairment around the segment boundary (in the vicinity of the monument).

38. Segment 1811 - Comal River - information from the U.S. Fish and Wildlife Service indicates that the temperature criterion of 80°F may not be protective of federally-listed species residing in the upper reach of this segment. EPA recommends that TCEQ consider dividing this segment to include a lower temperature in the upper reach.

39. Segment 2308 - Rio Grande below International Dam. The Public water supply use was inadvertently included in the 2000 TX WQS, which conflicted with information on segment 2308 in the preamble to the state regulation. This use can be removed from Appendix A. EPA has not approved (or disapproved) the public water supply use for this segment of the Rio Grande.

40. EPA recommends that the seagrass propagation use be designated in Appendix A for appropriate water bodies.

Appendix D - Site-specific Receiving Water Assessments

41. Pine Creek (segment 0202). A previously-approved Use Attainability Analysis (UAA) was used to establish an intermediate aquatic life use for Pine Creek in the 2000 TX WQS. However, sampling for the UAA was conducted in the upper end of this water body and several tributaries enter Pine Creek in the (approximate) 30 km downstream of the sampling point. EPA recommends evaluation of the downstream portion of Pine Creek to determine if it can support a high aquatic life use.

42. Spring Branch (segment 0801): A UAA for Spring Branch was previously reviewed by EPA and determined to be "approvable." This water body and the intermediate aquatic life use were inadvertently left out of the proposed standards, but should be included in the next triennial revision.

43. As done in previous revisions, please continue to review available information on individual segments in Appendix D and revise aquatic life uses as appropriate.

Appendix E - Site-specific Criteria

44. EPA recommends adding information to Appendix E to indicate that the water effects ratio (WER) of 1.8 for segments 1001, 1005, 1006, 1007, 1013, and 2427 applies to the entire water bodies, while the other WERs in Appendix E may only be used by the facility which conducted the study. Also, the WERs should be reported Appendix E with four significant figures to minimize effects of rounding in the calculation of site-specific criteria (please see item I.1. on page 57 of EPA's 1994 guidance on WERs).

UPDATE ON GENERAL PERMITS
10/05/06

TITLE	DESCRIPTION	STATUS/ISSUES
TXR040000 Phase II MS4s (Municipal Separate Storm Sewer Systems)	Authorizes the discharge of storm water from small MS4s located in an urbanized area. **Contact: D. Waterstreet (2495)**	Currently briefing executive management.
TXR050000 MSGP	Authorizes the discharge of storm water associated with industrial activities. **Contact: D. Waterstreet (2495)**	Issued August 14, 2006.
TXR150000 Construction Storm Water	Authorizes the discharge of storm water from construction sites. **Contact: D. Waterstreet (2495)**	Expires 3/2008. Discussions have begun regarding renewal.
TXG110000 Discharges from Concrete Production	Authorizes the discharge from ready-mix concrete plants, concrete products plants, and associated facilities. **Contact: Y.Pierce (6922)**	Set tentatively on the November 1st agenda.
TXG130000 Aquaculture	Authorizes the discharge from aquaculture facilities. **Contact: Y.Pierce (6922)**	Adopted April 2006.
TXG340000 Petroleum Bulk Storage Stations and Terminals	Authorizes the discharge of wastewater from petroleum bulk storage stations and terminals. **Contact: Y.Pierce (6922)**	Briefed deputy. Need to brief ED and Commissioners.
TXG530000 Harris County OnSite	Authorizes the discharge from on-site treatment systems from single family residences located within the San Jacinto River Basin in Harris County. **Contact: Y. Pierce (6922)**	A contract has been signed with Harris County for the implementation of the program. The TCEQ On-Site staff is currently working with Harris County to finalize the process.
TXG670000 Hydrostatic Testing	Authorizes the discharge resulting from the hydrostatic testing of vessels. **Contact: Y.Pierce (6922)**	Issued April 5, 2005. Accepting and processing NOIs.
TXG830000 Water Contaminated by Petroleum Fuel or Substances	Authorizes the discharge of water contaminated by petroleum fuel or petroleum substances. **Contact: Y.Pierce (6922)**	Expires October 2007. Renewal is being drafted.
TXG920000 Concentrated Animal Feeding Operation	Authorizes the discharge from concentrated animal feeding operations. **Contact: C. Mcguire (5308)**	Amendment was adopted in April 2006.

TITLE	DESCRIPTION	STATUS/ISSUES
WQG20 Manure Compost	Authorizes the land application of wastewater from manure compost operations. **Contact: Y.Pierce**	Expires October 2007. Renewal is being drafted.
WQG600000 Commercial solid waste discharge to a POTW	Authorizes the operation of industrial solid waste facilities which discharged to a POTW. **Contact: Y.Pierce (6922)**	Adopted in April 2006. Authorizations are being processed by the Waste Permits Division.

Waste Load Evaluation Revision (WLE-1R) for the Houston Ship Channel

- To satisfy the June 2000 agreement between EPA and the TCEQ to revise the waste load evaluation (WLE-1) for the Houston Ship Channel (HSC) and update the Water Quality Management Plan (WQMP) no later than the year 2007.

- Approved by EPA with adoption of the October 2005, January 2006, and April 2006 WQMP Updates.

- There will no longer be a need for the special "Houston Ship Channel" permit language. The Other Requirements provision referencing the 247,607 lb/day UOD waste loading and the expiration of permits will be deleted in future permits.

- Deterministic modeling for all dischargers (at 100% permitted waste loading) to the HSC will be performed and limits recommended to meet in-stream dissolved oxygen criteria.

- Dischargers to Above Tidal segments (1014, 1016, 1017) will be evaluated with permittees at full permitted waste loading.

- Dischargers to Tidal segments (1005, 1006, 1007, 1013, 2426, 2427, 2428, 2429, 2430, and 2436) will be evaluated with permittees at a Monte Carlo derived fraction (0.548) of full permitted waste loading

- The published document will be mailed to stakeholders later this week and will be on the web at

www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/assessments/wasteloadeval.pdf