823/R-88-100

GUIDANCE FOR STATE IMPLEMENTATION OF WATER QUALITY STANDARDS FOR CWA SECTION 303(C)(2)(B)

December 1988

U.S. Environmental Protection Agency
Office of Water
Office of Water Regulations and Standards
Criteria and Standards Division
401 M Street S.W. (WH-585)
Washington, DC 20460

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 12 1988

OFFICE OF WATER

MEMORANDUM

SUBJECT: Transmittal of Final "Guidance for State Implementation of Water Quality Standards for CWA Section 303(c)(2)(B)"

Rebecca W. Hanmer

FROM: Rebecca W. Hanmer, Acting Assistant Administrator for Water (WH-556)

TO: Water Management Division Directors
Regions I-X

Directors
State Water Pollution Control Agencies

Attached is the final guidance on State adoption of criteria for priority toxic pollutants. We prepared this guidance to help States comply with the new requirements of the 1987 amendments to the Clean Water Act. We have made only minor changes to the September 2, 1988 draft which was distributed to you earlier.

The guidance focuses specifically on the new effort to control toxics in water quality standards. It does not supersede other elements of the standards program which address conventional and non-conventional pollutants as well as priority toxic pollutants. These other elements are described in other Office of Water guidance such as the Water Quality Standards Handbook and continue in full force and effect.

Some commenters on the draft expressed a concern that the guidance places an unnecessary burden on States to demonstrate a need to regulate toxics before State criteria are adopted. This comment related primarily to Option 2 which provides for a more targetted approach than Option 1. We wish to clarify that no such requirement for the States to develop a demonstration of need is included in or intended by the guidance. We do urge States, as a minimum, to use their identifications of impacted segments under Section 304(l) as a starting point for identifying locations where toxic pollutants are of concern and in need of coverage in State standards. In addition, the presence or potential construction of facilities that manufacture or use

priority toxic pollutants or other information indicating that such pollutants are or may be discharged strongly suggests that States should set standards since such pollutants have the potential to or could be interfering with attaining designated uses. We believe it would be reasonable to take such an approach and a State need not demonstrate any actual impairment to justify setting a standard.

For your information, the Office of Water is now drafting revisions to the water quality standards regulation (especially 40 CFR 131.11) to incorporate the requirements for complying with Section 303(c)(2)(B) as reflected in this guidance. We will be seeking your suggestions and comments as this process proceeds.

Enclosure

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PURPOSE

This guidance addresses the adoption of toxics criteria in water quality standards pursuant to new section 303(c)(2)(B) of the Clean Water Act (CWA), as added by the Water Quality Act of 1987 (WQA). This guidance pertains to toxic pollutants listed pursuant to Section 307(a) of the Clean Water Act (CWA).

GENERAL GUIDANCE

EPA is proposing that a State may meet these requirements in the law in one of three scientifically and technically sound ways (or some combination thereof). These options are:

(1) Adopt Statewide numeric criteria in State water quality standards for all section 307(a) toxic pollutants for which EPA has developed criteria guidance, regardless of whether the pollutants are known to be present;

(2) Adopt specific numeric criteria in State water quality standards for section 307(a) toxic pollutants as necessary to support designated uses where such pollutants are discharged or are present in the affected waters and could reasonably be expected to interfere with designated uses;

(3) Adopt a procedure to be applied to a narrative water quality standard provision that prohibits toxicity in receiving waters. Such a procedure would be used by the State in calculating derived numeric criteria, which criteria shall be used for all purposes under section 303(c) of the CWA. At a minimum, such criteria need to be developed for Section 307(a) toxic pollutants, as necessary to support designated uses, where these pollutants are discharged or present in the affected waters and could reasonably be expected to interfere with designated uses.

EPA believes option 2 above most directly reflects the new Clean Water Act requirements and is the option recommended by the Agency. Option 3, while considered by EPA also to meet the requirements of the Act, is best suited for use as a supplement to option 2. Option 1 is consistent with State authority to establish water quality standards. Later in this guidance, each of the options is discussed.

EPA believes that an effective State water quality standards program should include both the chemical specific (i.e., ambient criteria) and narrative approaches. Numeric criteria for specific chemicals are important where the cause of toxicity is known or for protection against potential human health impacts. Numeric water quality criteria may also be the best way to address certain nonpoint source pollution problems. The narrative standard can be the basis for limiting toxicity where a specific toxic pollutant can be identified as causing the toxicity, but there is no numeric criterion in State standards. The narrative standard can also be used to limit whole effluent toxicity where it is not known which chemical or chemicals are causing the toxicity.

For several years now, EPA has required States to adopt a narrative standard to use as the basis for deriving whole effluent toxicity limits. The procedure described in this document is not the same as the procedure States have been using to derive whole effluent toxicity limits.[1] The procedure described in this guidance is applied to the narrative provision to derive numeric criteria for specific toxic pollutants.

In order to determine whether waters are attaining designated uses, and to develop appropriate total maximum daily loads (TMDL), waste load allocations (WLA), and National Pollutant Discharge Elimination System (NPDES) permit limits to meet the applicable water quality standards, a State must also consider pollution from nonpoint sources since both point and nonpoint sources may contribute to exceedances of water quality standards. EPA recognizes that current water quality standards are most often applied only to point sources because of problems with concentration and duration, and is beginning to look at ways to enhance water quality standards to better address problems created by nonpoint sources.

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1. For further information, consult EPA's Technical Support Document for Water Quality-based Toxics Control, EPA 440/4-85-032, September 1985.

BACKGROUND

Section 303(c)(2)(B) of the CWA, as added by the WQA of 1987, provides that:

> "Whenever a State reviews water quality standards pursuant to paragraph (1) of this subsection, or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria for all toxic pollutants listed pursuant to section 307(a)(1) of this Act for which criteria have been published under section 304(a), the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support such designated uses. Such criteria shall be specific numerical criteria for such toxic pollutants. Where such numerical criteria are not available, whenever a State reviews water quality standards pursuant to paragraph (1), or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria based on biological monitoring or assessment methods consistent with information published pursuant to section 304(a)(8). Nothing in this section shall be construed to limit or delay the use of effluent limitations or other permit conditions based on or involving biological monitoring or assessment methods or previously adopted numerical criteria."

To carry out these new requirements, whenever a State revises its water quality standards, it must review all available information and data to first determine whether the discharge or the presence of a toxic pollutant is interfering or is likely to interfere with the attainment of the designated uses of any stream segment. If the data indicate that it is reasonable to expect the toxic pollutant to interfere with the use, or it actually is interfering with the use, then the State must adopt a numeric limit for the specific pollutant. If a State is unsure whether a toxic pollutant is interfering with, or is likely to interfere with the designated use and therefore is unsure that control of the pollutant is necessary to support the designated use, the State should undertake to develop sufficient information upon which to make such a determination. Presence of facilities that manufacture or use the section 307(a) toxic pollutants or other information indicating that such pollutants are discharged or will be discharged strongly suggests that such pollutants could be interfering with attaining designated uses. If a State expects the pollutant not to interfere with the designated use, then section 303(1)(2)(B) does not require a numeric standard for that pollutant.

Section 303(c)(2)(B) addresses only pollutants listed as "toxic" pursuant to section 307(a) of the Act, which are codified at 40 CFR §401.15. The section 307(a) list contains 65 compounds and families of compounds, which potentially include thousands of specific compounds. The Agency has interpreted that list to include 126 "priority" toxic pollutants for regulatory purposes. Appendix A contains a listing of the 126 priority toxic pollutants. Reference in this guidance to toxic pollutants or section 307(a) toxic pollutants refers to the 126 priority toxic pollutants unless otherwise noted. Both the list of priority toxic pollutants and recommended criteria levels are subject to change.

The national criteria recommendations published by EPA under section 304(a) of the Act include values for both acute and chronic aquatic life protection; only chronic criteria recommendations have been established to protect human health. To comply with the statute, a State needs to adopt aquatic life and human health criteria where necessary to support the appropriate designated uses. Criteria for the protection of human health are needed for waterbodies designated for public water supply. The Agency policy on use of section 304(a) human health criteria or maximum concentration limits (MCLs) developed under the Safe Drinking Water Act is stated at 45 FR 79318, November 28, 1980. Basically, for protection of public water supplies, EPA encourages the use of MCLs. When fish ingestion is considered an important activity, then the human health related water quality criteria recommendation developed under section 304(a) of the CWA should be used; that is, the portion of the criteria recommendation based on fish consumption. For those pollutants designated as carcinogens, the recommendation for a human health criterion is generally more stringent than the aquatic life criterion for the same pollutant. In contrast, the aquatic life criteria recommendations for non-carcinogens are generally more stringent than the human health recommendations. When a State adopts a human health criterion for a carcinogen, the State needs to select a risk level. EPA has estimated risk levels of 10^{-5}, 10^{-6}, and 10^{-7} in its criteria documents under one set of exposure assumptions. However, the State is not limited to choosing among the risk levels published in the section 304(a) criteria documents nor is the State limited to the base case exposure assumptions; it must choose the risk level for its conditions and explain its rationale.

EPA does not intend to propose changes to the current requirements regarding the bases on which a State can adopt numeric criteria (40 CFR §131.11(b)(1)). Under our regulation, in addition to basing numeric criteria on EPA's section 304(a) criteria documents, States may also base numeric criteria on site-specific determinations or other scientifically defensible methods. Guidance on developing site-specific criteria may be found in the Water Quality Standards Handbook, December 1983.

Section 303(c)(2)(B) also provides that where EPA-recommended numeric criteria are not available, States shall adopt criteria based on biological monitoring or assessment methods consistent with information published pursuant to new section 304(a)(8) of the Act. At a minimum, whole effluent toxicity tests must be required of all point source discharges thought to be discharging such pollutants. EPA previously developed several guidance documents that help meet the intent of section 304(a)(8), including the "Technical Support Document for Water Quality-based Toxics Control" (EPA 440/4-85032, September 1985); "Guidelines for Deriving National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses" (45 FR 79341, November 28, 1980, as amended at 50 FR 30784, July 29, 1985); and "Guidelines and Methodology Used in the Preparation of Health Effect Assessment Chapters of the Consent Decree Water Criteria Documents" (45 FR 79318, November 28, 1980).

It should be noted that nothing in the Act or in the water quality standards regulation restricts the right of a State to adopt numeric criteria for any pollutant not listed pursuant to section 307(a)(1), and that such criteria may be expressed as concentration limits for an individual pollutant or for a toxicity parameter itself as measured by whole effluent toxicity testing.

THE OPTIONS: PROS, CONS, REQUIREMENTS

Option 1

- o Adopt Statewide numeric criteria in State water quality standards for all Section 307(a) toxic pollutants for which EPA has developed criteria guidance, regardless of whether the pollutants are known to be present.

Pro:

--simple, straight forward implementation
--ensure that States will satisfy statute
--makes maximum uses of EPA recommendations
--gets specific numbers into State water quality standards
--fast, at first

Con:

--some priority toxic pollutants may not be discharged in State
--may cause unnecessary monitoring by States
--without variance procedure, could cause unreasonable economic impacts
--might result in "paper standards"
--could halt progress underway to develop criteria for toxics

Discussion:

Option 1 is within a State's legal authority under the CWA to adopt broad water quality standards. EPA's concern with this option, which has been adopted by several States (some prior to passage of the WQA of 1987), is that the numeric criterion established in the State's standard may not have been found in advance to be reasonable for all waters of the State. EPA is confident of the scientific validity of its section 304(a) national criteria recommendations, but blanket application of the criteria to all waters under all circumstances may not always be prudent or reasonable. In some States, severe economic impacts may occur if the State does not exercise its authority to use one or more of the techniques for adjusting water quality standards: (1) establish or revise designated stream uses based on use attainability analyses, (2) develop site-specific criteria, or (3) allow short-term variances when appropriate.

All three of these techniques may apply to standards developed under any of the three options discussed in this guidance. It is likely that States electing to use option 1 will rely more on variances because the other two options are implemented with more site-specific data being available. It should be noted, however, that permits issued pursuant to such water quality variances must still comply with any applicable antidegradation and antibacksliding requirements.

In the water quality standards regulation promulgated on November 8, 1983, there is only a brief mention of variances with a discussion in the Preamble suggesting that only widespread economic and social impact can be used as the basis for granting a variance (a variance is granted by the State subject to review and approval by EPA). On March 15, 1985, EPA issued an interpretation of variances to water quality standards that allows short-term variances (not to exceed three years) to be granted from water quality standards to individual dischargers based on any of the six factors listed in section 131.10(g) of the regulation for justifying removal of a designated use. Our previous interpretation was flawed as it allowed more opportunity for a permanent change in standards that it did for a temporary, short-term change which could be granted by a variance. Without a short term variance procedure, there is a danger that permits may contain excessively long compliance dates which don't force the attainment of water quality standards.

The six factors on which a variance may be based are:

(1) Naturally occurring pollutant concentrations prevent the attainment of the use; or

(2) 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 violating State water conservation requirements to enable uses to be met; or

(3) Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

(4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

(5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or

(6) Controls more stringent than those required by section 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

A State using option 1 necessarily must follow all its legal and administrative requirements for adopting water quality standards. Since the specific numeric criteria for toxics adopted under option 1 are part of the State's water quality standards, they will be reviewed and either approved or disappproved by EPA when such standards are submitted by the State to EPA.

Option 2

- Adopt specific numeric criteria in State water quality standards for section 307(a) toxic pollutants as necessary to support designated uses where such pollutants are discharged or are present in the affected waters and could reasonably be expected to interfere with designated uses.

Pro:

--directly reflects statutory requirement
--standards based on demonstrated need to control problem pollutants
--State can use EPA's section 304(a) national criteria recommendations or other scientifically acceptable alternative, including site-specific criteria
--State can consider current or potential toxic pollutant problems
--State can go beyond section 307(a) toxics list, as desired

Con:

--may be difficult and time consuming to determine if, and which, pollutants are interfering with the designated use
--adoption of standards can require lengthy debates on correct criteria limit to be included in standards
--successful State toxic control programs based on narrative criteria may be halted or slowed as the State applies its limited resources to developing numeric standards
--difficult to update criteria once adopted as part of standards
--to be absolutely technically defensible, may need site-specific criteria in many situations, leading to a large workload for regulatory agency

Discussion:

This is the option EPA recommends a State use to meet the statutory requirement. It directly reflects all the Act's requirements and is flexible, resulting in adoption of numeric water quality standards as needed. To assure that the State is capable of dealing with new problems as they arise, EPA also recommends that States adopt a translator procedure which is the same as, or similar to, that described in Option 3, but applicable to all chemicals causing toxicity and not just priority pollutants as is the case for option 3.

In the short term, EPA intends for States to rely on their section 304(l) water quality assessments to identify those water segments that will need new and/or revised water quality standards for section 307(a) toxic pollutants. In addition, in FY 1988, EPA is conducting reviews of State toxic control programs as they relate to toxic pollutants. Following these reviews, EPA will work with each State to develop an action plan to cover the steps that the State should take to correct any program deficiencies identified during the review. In the short term, Action Plans should be the vehicle for reaching agreement between EPA and the States on the most expeditious schedule for revising State water quality standards to meet the CWA requirements. In the longer term, EPA expects similar determinations to occur during each triennial review of water quality standards as required by section 303(c).

In identifying the need for numeric criteria, EPA is encouraging States to use information and data such as: (1) ambient water monitoring data, including those for sediment and aquatic life (e.g., fish tissue data); (2) NPDES permit applications and permittee self-monitoring reports; (3) effluent guideline development documents, many of which contain section 307(a)(1) priority pollutant scans; (4) pesticide and herbicide application information and other records of pesticide or herbicide inventories; (5) public water supply source monitoring data noting pollutants with Maximum Contaminant Levels (MCLs); and (6) any other relevant information on toxic pollutants collected by Federal, State, interstate agencies, academic groups, or scientific organizations. (Note: For more detail, see EPA's "Categories of Waters to be Screened for Listing Under Section 304(l)" in EPA's section 304(l) guidance document).

Where the State's review indicates that there is a reasonable expectation of a problem from the discharge or presence of toxic pollutants, the State should identify the pollutant(s) and the relevant segment(s). In making these determinations, States should use their own EPA approved criteria or existing EPA water quality criteria for purposes of segment identification. After the review, the State may use other means to establish the final criterion as it revises its standards.

As with option 1, a State using option 2 must follow all its legal and administrative requirements for adoption of water quality standards. Since the resulting numeric criteria are part of a State's water quality standards, they are required to be submitted by the State to EPA for review and either approval or disapproval.

EPA believes this option offers the State optimum flexibility. For section 307(a) toxic pollutants adversely affecting designated uses, numeric criteria are available for permitting purposes. For other situations, the State has the option of defining site specific criteria.

Option 3

- Adopt a procedure to be applied to the narrative water quality standard provision that prohibits toxicity in receiving waters. Such a procedure would be used by a State in calculating derived numeric criteria to be used for all purposes of water quality criteria under section 303(c) of the CWA. At a minimum such criteria need to be derived for section 307(a) toxic pollutants where the discharge or presence of such pollutants in the affected waters could reasonably be expected to interfere with designated uses, as necessary to support such designated uses.

Pro:

--allows a State flexibility to control priority toxic pollutants
--reduces time and cost required to adopt specific numeric criteria as water quality standards regulations
--allows immediate use of latest scientific information available at the time a State needs to develop a derived numeric criteria
--revisions and additions to derived numeric criteria can be made without need to revise State law
--State can deal more easily with a situation where it did not establish water quality standards for the section 307(a) toxic pollutants during the most recent triennial review
--State can address problems from non-section 307(a) toxic pollutants

Con:

--EPA is currently on notice that a derived numeric criteria may invite legal challenge
--Once the necessary procedures are adopted to enhance legal defensibility (e.g., appropriate scientific methods and public participation and review), actual savings in time and costs may be less than expected
--public participation in development of derived numeric criterion may be limited when such criteria are not addressed in a hearing on water quality standards

Discussion:

EPA believes that adoption of a narrative standard along with a translator mechanism as part of a State's water quality standard satisfies the substantive requirements of the statute. These criteria are subject to all the State's legal and administrative requirements for adoption of standards plus review and either approval or disapproval by EPA, and result in the development of derived numeric criteria for specific section 307(a) toxic pollutants. They are also subject to an opportunity for public participation. Nevertheless, EPA believes the most appropriate use of option 3 is as a supplement to either options 1 or 2. Thus, a State would have formally adopted numeric criteria for those toxic pollutants of frequent occurrence and which have general applicability statewide for inclusion in NPDES permits, total maximum daily loads and waste load allocations, and would also have a sound and predictable method to develop additional numeric criteria as needed. This combination of options provides a complete regulatory scheme.

Although the approach in option 3 is similar to that currently allowed in the water quality standards regulation (40 CFR 131.11(a)(2)), this guidance discusses several administrative and scientific requirements EPA may clarify by revising the regulation in order to ensure acceptable quality and full

involvement of the public and EPA. The remainder of this section outlines the administrative and scientific requirements that EPA believes are necessary to comply with section 303(c)(2)(B).

1. The Option 3 Procedure Must be Used to Calculate Derived Numeric Water Quality Criteria

States must adopt a specific procedure to be applied to a narrative water quality criterion. To satisfy section 303(c)(2)(B), this procedure shall be used by the State in calculating derived numeric criteria, which criteria shall be used for all purposes under section 303(c) of the CWA. Such criteria need to be developed for section 307(a) toxic pollutants as necessary to support designated uses, where these pollutants are discharged or are present in the affected waters and could reasonably be expected to interfere with the designated uses.

In order to assure protection from short-term exposures, the State procedure should ensure development of derived numeric water quality criteria based on valid acute aquatic toxicity tests that are lethal to half the affected organisms (LC50) for those species that are representative of or similar to those found in the State. In addition, the State procedure should ensure development of derived numeric water quality criteria for protection from chronic exposure by using an appropriate safety factor applicable to this acute limit. If there are saltwater components to the State's aquatic resources, the State should establish appropriate derived numeric criteria for saltwater in addition to those for freshwater.

The State's documentation of the tests should include a detailed discussion of its quality control and quality assurance procedures. The State should also include a description (or reference existing technical agreements with EPA) of the procedure it will use to calculate derived acute and chronic numeric criteria from the test data, and how these derived criteria will be used as the basis for deriving appropriate TMDLs, WLAs, and NPDES permit limits.

As discussed above, the procedure for calculating derived numeric criteria needs to protect aquatic life from both acute and chronic exposure to specific chemicals. Chronic aquatic life criteria are to be met at the edge of the mixing zone. The acute criteria are to be met (1) at the end-of-pipe if mixing is not rapid and complete and a high rate diffuser is not present; or (2) after mixing if mixing is rapid and complete or a high rate diffuser is present. (See EPA's "Technical Support Document for Water Quality Based Toxics Control"). EPA has not established a national policy specifying the point of application in the receiving water to be used with human health criteria.

In addition, the State should also include an indication of potential bioconcentration or bioaccumulation by providing for: (1) laboratory tests that measure the steady-state bioconcentration rate achieved by a susceptible organism; and/or (2) field data in which ambient concentrations and tissue loads are measured to give an appropriate factor. In developing a procedure to be used in calculating derived numeric criteria for the protection of aquatic life, the State should consider the potential impact that bioconcentration has on aquatic and terrestrial food chains.

The State should also use the derived bioconcentration factor to calculate chronically protective numeric criteria for humans that consume aquatic organisms. In calculating this derived numeric criterion, the State should indicate data requirements to be met when dealing with either threshold (toxic) or non-threshold (carcinogenic) compounds. The State should describe the species and the minimum number of tests, which may generally be met by a single mammalian chronic test if it is of good quality and if the weight of evidence indicates that the results are reasonable. The State should provide the method to calculate a derived numeric criterion from the appropriate test result.

Both the threshold and non-threshold criteria for protecting human health should contain exposure assumptions, and the State procedure should be used to calculate derived numeric criteria that address the consumption of water, consumption of fish, and combined consumption of both water and fish. The State should provide the assumptions regarding the amount of fish and the quantity of water consumed per person per day, as well as the rationale used to select the assumptions. It needs to include the number of tests, the species necessary to establish a dose-response relationship, and the procedure to be used to calculate the derived numeric criteria. For non-threshold contaminants, the State should specify the model used to extrapolate to low dose and the risk level. It should also address incidental exposure from other water sources (e.g., swimming). When calculating derived numeric criteria for multiple exposure to pollutants, the State should consider additive effects, especially for carcinogenic substances, and should factor in the contribution to the daily intake of toxicants from other sources (e.g., food, air, etc.) when data are available.

2. The State Must Demonstrate That the Procedure Results in Derived Numeric Criteria that are Protective

The State needs to demonstrate that its procedures for developing criteria, including translator methods, yield fully protective criteria for human health and for aquatic life. EPA's review process will proceed according to EPA's regulation at 40 CFR §131.11 which requires that criteria be based on sound scientific rationale and be protective of all designated uses. EPA will use the expertise and experience it has gained in developing section 304(a) criteria for toxic pollutants by application of its own translator method (i.e., the Guidelines for Deriving National Water Quality Criteria cited on Page 5 herein) in reviewing State developed procedures.

Once EPA has approved the State's procedure, the Agency's review of derived numeric criteria, for example, for pollutants other than section 307(a) toxic pollutants resulting from the State's procedure, will focus on the adequacy of the data base rather than the calculation method. EPA also encourages States to apply such a procedure to calculate derived numeric criteria to be used as the basis for deriving permit limitations for nonconventional pollutants that also cause toxicity.

3. The State Must Provide Full Opportunity for Public Participation in Adoption of the Procedure

The water quality standards regulation requires States to hold public hearings for the purpose of reviewing and revising water quality standards in accordance with provisions of State law and EPA's public participation regulation (40 CFR Part 25). Where a State plans to adopt a procedure to be applied to the narrative criterion, it must provide full opportunity for public participation in the development and adoption of the procedure as part of the State's water quality standards.

While it is not necessary for the State to adopt each derived numeric criteria into its water quality standards and submit it to EPA for review and approval, EPA is very concerned that all affected parties have adequate opportunity to participate in the development of a derived numeric criterion even though it is not being adopted directly as a water quality standard.

A State can satisfy the need to provide an opportunity for public participation in the development of derived numeric criteria in several ways including:

1. a specific hearing on the derived numeric criterion;

2. the opportunity for a public hearing on an NPDES permit so long as public notice is given that a criterion for a toxic pollutant as part of the permit issuance is being contemplated; or

3. a hearing coincidental with any other hearing so long as it is made clear that development of a specific criterion is also being undertaken.

For example, as States develop their lists and individual control strategies (ICSs) under section 304(l), they may seek full participation by the public. NPDES regulations also specify public participation requirements related to State permit issuance. Finally, States have public participation requirements associated with Water Quality Management Plan updates. States may take advantage of any of these public participation requirements to fulfill the requirement for public review of any resulting derived numeric criteria. In such cases, the State must give prior notice that development of such criteria is under consideration.

4. <u>The Procedure Must be Formally Adopted and Mandatory</u>

Where a State elects to supplement its narrative criterion with an accompanying implementing procedure, it must formally adopt such a procedure as a part of its water quality standards. The procedure must be used by the State to calculate derived numeric criteria that will be used as the basis for all standards purposes, including: developing TMDLs, WLAs, and limits in NPDES permits; determining whether water use designations are being met; and identifying potential nonpoint source pollution problems.

5. <u>The Procedure Must be Approved by EPA as Part of the State's Water Quality Standards Regulation</u>

To be consistent with the requirements of the Act, the State's procedure to be applied to the narrative criterion must be submitted to EPA for review and approval, and will become a part of the State's water quality standards. (See 40 CFR §131.21 for further discussion.) This requirement may be satisified by a reference in the standards to the procedure which may be contained in another document, which has legal effect and is binding on the State, and all the requirements for public review, State implementation, and EPA review and approval are satisfied.

TIMING

EPA expects each State to comply with the new statutory requirements in any section 303(c) water quality standards review initiated after enactment of the Water Quality Act of 1987.

To the extent feasible, States are to incorporate the new statutory requirements into any ongoing review. If a State does not fulfill the new requirements, EPA may conditionally approve State-adopted water quality standards, but will require a State to immediately develop a schedule to meet the new requirements. EPA will not accept a delay to the next triennial review for adherence to the new requirements which have been in existence, by statute, since February 1987. Also, the identification and control of toxic pollutants has been a water quality standards program priority for several years as reflected in Agency operating guidance and as a requirement in the water quality standards regulation.

ASSISTANCE

Persons having questions or needing assistance in implementing water quality criteria for toxics may contact the Standards Branch, Criteria and Standards Division, Office of Water Regulations and Standards, EPA, WH-585, Washington, D.C. 20460, and whose telephone number is (202) 475-7315.

APPENDIX A

126 SECTION 307(A) TOXIC POLLUTANTS

PRIORITY POLLUTANT

ACENAPHTHENE
ACENAPTHYLENE (PAH)
ACROLEIN
ACRYLONITRILE
ALDRIN
ANTIMONY
ANTHRACENE
ARSENIC
ASBESTOS
1,2 BENZANTHRACENE (PAH)
BENZENE
BENZIDINE
BENZO (A) PYRENE (3,4-BENZOPYRENE) (PAH)
3,4 BENZOFLUORANTHENE (PAH)
BENZO(K)FLUORANTHENE (PAH)
1,12 BENZOPERYLENE (PAH)
BERYLLIUM
BROMOFORM (TRIBROMOMETHANE)
BROMOMETHANE (METHYL BROMIDE)
4-BROMOPHENYL PHENYL ETHER
CADMIUM
CARBON TETRACHLORIDE (TETRACHLOROMETHANE)
CHLORDANE
CHLOROBENZENE (MONOCHLOROBENZENE)
CHLORODIBROMOMETHANE (HALOMETHANE)
CHLOROETHANE (MONOCHLOROETHANE)
CHLOROETHYL ETHER (BIS-2)
1 CHLOROETHOXY METHANE (BIS-2)
2 CHLOROETHYL VINYL ETHER
4-CHLORO-3-METHYLPHENOL
CHLOROMETHANE (METHYL CHLORIDE)
CHLOROFORM (TRICHLOROMETHANE)
2 CHLOROPHENOL
CHLOROISOPROPYL ETHER (BIS-2)
2 CHLORONAPHTHALENE
4 CHLOROPHENYL PHENYL ETHER
CHROMIUM (HEX)
CHROMIUM (TRI)
CHYRSENE (PAH)
COPPER
CYANIDE
4,4 DDT
4,4 DDE
4,4 DDD
DIBENZO(a,h)ANTHRACENE (PAH)
1,2 DICHLOROBENZENE
1,3 DICHLOROBENZENE

APPENDIX A

126 SECTION 307(A) TOXIC POLLUTANTS

PRIORITY POLLUTANT

1,4 DICHLOROBENZENE
3,3 DICHLOROBENZIDINE
DICHLOROETHANE 1,1
DICHLOROETHANE 1,2
1,1 DICHLOROETHYLENE
1,2-TRANS-DICHLOROETHYLENE
DICHLOROBROMOMETHANE (HALOMETHANES)
DICHLOROMETHANE (HALOMETHANES)
2,4-DICHLOROPHENOL
DICHLOROPROPANE 1,2
DICHLOROPROPENE 1,3
DIELDRIN
DIMETHYLPHENOL 2,4
DIETHYLPHTHALATE
DIMETHYLPHTHALATE
DINITROTOLUENE 2,4
DINITROTOLUENE 2,6
2,4-DINITROPHENOL
DIOXIN (2,3,7,8-TCDD)
DIPHENYLHYDRAZINE 1,2
ALPHA ENDOSULFAN
BETA ENDOSULFAN
ENDOSULFAN SULFATE
ENDRIN
ENDRIN ALDEHYDE
ETHYLBENZENE
FLUORENE (PAH)
FLUORANTHENE
HEPATACHLOR
HEPATACHLOR EPOXIDE
HEXACHLOROETHANE
HEXACHLOROBENZENE
HEXACHLOROBUTADIENE
HEXACHLOROCYCLOHEXANE (LINDANE)
HEXACHLOROCYCLOHEXANE (ALPHA)
HEXACHLOROCYCLOHEXANE (BETA)
HEXACHLOROCYCLOHEXANE (DELTA)
HEXACHLOROCYCLOPENTADIENE
IDENO (1,2,3-cd) PYRENE (PAH)
ISOPHORONE
LEAD
MERCURY
NAPHTHALENE
NICKEL
NITROBENZENE
2 NITROPHENOL
4 NITROPHENOL

APPENDIX A

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PRIORITY POLLUTANT

4,6-DINITRO-2-METHYLPHENOL
NITROSODIMETHYLAMINE N
NITROSODIPHENYLAMINE-N
NITROSODI-N-PROPYLAMINE-N
PCB 1242
PCB 1254
PCB 1221
PCB 1232
PCB 1248
PCB 1260
PCB 1016
PHENOL
PENTACHLOROPHENOL
PHENANTHRENE (PAH)
BIS(2 ETHYL HEXYL) PHTHALATE
BUTYL BENZYL PHTHALATE
DI-N-BUTYL PHTHALATE
DI-N-OCTYL-PHTHALATE
PYRENE (PAH)
SELENIUM
SILVER
TETRACHLOROETHANE 1,1,2,2
TETRACHLOROETHYLENE
THALLIUM
TOLUENE
TOXAPHENE
1,2,4 TRICHLOROBENZENE
TRICHLOROETHANE 1,1,1
TRICHLOROETHANE 1,1,2
TRICHLOROETHYLENE
TRICHLOROPHENOL 2,4,6
VINYL CHLORIDE (CHLOROETHYLENE)
ZINC