

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

Comment ID: CTR-004-004a
Comment Author: South Bayside System Authority
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? N
CROSS REFERENCES C-24a; C-22; C-09

Comment: Despite the problems addressed above there are provisions of the CTR that SBSA supports, including:

- * EPA's policies and guidance regarding the use of mixing zones and dilution
- * Use of water effects ratios (WERs) for determining site specific criteria
- * Inclusion of metals criteria expressed as dissolved rather than total recoverable
- * Allowing permit writers the use of any of the methods in EPA's guidance document on the use of translators

Response to: CTR-004-004a

See response to CTR-004-009.

Comment ID: CTR-004-009
Comment Author: South Bayside System Authority
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? N
CROSS REFERENCES

Comment: Alternative Mixing Zones

One of the few avenues that may actually provide some regulatory relief is mixing zones. The Preamble to the CTR describes a mixing zone as a limited area or volume of water where initial dilution of a discharge takes place and where water quality standards can be exceeded. Mixing zones have been applied in the water quality standards program since its inception. The present water quality standards regulations allows states to adopt acute and chronic mixing zones as a matter of state discretion, so long

as the state's mixing zone protects the designated uses. See 40 C.F.R. section 131.13.

The Preamble recognizes that several California Regional Water Quality Control Boards have adopted mixing zone provisions in their respective Basin Plans. These mixing zone provisions can be applied to discharges to water bodies to which water quality standards based on the criteria contained in this proposed rule will apply once this rule becomes final. See CTR Preamble at pg. 42185. The problem arises for the proposal or adoption of new mixing zones where one is not currently authorized under an existing Basin Plan. The Preamble sets out numerous restrictions on the use of mixing zones, as follows:

A mixing zone should be established to ensure that the zone will not impair the integrity of the water body as a whole, the zone will not cause lethality to passing organisms, and, considering- likely pathways of exposure, that there are no significant human health risks. For application of two-number aquatic life criteria, as proposed in this rule, there may be up to two types of mixing zones. In the zone immediately surrounding the outfall, neither the acute nor the chronic criterion is met. The acute criterion is met at the edge of this zone. In the next mixing zone, the acute, but not the chronic, criterion is met, The chronic criterion is met at the edge of the second mixing zone. However, since both aquatic life and human health criteria are proposed in today's rule, the state may establish independent mixing zone policies for each. For any particular pollutant from any particular discharge, the magnitude, frequency, duration and mixing zone associated with each of the type of criteria may determine which one most limits the allowable discharge. Id.

The other potential problem arises because state-adopted mixing- zones are subject to EPA review and approval . See 40 C.F.R. section 131.13. Because EPA approval is required, the question arises whether a federal rulemaking would accompany approval of mixing zones as it does with approval of state variances (which are also authorized under 40 C.F.R. section 131.13). If so, this would greatly restrict the utility of new or alternative mixing zones as an avenue for regulatory relief.

(*1) This cost trigger is \$200 per toxic pounds-equivalent for a facility under the low-end scenario, and \$500 per toxic pounds-equivalent for a category of dischargers under the high-end scenario, See EA at pg. 4.

(*2) In addition, pollutant load I reductions were not calculated or credited for any pollutant for which an alternative regulatory approach was pursued. Id.

Response to: CTR-004-009

Mixing zone and dilution policies and implementation procedures are used by States to establish water quality based discharge limitations that protect the integrity of a waterbody as a whole, but provide permittees a reasonable avenue of relief by allowing ambient concentrations above water quality criteria in small areas near outfalls. EPA is not promulgating a mixing zone and dilution policy for California as part of this rulemaking. This is because EPA maintains that the decision regarding whether to adopt a mixing zones and dilution policy is made at the discretion of the State (see 40 CFR 131.13). While adopting a mixing zone and dilution policy is an area of State discretion, EPA retains authority to review and approve or disapprove policies which affect the application and implementation of water quality standards.

The CTR preamble reiterates existing EPA guidance contained in the Technical Support Document for Water Quality-based Toxics Control (1991) and the Water Quality Standards Handbook (1993) regarding the use of mixing zones and dilution by States. In accordance with this guidance, allowable mixing zone characteristics should be established to ensure that: (1) mixing zones do not impair the integrity of the

water body as a whole; (2) there is no lethality to organisms passing through the mixing zone; and (3) there are no significant health risks, considering likely pathways of exposure. To assist States in establishing appropriate mixing zones and dilution policies and procedures, EPA-Headquarters has periodically issued technical guidance on this topic. National EPA guidance can be found in the Technical Support Document for Water Quality-based Toxics Control (1991), the Water Quality Standards Handbook (1983 and 1993) and Quality Criteria for Water (the "Red Book", 1976). Other sources of information and guidance include Water Quality Criteria 1972 (the "Blue Book", National Academy of Sciences). At minimum, State mixing zone and dilution policies must be consistent with the EPA water quality standards regulation which requires the protection of designated uses. EPA received a majority of comments in support of the mixing zone and dilution discussion in the CTR preamble, which includes a review of the application of mixing zones and dilution in setting allowable discharge limitations based on acute, chronic, and human health criteria using a multi-tiered approach.

As discussed previously, under EPA's water quality standards regulation, States may adopt policies authorizing the use of mixing zones and dilution in setting TMDLs and water quality based effluent limitations (see 40 CFR 131.13). Pursuant to federal regulation, the decision regarding whether to allow mixing zones and dilution is made by individual States (i.e., States may elect to allow or to prohibit mixing zones/dilution for purposes of water quality based permitting). Where a State elects to allow mixing zones and dilution, the State must include an authorizing policy in its water quality standards regulation (e.g., see Water Quality Control Plan for Ocean Waters of California, California Ocean Plan, State Water Resources Control Board, 1997). Where a mixing zone and dilution policy is not sufficiently specific for EPA to adequately evaluate its implementation, the State must also establish procedures to be followed in implementing its mixing zone and dilution policy. Such mixing zone and dilution policies and implementation procedures are subject to EPA review and approval, as new or revised water quality standards (see 40 CFR 131.13). Courts have held that EPA is not required to undertake notice and comment procedures before approving State water quality standards. *City of Albuquerque v. Browner*, 865 F. Supp. 733 (D. N.M. 1993) (The Court noted that EPA is specifically required to provide notice and take comment before issuing federal water quality standards under section 303(b) and held that "[i]f Congress wanted the agency to provide additional notice upon approving state standards, it could have included that language in Section 303(c)(1)," *aff'd*, 97 F.3d 415, 425, n. 15 (10th Cir. 1996), cert. denied, 1997 US LEXIS 6709 (Nov. 10, 1997). State decisions regarding the application of mixing zones and dilution to specific point source discharges are subject to EPA review through the NPDES permitting process.

EPA will continue to support the State's establishment of technically defensible mixing zone and dilution policies and implementation procedures, consistent with EPA's water quality standards regulations and guidance, and their application in setting TMDLs and water quality based effluent limitations for acute, chronic, and human health criteria.

Therefore, since EPA will approve reasonable implementation of mixing zones, EPA believes its Economic Analysis properly included mixing zones as one of several areas of potential regulatory relief for dischargers.

Comment ID: CTR-005-003e
Comment Author: Novato Sanitary District
Document Type: Sewer Authority
State of Origin: CA
Represented Org:

Document Date: 09/23/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? Y
CROSS REFERENCES C-22; C-24a; C-01a; G-09; G-04

Comment: 2. The following provisions of the rule are supported: (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury; and (4) the Preamble discussions regarding metals translators, mixing zones, and interim permit limits.

Response to: CTR-005-003e

See response to CTR-004-009.

Comment ID: CTR-015-004
Comment Author: Eastern Municipal Water Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/23/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? N
CROSS REFERENCES

Comment: Mixing Zones (FR p.42185, Preamble section F.3.)

Mixing zones are defined by states. At this time, California does not have mixing zones at any state-level plan (Note: they were in the plans that were rescinded). The Agency mentions that several Regional Boards have mixing zone provisions in Basin Plans. The Agency states that it will recognize those provisions as they are applied to the water quality criteria contained in the Rule. Will the Agency recognize mixing zones should other Regional Boards adopt provisions from this time forward, especially if the State Board does not adopt a state-wide mixing zone definition and associated provisions in a timely manner, or at all?

Response to: CTR-015-004

In the absence of a state-wide policy on mixing zones, EPA will recognize any mixing zone provision that has been adopted by the Regional Board within its basin plan consistent with State law and is approved by EPA as consistent with the Clean Water Act.

Comment ID: CTR-020-019
Comment Author: City of Stockton
Document Type: Local Government
State of Origin: CA

Represented Org:
Document Date: 09/24/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? Y
CROSS REFERENCES

Comment: III. Mixing Zones

The CTR specifies that mixing zones are allowed on a case-by-case basis if authorized by the applicable Basin Plan and approved by the Regional Board for individual permits. In general, the rule should state that consideration of mixing should also apply to storm waters where dilution is certain to exist.

Response to: CTR-020-019

The State has discretion to allow (or deny) mixing zones in ambient waters that would apply to any NPDES discharger including storm water.

Comment ID: CTR-021-002e
Comment Author: LeBoeuf, Lamb, Green & MacRae
Document Type: Local Government
State of Origin: CA
Represented Org: City of Sunnyvale
Document Date: 09/25/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References: Letter CTR-021 incorporates by reference letter CTR-035
Attachments? Y
CROSS REFERENCES G-04; C-24a; C-22; K-01; G-02

Comment: Sunnyvale is very supportive of many fine concepts advanced in the proposed CTR, and we join with CASA/Tri-TAC in complimenting the Agency on its proposed positions with regard to such matters as: (a) the use of interim effluent limitations in NPDES permits during the pendency of TMDL and other special studies; (b) the allowance of water effects ratios in adjusting the criteria for metals without the necessity for additional rulemaking to establish site-specific objectives; (c) the use of the dissolved state for the metals criteria; (d) the use of cooperative, intergovernmental, and stakeholder-involved approaches towards the development of TMDLs;(e) the allowance of dilution for both chronic and acute pollutants; and (f) the allowance of compliance schedules in NPDES permits.

Response to: CTR-021-002e

See response to CTR-004-009.

Comment ID: CTR-027-012e
Comment Author: California SWQTF
Document Type: Storm Water Auth.
State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References: Letter CTR-027 incorporates by reference letters CTR-001, CTR-036 and CTR-040

Attachments? N

CROSS REFERENCES C-22; C-24; C-01a; G-09

Comment: PROVISIONS OF THE PROPOSED RULE WE SUPPORT

Notwithstanding the above comments, we believe there are certain elements of the proposed rule with respect to establishing water quality standards that we can support:

- * Metal criteria expressed in the dissolved fraction rather than expressed in the total recoverable fraction.
- * Metal criteria that are developed as a function of the water-effect-ratio (WER).
- * The current proposed human health criterion for mercury.
- * The current preamble language regarding metal translators and mixing zones.

We believe the above provisions provide a more acceptable, scientific approach to the water quality-based pollution control approach. We recommend these provisions of the current rule remain as proposed.

Response to: CTR-027-012e

See response to CTR-004-009.

Comment ID: CTR-032-002h

Comment Author: Las Gallinas Val. Sanitary Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References: Letter CTR-032 incorporates by reference letter CTR-035

Attachments? N

CROSS REFERENCES G-01; C-22; G-09; C-24a; C-24; K; G-04; G-02

Comment: Regulatory Flexibility and Relief

The District supports EPA's use of "sound science" and current data in developing the proposed criteria in the California Toxics Rule (CTR). The District strongly supports language in the Preamble that references and endorses recommendations of the State Task Forces including use in permitting of:

- * reasonable potential analyses
- * dissolved metals criteria
- * translators
- * water effects ratios
- * site specific objectives
- * innovative TMDL processes such as effluent trading
- * performance based interim

limits * chronic and acute mixing zones, and * compliance schedules in NPDES permits.

Response to: CTR-032-002h

See response to CTR-004-009.

Comment ID: CTR-035-002d

Comment Author: Tri-TAC/CASA

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES C-22; C-01a; C-08a; G-04; G-09; K-01; C-24a

Comment: Second, we commend EPA for its inclusion in the CTR of several innovative and flexible regulatory approaches, such as metals criteria expressed as dissolved rather than total recoverable concentrations, and the revised human health criterion for mercury. In addition, in light of the issues surrounding the human health criteria for arsenic we support EPA's decision not to promulgate human health criteria at this time. With respect to implementation issues discussed in the Preamble, we support EPA's policies and guidance regarding the application of mixing zones and dilution credits. the use of interim permit limits while Total Maximum Daily Loads (TMDLs) and other special studies are being performed, and EPA's guidance to Regional Water Quality Control Boards (RWQCBs) that they may use any of the methods described in EPA's guidance document on the use of translators. We also support EPA's proposal to create a rebuttable presumption for Water Effects Ratios (WERS), allowing the RWQCBs and SWRCB to develop site-specific WERS that can be approved by EPA during the NPDES permit approval process. We believe that this approach will help facilitate the development of appropriate site-specific adjustments for metals criteria.

Response to: CTR-035-002d

See response to CTR-004-009.

Comment ID: CTR-035-034

Comment Author: Tri-TAC/CASA

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES

Comment: p. 42185 -- Mixing Zones We support the inclusion of the discussion in the Preamble which allows mixing zones for acute and chronic criteria. As EPA notes, the Permitting and Compliance Issues Task Force recommended that the SWRCB allow the establishment of both acute and chronic mixing zones. We recommend that EPA support the establishment of technically defensible mixing zones that protect beneficial uses, consistent with EPA's water quality standards regulation.

Response to: CTR-035-034

See response to CTR-004-009.

Comment ID: CTR-038-002e
Comment Author: Sonoma County Water Agency
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? Y
CROSS REFERENCES C-22; C-24a; C-01a; G-04; G-09

Comment: 2. The following provisions of the rule are supported (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury; and (4) the Preamble discussions regarding metals translators, mixing zones, and interim permit limits.

Response to: CTR-038-002e

See response to CTR-004-009.

Comment ID: CTR-040-002d
Comment Author: County of Sacramento Water Div
Document Type: Storm Water Auth.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References: Letter CTR-040 incorporates by reference letter CTR-027
Attachments? Y
CROSS REFERENCES C-24a; C-01a; G-09

Comment: PROVISIONS SUPPORTED

We support a number of provisions of the Rule, including: (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury- and (4) the Preamble discussions regarding metals

translators and mixing zones. These provisions provide a firmer scientific base for the water quality-based approach to pollution control and are a marked improvement over the old Inland Surface Waters Plan. We would urge EPA to retain these provisions in the final Rule.

Response to: CTR-040-002d

See response to CTR-004-009.

Comment ID: CTR-040-051

Comment Author: County of Sacramento Water Div

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References: Letter CTR-040 incorporates by reference letter CTR-027

Attachments? Y

CROSS REFERENCES

Comment: The Preamble to the California Toxics Rule (CTR), and the rules accompanying Economic Analysis (EA), place a great deal of emphasis on the ability of dischargers to use alternative regulatory approaches to comply with CTR criteria if the cost of treatment technology was prohibitively expensive. For example, the EA assumes that, if the estimated annualized cost for removing a pollutant exceeded a cost trigger,(*1) "dischargers would explore the use of alternative regulatory approaches to comply with CTR-based effluent limits." EA at pg. 4 (emphasis added). Based on this assumption, no treatment cost was estimated for the facility.(*2)

The types of alternative regulatory approaches assumed available for dischargers in California include phased total maximum daily loads (TMDLs), water quality standard variances, site-specific criteria, change in designated use, and alternative mixing zones. EA at pg. 4-5. The following sections will discuss each of EPA's proposed methods for regulatory relief and explain whether or not these methods can truly be used to provide relief from the CTR-based permit limits as anticipated by EPA. It should be noted that the actual language of the rule itself does not mention any of the methods of regulatory relief. Therefore, this analysis will be based solely upon the language contained in the Preamble to the CTR.

Alternative Mixing Zones

One of the few avenues that may actually provide some regulatory relief is mixing zones. The Preamble to the CTR describes a mixing zone as a limited area or volume of water where initial dilution of a discharge takes place and where water quality standards can be exceeded. Mixing zones have been applied in the water quality standards program since its inception. The present water quality standards regulations allows states to adopt acute and chronic mixing zones as a matter of state discretion, so long as the state's mixing zone protects the designated uses. See 40 C.F.R. section 131.13.

The Preamble recognizes that several California Regional Water Quality Control Boards have adopted mixing zone provisions in their respective Basin Plans. These mixing zone provisions can be applied to discharges to water bodies to which water quality standards based on the criteria contained in this proposed rule will apply once this rule becomes final. See CTR Preamble at pg. 42185. The problem

arises for the proposal or adoption of new mixing zones where one is not currently authorized under an existing Basin Plan. The Preamble sets out numerous restrictions on the use of mixing zones, as follows:

A mixing zone should be established to ensure that the zone will not impair the integrity of the water body as a whole, the zone will not cause lethality to passing organisms, and, considering likely pathways of exposure, that there are no significant human health risks. For application of two-number aquatic life criteria as proposed in this rule, there may be up to two types of mixing zones. In the zone immediately surrounding the outfall, neither the acute nor the chronic criterion is met. The acute criterion is met at the edge of this zone. In the next mixing zone, the acute, but not the chronic, criterion is met. The chronic criterion is met at the edge of the second mixing zone. However, since both aquatic life and human health criteria are proposed in today's rule, the State may establish independent mixing zone policies for each. For any particular pollutant from any particular discharge, the magnitude, frequency, duration and mixing zone associated with each of the type of criteria may determine which one most limits the allowable discharge. Id.

The other potential problem arises because state-adopted mixing zones are subject to EPA review and approval, See 40 C.F.R. section 131.13. Because EPA approval is required, the question arises whether a federal rulemaking would accompany approval of mixing zones as it does with approval of state variances (which are also authorized under 40 C.F.R. section 131.13). If so, this would greatly restrict the utility of new or alternative mixing zones as an avenue for regulatory relief.

(*1) This cost trigger is \$200 per toxic pounds-equivalent for a facility under the low-end scenario, and \$500 per toxic pounds-equivalent for a category of dischargers under the high-end scenario. See EA at pg. 4.

(*2) In addition, pollutant load reductions were not calculated or credited for any pollutant for which an alternative regulatory approach was pursued. Id.

Response to: CTR-040-051

See response to CTR-004-009.

Comment ID: CTR-041-006b
Comment Author: Sacramento Reg Cnty Sanit Dist
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? N
CROSS REFERENCES G-04

Comment: Fifth, the District supports the preamble discussion on both interim permit limits and mixing zones as valid implementation procedures. In addition, however, the District specifically endorses the State's Permitting Task Force recommendations on these two subjects: (1) that interim effluent limits be calculated based on past performance plus future uncertainty, and (2) that the State Water Resources Control Board (SWRCB) should allow the establishment of both acute and chronic mixing zones.

Response to: CTR-041-006b

See response to CTR-004-009.

Comment ID: CTR-041-047

Comment Author: Sacramento Reg Cnty Sanit Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES

Comment: The Preamble to the California Toxics Rule (CTR), and the rules accompanying Economic Analysis (EA), place a great deal of emphasis on the ability of dischargers to use alternative regulatory approaches to comply with CTR criteria if the cost of treatment technology was prohibitively expensive. For example, the EA assumes that, if the estimated annualized cost for removing a pollutant exceeded a cost trigger,(*1) "dischargers would explore the use of alternative regulatory approaches to comply with CTR-based effluent limits." EA at.pg. 4(emphasis added). Based on this assumption, no treatment cost was estimated for the facility.(*2)

The types of alternative regulatory approaches assumed available for dischargers in California include phased total maximum daily loads (TMDLs), water quality standard variances, site-specific criteria, change in designated use, and alternative mixing zones. EA at pg. 4-5. The following sections will discuss each of EPA's proposed methods for regulatory relief and explain whether or not these methods can truly be used to provide relief from the CTR-based permit limits as anticipated by EPA. It should be noted that the actual language of the rule itself does not mention any of the methods of regulatory relief. Therefore, this analysis will be based solely upon the language contained in the Preamble to the CTR.

Alternative Mixing Zones

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The Preamble recognizes that several California Regional Water Quality Control Boards have adopted mixing zone provisions in their respective Basin Plans. These mixing zone provisions can be applied to discharges to water bodies to which water quality standards based on the criteria contained in this proposed rule will apply once this rule becomes final. See CTR Preamble at pg. 42185. The problem arises for the proposal or adoption of new mixing zones where one is not currently authorized under an existing Basin Plan. The Preamble sets out numerous restrictions on the use of mixing zones, as follows:

A mixing zone should be established to ensure that the zone will not impair the integrity of the water

body as a whole, the zone will not cause lethality to passing organisms, and, considering likely pathways of exposure, that there are no significant human health risks. For application of two-number aquatic life crime as proposed in this rule, there may be up to two types of mixing zones. In the zone immediately surrounding the outfall, neither the acute nor the chronic criterion is met. The acute criterion is met at the edge of this zone. In the next mixing zone, the acute, but not the chronic, criterion is met. The chronic criterion is met at the edge of the second mixing zone. However, since both aquatic life and human health criteria are proposed in today's rule, the State may establish independent mixing zone policies for each. For any particular pollutant from any particular discharge, the magnitude, frequency, duration and mixing zone associated with each of the type of criteria may determine which one most limits the allowable discharge. Id.

The other potential problem arises because state-adopted mixing zones are subject to EPA review and approval, See 40 C.F.R. section 131.13. Because EPA approval is required, the question arises whether a federal rulemaking would accompany approval of mixing zones as it does with approval of state variances (which are also authorized under 40-C.F.R. section 131.13). If so, this would greatly restrict the utility of new or alternative mixing zones as an avenue for regulatory relief.

(*1) This coat trigger is \$200 per toxic pounds-equivalent for a facility under the low-end scenario, and \$500 per toxic pounds-equivalent for a category of dischargers under the high-end scenario. See EA at pg. 4.

(*2) In addition, pollutant load reductions were not calculated or credited for any pollutant for which an alternative regulatory approach was pursued. Id.

Response to: CTR-041-047

See response to CTR-004-009.

Comment ID: CTR-043-002e
Comment Author: City of Vacaville
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? Y
CROSS REFERENCES C-22; C-24a; G-01a; G-04; G-09

Comment: 2. The following provisions of the rule are supported: (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury; and (4) the Preamble discussions regarding metals, translators, mixing zones and interim permit limits.

Response to: CTR-043-002e

See response to CTR-004-009.

Comment ID: CTR-044-003e
Comment Author: City of Woodland
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? Y
CROSS REFERENCES C-22; C-24a; C-01a; G-09; G-04

Comment: We have reviewed the proposed CTR and offer the following comments:

2. The following provisions of the rule are supported:
 - (1) adoption of metals criteria as dissolved concentrations;
 - (2) expression of the metals criteria as a function of the water-effect ratio;
 - (3) adoption of the proposed new human health criteria for mercury; and
 - (4) the Preamble discussions regarding metals translators, mixing zones, and interim permit limits.

Were the old human health criterion for mercury (0.012 ug/ l) to be adopted, the City would have to remove its discharge from Tule Canal and go to land disposal. The capital cost to do this would be \$22.1 million and the total present worth cost would be \$23.1 million (see Exhibit B, Required Capital improvements and Costs for Beryllium and Mercury). This would translate to an annual cost of \$3.1 million per year (at 7% over 10 years) and would require that monthly sewer service charges be increased by more than 100%.

Response to: CTR-044-003e

See response to CTR-004-009.

With respect to the comment about the economic impact of the old criterion for mercury 0.012 ug/l, EPA has not evaluated these costs since the CTR does not promulgate a mercury criteria of 0.012 ug/l.

Comment ID: CTR-044-042
Comment Author: City of Woodland
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? N
CROSS REFERENCES

Comment: The Preamble to the California Toxics Rule (CTR), and the rules accompanying Economic Analysis (EA), place a great deal of emphasis on the ability of dischargers to use alternative regulatory approaches to comply with CTR criteria if the cost of treatment technology was prohibitively expensive. For example, the EA assumes that, if the estimated annualized cost for removing a pollutant exceeded a cost trigger,(*1) "dischargers would explore the use of alternative regulatory approaches to comply with CTR-based effluent limits." EA at pg. 4(emphasis added). Based on this assumption, no treatment cost was estimated for the facility.(*2)

The types of alternative regulatory approaches assumed available for dischargers in California include phased total maximum daily loads (TMDLs), water quality standard variances, site-specific criteria, change in designated use, and alternative mixing zones. EA at pg. 4-5. The following sections will discuss each of EPA's proposed methods for regulatory relief and explain whether or not these methods can truly be used to provide relief from the CTR-based permit limits as anticipated by EPA. It should be noted that the actual language of the rule itself does not mention any of the methods of regulatory relief. Therefore, this analysis will be based solely upon the language contained in the Preamble to the CTR.

Alternative Mixing Zones

One of the few avenues that may actually provide some regulatory relief is mixing zones. The Preamble to the CTR describes a mixing zone as a limited area or volume of water where initial dilution of a discharge takes place and where water quality standards can be exceeded. Mixing zones have been applied in the water quality standards program since its inception. The present water quality standards regulations allow states to adopt acute and chronic mixing zones as a matter of state discretion, so long as the state's mixing zone protects the designated uses, See 40 C.F.R. section 131.13.

The Preamble recognizes that several California Regional Water Quality Control Boards have adopted mixing zone provisions in their respective Basin Plans. These mixing zone provisions can be applied to discharges to water bodies to which water quality standards based on the criteria contained in this proposed rule will apply once this rule becomes final. See CTR Preamble at pg. 42185. The problem arises for the proposal or adoption of new mixing zones where one is not currently authorized under an existing Basin Plan. The Preamble sets out numerous restrictions on the use of mixing zones, as follows:

A mixing zone should be established to ensure that the zone will not impair the integrity of the water body as a whole, the zone will not cause lethality to passing organisms, and, considering likely pathways of exposure, that there are no significant human health risks. For application of two-number aquatic life criteria as proposed in this rule, there may be up to two types of mixing zones. In the zone immediately surrounding the outfall, neither the acute nor the chronic criterion is met. The acute criterion is met at the edge of this zone. In the next mixing zone, the acute, but not the chronic, criterion is met. The chronic criterion is met at the edge of the second mixing zone. However, since both aquatic life and human health criteria are proposed in today's rule, the State may establish independent mixing zone policies for each. For any particular pollutant from any particular discharge, the magnitude, frequency, duration and mixing zone associated with each of the type of criteria may determine which one most limits the allowable discharge. Id.

The other potential problem arises because state-adopted mixing zones are subject to EPA review and approval, See 40 C.F.R. section 131.13. Because EPA approval is required, the question arises whether a federal rulemaking would accompany approval of mixing zones as it does with approval of state variances (which are also authorized under 40-C.F.R. section 131.13). If so, this would greatly restrict

the utility of new or alternative mixing zones as an avenue for regulatory relief.

(*1) This coat trigger is \$200 per toxic pounds-equivalent for a facility under the low-end scenario, and \$500 per toxic pounds-equivalent for a category of dischargers under the high-end scenario. See EA at pg. 4.

(*2) In addition, pollutant load reductions were not calculated or credited for any pollutant for which an alternative regulatory approach was pursued. Id.

Response to: CTR-044-042

See response to CTR-004-009.

Comment ID: CTR-045-008
Comment Author: Sausalito-Marin Sanitary Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:

Attachments? Y

CROSS REFERENCES

Comment: The District supports many of the items included in the proposed CTR:

EPA's policies and guidance regarding the application of mixing zones and dilution credits.

Response to: CTR-045-008

See response to CTR-004-009.

Comment ID: CTR-052-002d
Comment Author: East Bay Dischargers Authority
Document Type: Sewer Authority
State of Origin: SC
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References: Letter CTR-052 incorporates by reference letters CTR-035 and CTR-054
Attachments? Y
CROSS REFERENCES C-22; C-01a; G-09; G-04

Comment: EPA will recall the State Water Quality Plans Task Forces that included all stakeholders, including EPA. The Authority appreciates the incorporation of many of the consensus recommendations

from the Task Forces into the CTR, including:

- * Adoption of the metals criteria as dissolved concentrations and the expression of the criteria as a function of the water-effect ratio
- * Adoption of the proposed new human health criterion for mercury
- * Preamble discussions regarding metals translators, mixing zones, and interim permit limits

Response to: CTR-052-002d

See response to CTR-004-009.

Comment ID: CTR-052-019

Comment Author: East Bay Dischargers Authority

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References: Letter CTR-052 incorporates by reference letters CTR-035 and CTR-054

Attachments? Y

CROSS REFERENCES

Comment: C. RECOMMENDATIONS FOR MODIFICATIONS TO THE CTR AND EA

EPA should mandate that the State Board continue to use defensible dilution credits. Only if documented human health and/or aquatic toxicity problems are shown to exist in specific segments of water bodies should the State and Regional Boards be allowed to consider modifications to continued use of dilution credits.

Response to: CTR-052-019

EPA does not believe that it is appropriate to mandate that the State use dilution credits or mixing zones because these decisions are most appropriately addressed at the State and local level. The State has discretion to make modifications to its mixing zone policy based on any scientific or policy grounds as long as the modifications are consistent with State and Federal law. The State is not required to limit modifications to its mixing zone policy only to those cases where human health or toxicity problems are shown to exist in specific segments of water bodies. States may always be more stringent than EPA in adopting water quality standards. See section 510 of the Clean Water Act.

Comment ID: CTR-054-004b

Comment Author: Bay Area Dischargers Assoc.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? Y

CROSS REFERENCES G-09; G-04

Comment: BADA supports the Preamble discussions regarding metals translators, mixing zones, and interim permit limits. Translators and mixing zones will provide a better scientific basis for the application of the criteria and will go a long way toward protecting against the imposition of unnecessary or unreasonable controls. Interim permit limits will allow dischargers faced with potential attainability problems to pursue reasonable actions, such as pollution prevention, treatment plant optimization, pollutant trading, TMDLS, etc. prior to being faced with final effluent limitations. BADA endorses the recommendation of the State Plan Public Task Forces on the issue of interim limits.

Response to: CTR-054-004b

See response to CTR-004-009.

Comment ID: CTR-054-046

Comment Author: Bay Area Dischargers Associati

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES

Comment: The Preamble to the California Toxics Rule (CTR), and the rules accompanying Economic Analysis (EA), place a great deal of emphasis on the ability of dischargers to use alternative regulatory approaches to comply with CTR criteria if the cost of treatment technology was prohibitively expensive. For example, the EA assumes that, if the estimated annualized cost for removing a pollutant exceeded a cost trigger,(*1) "dischargers would explore the use of alternative regulatory approaches to comply with CTR-based effluent limits." EA at.pg. 4(emphasis added). Based on this assumption, no treatment cost was estimated for the facility.(*2)

The types of alternative regulatory approaches assumed available for dischargers in California include phased total maximum daily loads (TMDLs), water quality standard variances, site-specific criteria, change in designated use, and alternative mixing zones. EA at pg. 4-5. The following sections will discuss each of EPA's proposed methods for regulatory relief and explain whether or not these methods can truly be used to provide relief from the CTR-based permit limits as anticipated by EPA. It should be noted that the actual language of the rule itself doesnot mention any of the methods of regulatory relief. Therefore, this analysis will be based solely upon the language contained in the Preamble to the CTR.

Alternative Mixing Zones

One of the few avenues that may actually provide some regulatory relief is mixing zones. The Preamble to the CTR describes a mixing zone as a limited area or volume of water where initial dilution of a

discharge takes place and where water quality standards can be exceeded. Mixing zones have been applied in the water quality standards program since its inception. The present water quality standards regulations allows states to adopt acute and chronic mixing zones as a matter of state discretion, so long as the state's mixing zone protects the designated uses, See 40 C.F.R. section 131.13.

The Preamble recognizes that several California Regional Water Quality Control Boards have adopted mixing zone provisions in their respective Basin Plans. These mixing zone provisions can be applied to discharges to water bodies to which water quality standards based on the criteria contained in this proposed rule will apply once this rule becomes final. See CTR Preamble at pg. 42185. The problem arises for the proposal or adoption of new mixing zones where one is not currently authorized under an existing Basin Plan. The Preamble sets out numerous restrictions on the use of mixing zones, as follows:

A mixing zone should be established to ensure that the zone will not impair the integrity of the water body as a whole, the zone will not cause lethality to passing organisms, and, considering likely pathways of exposure, that there are no significant human health risks. For application of two-number aquatic life crime as proposed in this rule, there may be up to two types of mixing zones. In the zone immediately surrounding the outfall, neither the acute nor the chronic criterion is met. The acute criterion is met at the edge of this zone. In the next mixing zone, the acute, but not the chronic, criterion is met. The chronic criterion is met at the edge of the second mixing zone. However, since both aquatic life and human health criteria are proposed in today's rule, the State may establish independent mixing zone policies for each. For any particular pollutant from any particular discharge, the magnitude, frequency, duration and mixing zone associated with each of the type of criteria may determine which one most limits the allowable discharge. Id.

The other potential problem arises because state-adopted mixing zones are subject to EPA review and approval, See 40 C.F.R. section 131,13. Because EPA approval is required, the question arises whether a federal rulemaking would accompany approval of mixing zones as it does with approval of state variances (which are also authorized under 40-C.F.R. section 131.13). If so, this would greatly restrict the utility of new or alternative mixing zones as an avenue for regulatory relief.

(*1) This coat trigger is \$200 per toxic pounds-equivalent for a facility under the low-end scenario, and \$500 per toxic pounds-equivalent for a category of dischargers under the high-end scenario. See EA at pg. 4.

(*2) In addition, pollutant load reductions were not calculated or credited for any pollutant for which an alternative regulatory approach was pursued. Id.

Response to: CTR-054-046

See response to CTR-004-009.

Comment ID: CTR-056-007
Comment Author: East Bay Municipal Util. Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/22/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References: Letter CTR-056 incorporates by reference letter CTR-054
Attachments? N
CROSS REFERENCES

Comment: Second, EBMUD would like to express to EPA its support for inclusion of:

* EPA's policy regarding and guidance on the application of mixing zones and dilution credits,

Response to: CTR-056-007

See response to CTR-004-009.

Comment ID: CTR-058-008
Comment Author: Western States Petroleum Assoc
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? Y
CROSS REFERENCES

Comment: 7. Mixing Zones. WSPA supports EPA's recognition of the use of mixing zones.

In proposing the rule, EPA has recognized the appropriate role of mixing zones in setting and achieving WQBELS. EPA regulations, policy and guidance (e.g., the Technical Support Document for WQBELS) amply support their use in protecting receiving water.

WSPA supports the use of sound science in determining mixing zones and the actual degree of mixing achieved by today's engineered diffusers in establishing mixing zones and dilution credit. EPA should encourage states and regulators to make use of sound science, rather than arbitrary dilution factors, in establishing mixing zones. To this end WSPA supports additional EPA outreach to the states and state regulators to achieve a comfort level with using sound science and avoiding arbitrary decisions.

Response to: CTR-058-008

See response to CTR-004-009.

Comment ID: CTR-060-002
Comment Author: San Diego Gas and Electric
Document Type: Electric Utility
State of Origin: CA
Represented Org:
Document Date: 09/26/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES

Comment: PROVISIONS SDG&E SUPPORTS

EPA has included in the proposed CTR provisions which are reasonable and with which SDG&E supports. These include:

Mixing zones

Acute and chronic mixing zones play an important role in the implementation of water quality based effluent limits. SDG&E supports EPA's inclusion of the use of mixing zones in the proposed rule (see 62 Fed. Reg. at 42206, Col. 2).

Response to: CTR-060-002

See response to CTR-004-009.

Comment ID: CTR-066-010

Comment Author: Delta Diablo Sanitation Dist.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES

Comment: Our preliminary review of the CTR finds several areas that we believe are positive changes and will enhance the rulemaking. The areas that we support are as follows:

* EPA's policies and guidance regarding the application of mixing zones and dilution credits.

Response to: CTR-066-010

See response to CTR-004-009.

Comment ID: CTR-077-002

Comment Author: Bay Planning Coalition

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES

Comment: Mixing Zone Policy

According to the Guidelines, the Mixing zone calculations as applied to dredge sediment testing are performed in accordance with the "Green Book" (EPA/Corps 1991). We support EPA's recognition of the use of mixing zones in the Toxics Rule.

Response to: CTR-077-002

See response to CTR-004-009.

Comment ID: CTR-081-002h

Comment Author: West County Agency

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES G-04; C-24a; G-02; C-22; G-09; C-01a; C-08a

Comment: * There are many aspects of the CTR that we support. These include: a) Application of interim limits while special studies are performed. b) Approach to water effect ratios for determining site specific criteria. c) Inclusion of provision for compliance schedules. However, this should be modified to allow inclusion of compliance schedules of up to 15 years in permits if deemed appropriate by Regional Boards. d) Metals criteria expressed as dissolved rather than total recoverable concentrations. e) EPA's guidance to Regional Boards regarding use of translators. f) EPA's proposal to create a rebuttal presumption for Water Effects Ratios, g) Revised human health criteria for mercury h) Decision to not promulgate human health criteria at this time in light of issues surrounding health criteria for arsenic. i) EPA's policies regarding application of mixing zones and dilution credits.

Response to: CTR-081-002h

See response to CTR-004-009.

Comment ID: CTR-085-011

Comment Author: Camarillo Sanitary District

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES

Comment: On several aspects of the California Toxics Rule, the District is in agreement with CASA and SCAP comments:

* The EPA's policies and guidance regarding the application of mixing zones and dilution credits.

Response to: CTR-085-011

See response to CTR-004-009.

Comment ID: CTR-086-004h

Comment Author: EOA, Inc.

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org: California Dent

Document Date: 09/26/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References: Letter CTR-086 incorporates by reference letter CTR-035

Attachments? N

CROSS REFERENCES G-01; C-22; G-09; C-24a; C-24; K-03; G-04; G-02

Comment: Regulatory Flexibility and Relief

CDA supports language in the CTR Preamble that references and endorses recommendations of the State Task Forces including in part the use of.

* reasonable potential analyses * dissolved metals criteria * translators * water effects ratios * site specific objectives * innovative TMDL processes such as effluent trading * performance based interim limits * chronic and acute mixing zones, and * compliance schedules in NPDES permits.

Response to: CTR-086-004h

See response to CTR-004-009.

Comment ID: CTR-089-001d

Comment Author: Las Virgenes Mncpl Water Dist.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References:

Attachments? N

CROSS REFERENCES C-22; C-01a; C-08a; K-01; G-02; G-09

Comment: The draft California Toxics Rule (CTR) is clearly the product of substantial effort by USEPA staff, and we applaud this effort and its intent. On several issues of concern to public utilities, the CTR strikes a good balance between the need to promulgate standards and the need to base those standards on sound science. Examples include the use of dissolved concentrations rather than the total recoverable concentrations for metals, the deferral of human health criteria for arsenic until adequate information is available, and the revision of the human health criterion for mercury. We are also pleased with the CTR's guidance and flexibility, on mixing zones and dilution credits, total maximum daily loads (TMDLs), compliance schedules, and translators.

Response to: CTR-089-001d

See response to CTR-004-009.

Comment ID: CTR-090-002d

Comment Author: C&C of SF, Public Util. Commis.

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-05 Mixing Zones&Dilution Credit

References: Letter CTR-090 incorporates by reference letters CTR-035 and CTR-054

Attachments? Y

CROSS REFERENCES C-17a; C-24a; C-22; G-02; G-04

Comment: There are many features of the proposed rule which we strongly endorse, specifically:

- * the use of the latest IRIS values for human health criteria, it is essential that the criteria be based on the latest scientific and environmental information;
- * recognition that the dissolved fraction of metals, rather than the total recoverable, better reflect the aquatic toxicity of metals;
- * recognition that for certain metals (e.g. copper and zinc) ambient water chemistry is critical in determining toxicity thereby endorsing the Water Effects Ratio;
- * recognition and strong endorsement of the multi-tiered mixing zones for acute, chronic and human health effects; and
- * recognition of interim limits and compliance schedules as appropriate implementation strategies,

Response to: CTR-090-002d

See response to CTR-004-009.

Comment ID: CTR-092-007
Comment Author: City of San Jose, California
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References: Letter CTR-092 incorporates by reference letter CTR-035
Attachments? Y
CROSS REFERENCES

Comment: Mixing Zones

The City fully supports the discussion and allowance of mixing zones for both acute and chronic criteria in accordance with EPA's water quality standards program. The establishment of mixing zones should be allowed in those instances where designated uses remain unimpaired, where the zone does not result in lethal doses to resident organisms, and where human health aspects are adequately protected.

Response to: CTR-092-007

See response to CTR-004-009.

Comment ID: CTRH-001-022b
Comment Author: Julio Guerra
Document Type: Public Hearing
State of Origin: CA
Represented Org: City of Merced
Document Date: 09/17/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? N
CROSS REFERENCES G-07

Comment: There are good things in here regarding the variances and the recognition of the existence of ephemeral streams. And the naturally occurring pollution, you know, has to be taken into account when it actually applies to water quality standards.

I would observe in that regard that the NPDES program recognizes that intake credits may sometimes be appropriately applied to adjust effluent limits. But in the NPDES language it states that that only can occur when you discharge into the same water body that you take the water from.

In our case, of course, we use groundwater. And, as an example, it may contain arsenic. And the arsenic isn't really removed from the water before it is discharged to surface water. We don't fit the mold of being authorized those intake credits, because we're not discharging into the same water body that we draw water from.

Response to: CTRH-001-022b

EPA recognizes that a same body of water demonstration may be more difficult for a municipality using groundwater; however, groundwater as a category is not excluded necessarily from eligibility for a same body of water determination. EPA's rationale for intake credits is based on two guiding principles: 1) the source water and receiving water are hydrologically connected; and, 2) that the pollutant would have ended up in the receiving water had the man-induced removal and reintroduction of the pollutant not occurred. If a same body of water determination cannot be made, there are other more appropriate forms of flexibility for inter-water body transfers of pollutants where the discharger is unable to comply with its new or more stringent water quality-based effluent limit, e.g., variances, compliance schedules.

Comment ID: CTRH-001-024b
Comment Author: Michelle Pla
Document Type: Public Hearing
State of Origin: CA
Represented Org: S.F. Public Utilities Com
Document Date: 09/17/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? N
CROSS REFERENCES g-02; c-22; c-24a; c-17a

Comment: MS. PLA: My name is Michelle Pla. I'm with the Public Utilities Commission, City and County of San Francisco.

I made the comment on my card that I also said that I would try to be constructive, and so I'm going to follow my mentor here, Phil Bobel, and say that there are some things in this rule that we're very pleased to see.

We're very pleased to see use of the latest scientific information, particularly the use of latest IRIS, I-R-I-S, numbers-for human health. We're very pleased that you're using dissolved versus total recoverable form for the metals.

We're very pleased to see recognition of the water effects ratios. We're pleased to see recognition for a multi-tiered mixing zone for acute and chronic human health effects and hope that the state pays particular attention to that.

We do have a problem with the way you've described compliance schedules and hope to be working strictly by the state on that as well. We think that the five-year system is fairly shortsighted, and -we can't even do FMDSLs in five years.

Response to: CTRH-001-024b

See response to CTR-004-009.

Comment ID: CTRH-001-032c
Comment Author: Dave Brent
Document Type: Public Hearing
State of Origin: CA

Represented Org: CA Water Qual. Task Force
Document Date: 09/17/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? N
CROSS REFERENCES C-22; C-24a

Comment: I would like to take this time to note that I think it contains some important elements that we agree with and believe are reflective of the impact. These include the uses of dissolved metals and the provisions which will enable the state to use mixing zones and water effects ratios and establish site-specific objectives.

Response to: CTRH-001-032c

See response to CTR-004-009.

Comment ID: CTRH-001-057g
Comment Author: Dave Tucker
Document Type: Public Hearing
State of Origin: CA
Represented Org: San Jose Env. Serv. Dept.
Document Date: 09/17/97
Subject Matter Code: G-05 Mixing Zones&Dilution Credit
References:
Attachments? N
CROSS REFERENCES K-03; C-24a; G-04; G-07; G-09; C-22

Comment: Some of the flexibility that the City highly supports is the water effect ratio investigations to adjust statewide criteria to site-specific conditions; the interim limits concept while special studies are being conducted by the dischargers and other entities; a variance procedure to allow dischargers to achieve progress toward effluent limit attainment without violating applicable water quality standards; dissolved criteria for metals to reflect the toxicological conditions; translators to adjust dissolved criteria to total permit limitations; trading programs to attain and maintain water quality; and a mixing zone that reflects true instream pollutant conditions and that protects beneficial uses.

Response to: CTRH-001-057g

See response to CTR-004-009.

Subject Matter Code: G-06 NWQI

Comment ID: CTR-061-020

Comment Author: G. Fred Lee & Associates

Document Type: Academia

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-06 NWQI

References:

Attachments? Y

CROSS REFERENCES

Comment: National Water Quality Inventory

At the September 17, 1997 hearing on the proposed CTR, the US EPA Region 9 made available on the table in the hearing room a copy of the US EPA Fact Sheet "National Water Quality Inventory: 1994 Report to Congress" (1995) evidently to try to convince the hearing participants that the adoption of the proposed CTR criteria was necessary to protect the Nation's waters from the impact of toxics that are regulated by the proposed CTR. Shortly after the release of that report to Congress, I conducted a review of the procedures used by the US EPA and the states in determining the presence of so-called "impaired" waters and found that the Agency had again used unreliable procedures for designating impaired waters. Enclosed is a copy of a report, "Unreliable Reporting of Water Quality Impairment by the US EPA's National Water Quality Inventory," Feb (1996) that I have prepared on this issue. The Agency dictates to the states that they must list as impaired any waterbody for which there is an exceedance of a water quality criterion more than once in three years. The Agency ignores the well-known fact that many of the exceedances are administrative, arising from the overly protective nature of the criteria that results from the failure of the criteria and the water effects ratio approach to properly incorporate the aquatic chemistry of the regulated constituents into assessing potential toxicity to aquatic life. The actual amount of real use-impaired waters of concern to the public is far less than that predicted by the US EPA "Fact Sheet."

Response to: CTR-061-020

First, EPA notes that the National Water Quality Inventory Reports (also referred to as the CWA Section 305(b) report) and the guidance used by States and Indian Tribes for developing these reports are outside of the scope of today's rule. The Agency will, however, take the commenter's concerns under advisement and consider those concerns expressed in the review of the Section 305(b) guidance for preparing the reports which EPA jointly develops with States and Indian Tribes.

Subject Matter Code: G-07 Variances

Comment ID: CTR-004-007

Comment Author: South Bayside System Authority

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: G-07 Variances

References:

Attachments? N

CROSS REFERENCES

Comment: Available Regulatory Relief under the California Toxics Rule

The Preamble to the California Toxics Rule (CTR), and the rules accompanying Economic Analysis (EA), place a great deal of emphasis on the ability of dischargers to use alternative regulatory approaches to comply with CTR criteria if the cost of treatment technology was prohibitively expensive. For example, the EA assumes that, if the estimated annualized cost for removing a pollutant exceeded a cost trigger,(*1) "dischargers would explore the use of alternative regulatory approaches to comply with CTR-based effluent limits." EA at. pg. 4 (emphasis added). Based on this assumption, no treatment cost was estimated for the facility. (*2)

The types of alternative regulatory approaches assumed available for dischargers in California include phased total maximum daily loads (TMDLs), water quality standard variances, site-specific criteria, change in designated use, and alternative mixing zones. EA at pg. 4-5. The following sections will discuss each of EPA's proposed methods for regulatory relief and explain whether or not these methods can truly be used to provide relief from the CTR-based permit limits as anticipated by EPA. It should be noted that the actual language of the rule itself does not mention any of the methods of regulatory relief. Therefore, this analysis will be based solely upon the language contained in the Preamble to the CTR.

Water Quality Standard Variances/ Designated Use Modifications

The Preamble to the CTR discusses variances as a form of regulatory relief that might be pursued by dischargers. See 62 Fed.Rec., 42,185-6. The Preamble provides that States may adopt a statewide policy (or Regional Boards may adopt Basin-wide policies) to allow water quality standard variances for individual dischargers. The variance Policy Would allow the State or Regional Board to grant a variance to an individual permittee from a water quality standard,(*5) which is the basis of a water quality-based effluent limitation in a permit. However, there are some serious restrictions placed on the use of variances. The following lays out these restrictions:

* Variances are not allowed for new or recommencing dischargers.

* Variances are discharger and pollutant specific. In other words, the water quality standard variance applies only to the permittee requested the variance and only to the pollutant or pollutants specified in the variance.

* Once a variance has been approved by the State, it must be submitted to EPA for approval. - EPA will only approve variances if consistent with the substantive requirements set out at 40 CFR Part 131 for

removing a designated use.(*6)

* EPA will only approve state variances if specific provisions are included.(*7)

* EPA would have to tinker with a federal rulemaking to make the necessary changes to this rule to allow for State-approved variances. The Preamble explains this restriction as follows:

EPA, however, cautions California and the public that promulgation of this federal rule removes most of the flexibility available to the State for modifying its standards on a discharger-specific or stream-specific basis. For example, variances and site-specific criteria development are actions sometimes adopted by states. These are optional policies under terms of the federal water quality standards regulation. Except for the water-effect ratio procedure for certain metals, EPA has not incorporated either optional policy, in general, in this proposed rulemaking, that is, EPA has not generally authorized State modifications of federal water quality. Each of these types of modifications will, in general, require federal rulemaking on a case by case basis to change the federal rule. Because of the time consuming nature of reviewing such requests, limited federal resources, and the need for the Agency to move into other priority program areas in establishing environmental controls, EPA alerts California and the public that a prompt Agency response is unlikely. The best course of action, if such provisions are desired, is for the State to adopt its own standards and take advantage, if it so chooses, of the flexibility offered by these optional provisions.(*8)

Because of all of the restrictions placed on their use, variances are not really a viable option for regulatory relief. The only way for variances to be a viable option would be for EPA to incorporate a variance policy into the proposed rule that would authorize State modifications of federal water quality standards.

(*1) This cost trigger is \$200 per toxic pounds-equivalent for a facility under the low-end scenario, and \$500 per toxic pounds-equivalent for a category of dischargers under the high-end scenario, See EA at pg. 4.

(*2) In addition, pollutant load reductions were not calculated or credited for any pollutant for which an alternative regulatory approach was pursued. Id.

(*4) EPA, Guidance for Water Quality-based Decisions: The TMDL Process, EPA Doc. No. 440/4-91-001 at pg. 20 (April 1991) (Emphasis added).

(*5) The variance would allow the permittee time to achieve reasonable progress towards attaining a specific water quality based effluent limitation, without violating CWA section 402(a)(1), which requires that NPDES permittees meet all applicable water quality standards. See 62 Fed.Reg. 42185-6. A variance does not effect the corresponding water quality standard for the water body receiving the discharge. Variances are designed to preserve the underlying water quality standard over the long term, while providing flexibility to individual dischargers in complying with permit limits based on the standards. When a variance is granted, the discharger is assured compliance during the term of a variance, as long as all variance conditions are met. Id.

(*6) Specifically, the State's policy must require the inclusion of a demonstration that a water quality standard is unattainable, based on one or more of the following grounds: 1. Naturally occurring pollutant concentrations prevent the attainment of the water quality standard; 2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the water quality standard, unless these

conditions may be compensated for by the discharge of sufficient volume of effluent to enable the standard to be met without violating State water conservation requirements; 3. Human-caused conditions or sources of pollution prevent the attainment of the water quality standard and cannot be remedied, or would cause more environmental damage to correct than to leave in place; 4. Dams, diversions or other types of hydrologic modifications preclude the attainment of a water quality standard, 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 standard; 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 chemical water quality, preclude attainment of the water quality standard; or 6. Controls more stringent than those required by CWA sections 301 (b) and 306 would result in substantial and widespread economic and social impact.

(*7) The required provisions are as follows: 1. The State will include each individual variance as part of its water quality standard or water quality plan; 2. The variance will include documentation that treatment more advanced than that required by CWA section 301(b) and 306 has been carefully considered, and that alternative effluent control strategies have been evaluated; 3. The underlying, more stringent criterion will be maintained and will be binding on all other dischargers; 4. The discharger who will be given a variance for one particular constituent will be required to meet the applicable criteria for other constituents; 5. The variance will be granted for a specific period of time and must be rejustified upon expiration, but at least every three years; 6. Reasonable progress will be made towards meeting the underlying standards; 7. The variance will not likely jeopardize the continued existence of any threatened or endangered species listed under Section 4 of the Endangered Species Act or result in the destruction or adverse modification of such species' critical habitat; and 8. The variance will be subjected to public notice, comment, and hearing. See CWA section 303(c)(t) and 40 CFR 131.20. The public notice should contain a clear description of the impact of the variances upon achieving the water quality standard in the water body.

(*8) See CTR Preamble at pg. 42195-6. Further guidance on variance policies is provided in EPA's 1994 Water Quality Standards Handbook, Chapters 2 and 5 (EPA 823-B-94-005a, August 1994).

Response to: CTR-004-007

EPA disagrees that variances are not a viable option for regulatory relief for dischargers. The ability of States to develop site specific criteria or to grant variances and exceptions to water quality standards are optional procedures that are available to States (See 40 CFR 131.11(b)(ii) and 131.3). It is neither a statutory nor a regulatory requirement to develop site specific criteria or to issue variances.

Since the criteria in this rule are Federal criteria that are applicable in the State, the State cannot unilaterally establish site-specific criteria or issue variances to the Federal rule. Such provisions are still available to the State, but are more cumbersome as it requires the State to meet all the regulatory requirements for developing such procedures, but then EPA would need to undertake a Federal rulemaking process on a case by case basis in order to effectuate changes to the rule in accordance with the Administrative Procedures Act. EPA emphasizes that this is a strong reason for California to act to adopt its own numeric criteria even after this Federal promulgation action is taken.

The basis for assuming that regulatory relief would be available under certain circumstances for purposes of estimating costs is explained in the economic analysis for this rule. Note that EPA's high end cost estimate assumed that no regulatory relief would be available to dischargers. See also response to comment CTR-032-004 (Category E-01m).

Comment ID: CTR-015-005
Comment Author: Eastern Municipal Water Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/23/97
Subject Matter Code: G-07 Variances
References:
Attachments? N
CROSS REFERENCES

Comment: Variances (FR p. 42185, Preamble section F.3.)

The Agency describes the procedures and demonstrations that any state-adopted variance policy must contain, and also states that the Agency must approve the policy. Additionally, should any variance from a water quality criterion subsequently result from the state policy, it is indicated that a federal rulemaking must occur to recognize each variance from the Rule. Is this true? Agency "approval" is required, according to the Agency's Water Quality Standards Handbook (1994). If the Agency approves a state variance policy, then actions under the policy should follow the policy procedures, whether the criteria are federal or state. The last part of these statements essentially denies modifications to the water quality criteria. The Agency is effectively removing the flexibility which seems to be under the purview of the state.

Response to: CTR-015-005

See response to CTR-004-007.

Comment ID: CTR-035-035
Comment Author: Tri-TAC/CASA
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-07 Variances
References:
Attachments? N
CROSS REFERENCES

Comment: pp. 42185-42186 -- Variances The Preamble encourages the SWRCB to adopt a policy allowing dischargers to apply for variances, but stops short of adopting a provision in the CTR allowing variances. EPA further states that the granting of variances will require a federal rulemaking on a case-by-case basis, and that "a prompt Agency response is unlikely." As with site-specific criteria, we object, on the one hand, to EPA's assumption in the cost analysis that regulatory relief mechanisms such as variances will not only be available but will be granted to dischargers, while on the other hand EPA essentially states that it does not intend to grant variances. We believe these approaches conflict, and that EPA must resolve these inconsistencies before finalizing the CTR- Therefore, we strongly urge EPA

to include a provision in the CTR authorizing the issuance of variances. However, we recommend that EPA provide flexibility in variance procedures to allow for such things as variances without federal rulemaking requirements, and consideration of multiple discharger (or water body) variances, consistent with the policy of fostering collaborative, watershed-based solutions to water quality problems.

Response to: CTR-035-035

See response to CTR-005-009

Comment ID: CTR-040-049

Comment Author: County of Sacramento Water Div

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-07 Variances

References: Letter CTR-040 incorporates by reference letter CTR-027

Attachments? Y

CROSS REFERENCES

Comment: The Preamble to the California Toxics Rule (CTR), and the rules accompanying Economic Analysis (EA), place a great deal of emphasis on the ability of dischargers to use alternative regulatory approaches to comply with CTR criteria if the cost of treatment technology was prohibitively expensive. For example, the EA assumes that, if the estimated annualized cost for removing a pollutant exceeded a cost trigger,(*1) dischargers would explore the use of alternative regulatory approaches to comply with CTR-based effluent limits." EA at.pg. 4 (emphasis added). Based on this assumption, no treatment cost was estimated for the facility.(*2)

The types of alternative regulatory approaches assumed available for dischargers in California include phased total maximum daily loads (TMDLs), water quality standard variances, site-specific criteria, change in designated use, and alternative mixing zones. EA at pg. 4-5. The following sections will discuss each of EPA's proposed methods for regulatory relief and explain whether or not these methods can truly be used to provide relief from the CTR-based permit limits as anticipated by EPA. It should be noted that the actual language of the rule itself does not mention any of the methods of regulatory relief. Therefore, this analysis will be based solely upon the language contained in the Preamble to the CTR.

Water Quality Standard Variances/ Designated Use Modifications

The Preamble to the CTR discusses variances as a form of regulatory relief that might be pursued by dischargers. See 62 Fed. Reg. 42,185-6. The Preamble provides that States may adopt a statewide policy (or Regional Boards may adopt Basin-wide policies) to allow water quality standard variances for individual dischargers. The variance policy would allow the State or Regional Board to grant a variance to an individual permittee from a water quality standard,(*5) which is the basis of a water quality-based effluent limitation in a permit. However, there are some serious restrictions placed on the use of variances. The following lays out these restrictions:

* Variances are not allowed for new or recommencing dischargers. * Variances are discharger and pollutant specific. In other words, the

water quality standard variance applies only to the permittee requesting the variance and only to the pollutant or pollutants specified in the variance. * Once a variance has been approved by the State, it must be submitted to EPA for approval. - EPA will only approve variances if consistent with the substantive requirements set out at 40 CFR Part 131 for removing a designated use.(*6) - EPA will only approve state variances if specific provisions are included.(*7) - EPA would have to undertake a federal rulemaking to make the necessary changes to this rule to allow for State-approved variances, The Preamble explains this restriction as follows:

EPA, however, cautions California and the public that promulgation of this federal rule removes most of the flexibility available to the State for modifying its standards on a discharger-specific or stream-specific basis. For example, variances and site-specific criteria development are actions sometimes adopted by states. These are optional policies under terms of the federal water quality standards regulation. Except for the water-effect ratio procedure for certain metals, EPA has not incorporated either optional policy, in general, in this proposed rulemaking, that is, EPA has not generally authorized State modifications of federal water quality standards. Each of these types of modifications will, in general, require federal rulemaking on a case by case basis to change the federal rule. Because of the time consuming nature of reviewing such requests, limited federal resources, and the need for the Agency to move into other priority program areas in establishing environmental controls, EPA alerts California and the public that a prompt Agency response is unlikely. The best course of action, if such provisions are desired, is for the State to adopt its own standards and take advantage, if it so chooses, of the flexibility offered by these optional provisions. (*8)

Because of all of the restrictions placed on their use, variances are not really a viable option for regulatory relief. The only way for variances to be a viable option would be for EPA to incorporate a variance policy into the proposed rule that would authorize State modifications of federal water quality standards.

(*1) This cost trigger is \$200 per toxic pounds-equivalent for a facility under the low-end scenario, and \$500 per toxic pounds-equivalent for a category of dischargers under the high-end scenario. See EA at pg. 4.

(*2) In addition, pollutant load reductions were not calculated or credited for any pollutant for which an alternative regulatory approach was pursued. Id.

(*5) The variance would allow the permittee to achieve reasonable progress towards attaining a specific water quality-based effluent limitation, without violating CWA section 402(a)(1), which requires that NPDES permittees meet all applicable water quality standards, See 62 Fed.Reg. 42185-6. A variance does not effect the corresponding water quality for the water body receiving the discharge. Variances are designed to preserve the underlying water quality standard over the long term, while providing flexibility to individual dischargers in complying with permit limits based on the standards. When a variance is granted, the discharger is assured compliance during the term of a variance, as long as all variance conditions are met. Id.

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- 2.

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(*8) See CTR Preamble at pg. 42185-6. Further guidance on variance policies is provided in EPA's 1994 Water Quality Standards Handbook, Chapters 2 and 5 (EPA 823-B-94-005a, August 1994).

Response to: CTR-040-049

See Response to CTR-035-035.

Comment ID: CTR-041-045

Comment Author: Sacramento Reg Cnty Sanit Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-07 Variances

References:

Attachments? N

CROSS REFERENCES

Comment: The Preamble to the California Toxics Rule (CTR), and the rules accompanying Economic Analysis (EA), place a great deal of emphasis on the ability of dischargers to use alternative regulatory

approaches to comply with CTR criteria if the cost of treatment technology was prohibitively expensive. For example, the EA assumes that, if the estimated annualized cost for removing a pollutant exceeded a cost trigger,^(*1) "dischargers would explore the use of alternative regulatory approaches to comply with CTR-based effluent limits." EA at pg. 4 (emphasis added). Based on this assumption, no treatment cost was estimated for the facility.^(*2)

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(*5) The variance would allow the permittee to achieve reasonable progress towards attaining a specific water quality-based effluent limitation, without violating CWA section 402(a)(1), which requires that NPDES permittees meet all applicable water quality standards, See 62 Fed.Reg. 42185-6. A variance does not effect the corresponding water quality for the water body receiving the discharge. Variances are designed to preserve the underlying water quality standard over the long term, while providing flexibility to individual dischargers in complying with permit limits based on the standards. When a variance is granted, the discharger is assured compliance during the term of a variance, as long as all variance conditions are met. Id.

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Response to: CTR-041-045

See Response to CTR-004-007.

Comment ID: CTR-044-040

Comment Author: City of Woodland

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: G-07 Variances

References:

Attachments? N

CROSS REFERENCES

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8. The variance will be subjected to public notice, comment and hearing. See CWA section 303(c)(1) and 40 CFR 131.20. The public notice should contain a clear description of the impact of the variance upon achieving the water quality standard in the water body.

(*8) See CTR Preamble at pg. 42185-6. Further guidance on variance policies is provided in EPAs 1994 Water Quality Standards Handbook, Chapters 2 and 5 (EPA 823-B-94-005a, August 1994).

Response to: CTR-044-040

See response to CTR-004-007.

Comment ID: CTR-050-005b
Comment Author: Sonnenschein Nath & Rosenthal
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org: American Petrol
Document Date: 09/26/97
Subject Matter Code: G-07 Variances
References:
Attachments? N
CROSS REFERENCES C-24

Comment: II. EPA Should Allow Variances and Site-Specific modifications.

Beyond the issue of whether EPA has the authority to issue the proposed rule, there are other significant problems with the proposal. For example, the Agency has made the inexplicable decision not to include provisions that would allow for issuance of variances or site-specific modifications to the criteria. This is despite the Agency's recognition that a variance procedure is an "important procedure to assist the State in effectively implementing water quality standards." (62 Fed. Reg. at 42185). EPA gives absolutely no explanation for its decision not to allow use of this procedure. Moreover, the Agency concedes that "promulgation of this federal rule removes most of the flexibility available to the State for modifying its standards on a discharger-specific or stream-specific basis. " Instead, an applicant would have to ask EPA to begin a "federal rulemaking on a case-by-case basis to change the federal rule." (62 Fed. Reg. at 42186) EPA makes it quite clear that applicants should not expect any relief from that avenue, because the Agency simply has more important things to do:

Because of the time consuming nature of reviewing such requests, limited federal resources, and the need for the Agency to move into other priority program areas in establishing environmental controls, EPA alerts California and the public that a prompt Agency response is unlikely.

Despite this cavalier dismissal of the need for actually acting on variance and site criteria applications, the Agency does not hesitate to mention those mechanisms in its economic analysis as being available to moderate the impact of the proposed rule. The Agency specifically mentions variances and site-specific criteria when it states that "these implementation procedures can have an effect on how water quality standards, based on today's proposed rule, will impact NPDES permit holders." (62 Fed. Reg. at 42192). In fact, that statement is clearly false, given EPA's decision not to include variance or site-specific criteria procedures in the proposed rule. The Agency should reconsider that decision and insert those provisions.

Response to: CTR-050-005b

See response to CTR-035-035.

Comment ID: CTR-054-044
Comment Author: Bay Area Dischargers Associati
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97

Subject Matter Code: G-07 Variances

References:

Attachments? N

CROSS REFERENCES

Comment: The Preamble to the California Toxics Rule (CTR), and the rules accompanying Economic Analysis (EA), place a great deal of emphasis on the ability of dischargers to use alternative regulatory approaches to comply with CTR criteria if the cost of treatment technology was prohibitively expensive. For example, the EA assumes that, if the estimated annualized cost for removing a pollutant exceeded a cost trigger,(*1) "dischargers would explore the use of alternative regulatory approaches to comply with CTR-based effluent limits." EA at.pg. 4(emphasis added). Based on this assumption, no treatment cost was estimated for the facility.(*2)

The types of alternative regulatory approaches assumed available for dischargers in California include phased total maximum daily loads (TMDLs), water quality standard variances, site-specific criteria, change in designated use, and alternative mixing zones. EA at pg. 4-5. The following sections will discuss each of EPA's proposed methods for regulatory relief and explain whether or not these methods can truly be used to provide relief from the CTR-based permit limits as anticipated by EPA. It should be noted that the actual language of the rule itself does not mention any of the methods of regulatory relief. Therefore, this analysis will be based solely upon the language contained in the Preamble to the CTR.

Water Quality Standard Variances/ Designated Use Modifications

The Preamble to the CTR discusses variances as a form of regulatory relief that might be pursued by dischargers. See 62 Fed.Reg. 42,185-6. The Preamble provides that States may adopt a statewide policy (or Regional Boards may adopt Basin-wide policies) to allow water quality standard variances for individual dischargers. The variance policy would allow the State or Regional Board to grant a variance to an individual permittee from a water quality standard,(*5) which is the basis of a water quality-based effluent limitation in a permit. However, there are some serious restrictions placed on the use of variances. The following lays out these restrictions:

- * Variances are not allowed for new or recommending dischargers.
- * Variances are discharger and pollutant specific. In other words, the water quality standard variance applies only to the permittee requesting the variance and only to the pollutant or pollutants specified in the variance.
- * Once a variance has been approved by the State, it must be submitted to EPA for approval.
- EPA will only approve variances if consistent with the substantive requirements set out at 40 CFR Part 131 for removing a designated use.(*6)
- EPA will only approve state variances if specific provisions are included.(*7) - EPA would have to undertake a federal rulemaking to make the necessary changes to this rule to allow for State-approved variances. The Preamble explains this restriction as follows:

EPA, however, cautions California and the public that promulgation of this federal rule, removes most of the flexibility available to the State for modifying its standards on a discharger-specific or stream-specific basis. For example, variances and site-specific criteria development are actions

sometimes adopted by states. These are optional policies under terms of the federal water quality standards regulation. Except for the water-effect ratio procedure for certain metals, EPA has not incorporated either optional policy, in general, in this proposed rulemaking, that is, EPA has not generally authorized State modifications of federal water quality standards. Each of these types of modifications will, in general, require federal rulemaking on a case by case basis to change the federal rule. Because of the time consuming nature of reviewing such requests, limited federal resources, and the need for the Agency to move into other priority program areas in establishing environmental controls, EPA alerts California and the public that a prompt Agency response is unlikely. The best course of action, if such provisions are desired, is for the State to adopt its own standards and take advantage, if it so chooses, of the flexibility offered by these optional provisions. (*8)

Because of all of the restrictions placed on their use, variances are not really a viable option for regulatory relief. The only way for variances to be a viable option would be for EPA to incorporate a variance policy into the proposed rule that would authorize State modifications of federal water quality standards.

(*1) This cost trigger is \$200 per toxic pounds-equivalent for a facility under the low-end scenario, and \$500 per toxic pounds-equivalent for a category of dischargers under the high-end scenario. See EA at pg. 4.

(*2) In addition, pollutant load reductions were not calculated or credited for any pollutant for which an alternative regulatory approach was pursued. Id.

(*4) EPA, Guidance for Water Quality-based Decisions: The TMDL Process, EPA Doc. No. 440/4-91-001 at pg. 20 (April 1991) (emphasis added).

(*5) The variance would allow the permittee to achieve reasonable progress towards attaining a specific water quality-based effluent limitation, without violating CWA section 402(a)(1), which requires that NPDES permittees meet all applicable water quality standards, See 62 Fed.Reg. 42185-6. A variance does not effect the corresponding water quality for the water body receiving the discharge. Variances are designed to preserve the underlying water quality standard over the long term, while providing flexibility to individual dischargers in complying with permit limits based on the standards. When a variance is granted, the discharger is assured compliance during the term of a variance, as long as all variance conditions are met. Id.

(*6) Specifically, the State's policy must require the inclusion of a demonstration that a water quality standard is unattainable, based on one or more of the following grounds:

1. Normally occurring pollutant concentrations prevent the attainment of the water quality standard;
2. Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the water quality standard, unless these conditions may be compensated for by the discharge of sufficient volume of effluent to enable the standard to be met without violating State water conservation requirements;
3. Human-caused conditions or sources of pollution prevent the attainment of the water quality standard and cannot be remedied, or would cause more environmental damage to correct than to leave in place;
4. Dams, diversions or other types of hydrologic modifications preclude the attainment of a water quality standard, 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 standard;
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 chemical water quality, preclude attainment of the

water quality standard; or 6. Controls more stringent than those required by CWA sections 301(b) and 306 would result in substantial and widespread economic and social impact.

(*7) The required provisions are as follows: 1. The State will include each individual variance as part of its water quality standard or water quality plan; 2. The variance will include documentation that treatment more advanced than that required by CWA section 301(b) and 306 has been carefully considered, and that alternative effluent control strategies have been evaluated; 3. The underlying, more stringent criterion will be maintained and will be binding on all other discharges; 4. The discharger who will be given a variance for one particular constituent will be required to meet the applicable criteria for other constituents; 5. The variance will be granted for a specific period of time and must be rejustified upon expiration, but at least every three years; 6. Reasonable progress will be made towards meeting the underlying standards; 7. The variance will not likely jeopardize the continued existence of any threatened or endangered species listed under Section 4 of the Endangered Species Act or result in the destruction or adverse modification of such species' critical habitat; and 8. The variance will be subjected to public notice, comment and hearing. See CWA section 303(c)(1) and 40 CFR 131.20. The public notice should contain a clear description of the impact of the variance upon achieving the water quality standard in the water body.

(*8) See CTR Preamble at pg. 42185-6. Further guidance on variance policies is provided in EPAs 1994 Water Quality Standards Handbook, Chapters 2 and 5 (EPA 823-B-94-005a, August 1994).

Response to: CTR-054-044

See response to CTR-004-007.

Comment ID: CTR-057-010b
Comment Author: City of Los Angeles
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-07 Variances
References:
Attachments? N
CROSS REFERENCES K-01; C-24

Comment: Implementation

Although the proposed Rule discusses implementation issues such as TMDLs, variances, SSOs, and interim permits, it lacks evidence of support for any of these provisions. We believe that this will have the effect of reducing the State's confidence or perceived authority in granting any of these provisions to individual POTWs. For example, Page 42186 of the CTR lists six criteria that must be used by the State to determine the non-attainability of a water quality standard; we are doubtful that any of these criteria would be strictly applicable to our facilities with respect to lindane and DDT. We believe CTR variance criteria should include economic considerations for specific discharger implementation efforts. Unless the EPA provides more support for these provisions, we fear that the State will either not grant us a legitimate variance or will waiver in its commitment to act at all.

Response to: CTR-057-010b

See response to CTR-004-007.

Furthermore, the six criteria that are used as a basis for a variance does include economic considerations (see preamble of the proposed rule 62 FR 42186, August 5, 1997 and the Water Quality Standards Regulation at 131.10(g)). The requirements for issuing a variance are the same as those for downgrading or removal of a designed use. Discussions on alternative justifications for variances are outside the scope of today's rule.

Comment ID: CTR-090-020

Comment Author: C&C of SF, Public Util. Commis.

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-07 Variances

References: Letter CTR-090 incorporates by reference letters CTR-035 and CTR-054

Attachments? Y

CROSS REFERENCES

Comment: Variances This procedure described in the preamble is unduly cumbersome and unrealistic. Particular problems we see with this approach are:

Time limit - The proposed policy requires that variances be granted for not more than three years, after which they must be re-justified. This policy is not reasonable when applied to a major municipal wastewater construction program which may have a variance as an integral part of the facility planning process. Does it make sense to reanalyze a fundamental design premise every three years for a wastewater system that may have cost hundreds of millions and taken decades to construct. Although review of facility plans is appropriate in some cases, following the laborious process every three years as described in this proposal would have no benefit since there is no feasible way to instantly change a completed wastewater system.

Regulatory justification - EPA has modeled the variance procedure on the portion of the regulations established to provide for removal of a designated use. What is left out of the preamble is a justification for using this model for the additional requirements added to the procedure. Why, in the first place does EPA need to establish a variance procedure. The Clean Water Act requires the state have standards which 'shall be such as to protect the public health and welfare, enhance the quality of water and serve the purposes of this chapter.' Each Basin Plan in California already has a variance policy which meet this statutory requirement and which is currently in effect. We propose that there is no need for the variance procedure in this rule-making.

Conflict with the fundamental premise of state water quality standards The major problem with the proposed variance procedure is that it is in conflict with the underlying premise upon which the standards were originally developed. The standards in California were developed to be applied to permanent dischargers such as POTWs and industrial discharges. The state explicitly recognized that the standards were inappropriate for intermittent discharges such as combined sewer overflows. Because the standards were not appropriate for CSOs, the state intended that the variance procedure be used. Taking as an

example, the Ocean Plan standards applied to the first San Francisco permits, the SWRCB made the following statement:

... it is patently clear that it was realized it inappropriate to apply Ocean Plan standards strictly to combined waste and stormwater discharges. The record indicates further, that rather than address this problem in the 1978 Ocean Plan amendments, directly, it was decided to deal with such problems on a case-by-case basis via the exception mechanism. [Order No. WQ 79-16].

The same argument applies to stormwater discharges. Since most such discharges will violate the current standards during at least some period during the discharge, it is obvious that the intent of those developing the standards was not to apply them to intermittent discharges in the same manner as they are applied to permanent discharges. Until the standards are changed, the variance process is the only available mechanism to reconcile the standards with these discharges.

In order to minimize paperwork, and to provide more meaningful public participation, we suggest that all remaining variances be handled as part of the Basin Plan process ,(by watershed and discharger class) rather than on an individual NPDES permit basis.

We further request that all existing variances be incorporated into the CTR by reference. This could be handled by listing the currently applicable Basin Plans and adding language to the effect that "...all variances issued pursuant to these plans are incorporated into the CTR by reference." San Francisco has variances and/or site-specific discharge standards associated with its wet-weather control facilities (RWQCB(2) Order 94-149 as amended by Order 96-117, Southeast WPCP, and Order 95-039, Northpoint and Southeast Sewerage Zones).

Response to: CTR-090-020

EPA disagrees that a three year time limit for variances is unreasonable. The variance represents a change in the applicable water quality criteria. Variances are optional components of a state's water quality standards. As noted in the preamble, EPA's policy on variances is that variance are granted for a specific period of time and must be rejustified upon expiration but at least every three years. The three year rejustification is derived from the triennial review requirements of CWA Section 303. Section 303 requires States to hold hearings for the purpose of reviewing and, if necessary, revising their water quality standards.

EPA notes that the Agency is not including or establishing a variance procedure for California in this rule. Rather, the preamble of the rule explains minimum requirements for State adopted variance provisions. As previously noted, such provisions are optional policies that states in general adopt to assist in the implementation of their NPDES permit program. See response to CTR-004-007.

Comment ID: CTR-092-008

Comment Author: City of San Jose, California

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: G-07 Variances

References: Letter CTR-092 incorporates by reference letter CTR-035

Attachments? Y
CROSS REFERENCES

Comment: Variances

The City strongly supports the application of variances as an important regulatory procedure to assist the State in implementing its water quality standards program. The City further encourages the State to formally adopt a variance provision that allows variances for individual dischargers. This procedure would provide a valuable tool to allow a permittee to achieve reasonable progress toward attainment of a water quality based effluent limitation without violating applicable water quality standards.

Response to: CTR-092-008

EPA takes no position as to whether the State adopts a variance provisions in its water quality standards.

Comment ID: CTRH-001-022a
Comment Author: Julio Guerra
Document Type: Public Hearing
State of Origin: CA
Represented Org: City of Merced
Document Date: 09/17/97
Subject Matter Code: G-07 Variances
References:
Attachments? N
CROSS REFERENCES G-05

Comment: There are good things in here regarding the variances and the recognition of the existence of ephemeral streams. And the naturally occurring pollution, you know, has to be taken into account when it actually applies to water quality standards.

I would observe in that regard that the NPDES program recognizes that intake credits may sometimes be appropriately applied to adjust effluent limits. But in the NPDES language it states that that only can occur when you discharge into the same water body that you take the water from.

In our case, of course, we use groundwater. And, as an example, it may contain arsenic. And the arsenic isn't really removed from the water before it is discharged to surface water. We don't fit the mold of being authorized those intake credits, because we're not discharging into the same water body that we draw water from.

Response to: CTRH-001-022a

EPA acknowledges the commenter's support for the discussions on variances that are contained in the preamble of the rule. See response to CTR-004-007.

Comment ID: CTRH-001-057d
Comment Author: Dave Tucker

Document Type: Public Hearing
State of Origin: CA
Represented Org: San Jose Env. Serv. Dept.
Document Date: 09/17/97
Subject Matter Code: G-07 Variances

References:

Attachments? N

CROSS REFERENCES K-03; C-24a; G-04; G-09; C-22; G-05

Comment: Some of the flexibility that the City highly supports is the water effect ratio investigations to adjust statewide criteria to site-specific conditions; the interim limits concept while special studies are being conducted by the dischargers and other entities; a variance procedure to allow dischargers to achieve progress toward effluent limit attainment without violating applicable water quality standards; dissolved criteria for metals to reflect the toxicological conditions; translators to adjust dissolved criteria to total permit limitations; trading programs to attain and maintain water quality; and a mixing zone that reflects true instream pollutant conditions and that protects beneficial uses.

Response to: CTRH-001-057d

EPA acknowledges the commenter's support for variances, However, EPA is not including a variance procedure in today's rule. See response to CTR-004-007.

Subject Matter Code: G-08 State Policy

Comment ID: CTRE-004-001b

Comment Author: Victor Valley Wastewater Auth.

Document Type:

State of Origin: CA

Represented Org:

Document Date: 09/11/97

Subject Matter Code: G-08 State Policy

References:

Attachments? N

CROSS REFERENCES B

Comment: The Victor Valley Wastewater Reclamation Authority (VWVRA) respectfully requests that the comment period deadline be extended for the California Toxics Rule (CTR). The current comment period deadline is September 26, 1997. We request that the latter deadline be extended for at least 60 days so that we can fully evaluate the potential impact on VWVRA

The reasons for our request are as follows:

1. VWVRA discharges to the Mojave River, which is considered by the Lahontan RWQCB as an impaired waterway. Although portions of the Mojave exhibit year-round surface flow, the River directly above VWVRA does not exhibit consistent surface flow. However, the Lahontan RWQCB considers the Mojave an underflow stream, which is often considered as surface flow. Whether an underflow stream would be considered under the CTR for receiving stream dilution has yet to be determined;
2. It is difficult if not impossible to evaluate the impacts of a proposed regulation without considering the mechanism by which it will be implemented. The SWRCB is not expected to release the implementation plan until September 12, 1997. Therefore, VWVRA takes exception to the imposition of a regulation with an undefined implementation plan;
3. Because of the latter unknowns and the complexity of the regulation V has not had sufficient time to evaluate the potential economic impacts, if any, of the proposed regulation.

Response to: CTRE-004-001b

See response to CTR-009-001.

Subject Matter Code: G-09 Translators

Comment ID: CTR-004-004d
Comment Author: South Bayside System Authority
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: G-09 Translators
References:
Attachments? N
CROSS REFERENCES G-05
C-24a
C-22

Comment: Despite the problems addressed above there are provisions of the CTR that SBSA supports, including:

- * EPA's policies and guidance regarding the use of mixing zones and dilution
- * Use of water effects ratios (WERs) for determining site specific criteria
- * Inclusion of metals criteria expressed as dissolved rather than total recoverable
- * Allowing permit writers the use of any of the methods in EPA's guidance document on the use of translators

Response to: CTR-004-004d

EPA appreciates the commenter's support for its discussion of metals translators in the preamble of the proposed CTR.

Comment ID: CTR-005-003d
Comment Author: Novato Sanitary District
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/23/97
Subject Matter Code: G-09 Translators
References:
Attachments? Y
CROSS REFERENCES C-22
C-24a
C-01a
G-05
G-04

Comment: 2. The following provisions of the rule are supported: (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury; and (4) the Preamble discussions regarding metals translators, mixing zones, and interim permit limits.

Response to: CTR-005-003d

See response to CTR-004-004d.

Comment ID: CTR-027-012d

Comment Author: California SWQTF

Document Type: Storm Water Auth.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-09 Translators

References: Letter CTR-027 incorporates by reference letters CTR-001, CTR-036 and CTR-040

Attachments? N

CROSS REFERENCES C-22

C-24

C-01a

G-05

Comment: PROVISIONS OF THE PROPOSED RULE WE SUPPORT

Notwithstanding the above comments, we believe there are certain elements of the proposed rule with respect to establishing water quality standards that we can support:

- * Metal criteria expressed in the dissolved fraction rather than expressed in the total recoverable fraction.
- * Metal criteria that are developed as a function of the water-effect-ratio (WER).
- * The current proposed human health criterion for mercury.
- * The current preamble language regarding metal translators and mixing zones.

We believe the above provisions provide a more acceptable, scientific approach to the water quality-based pollution control approach. We recommend these provisions of the current rule remain as proposed.

Response to: CTR-027-012d

See response to CTR-004-004d.

Comment ID: CTR-030-008

Comment Author: Utility Water Act Group

Document Type: Trade Org./Assoc.
State of Origin: DC
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-09 Translators
References:
Attachments? Y
CROSS REFERENCES

Comment: D. EPA's Discussion of the Chemical Translator Guidance Should be Clarified

EPA appropriately includes its recently completed Chemical Translator Guidance (The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit From a Dissolved Criterion (EPA 823-B-96-007, June 1996) (Translator Guidance) in the rulemaking record and notes the importance of having mechanisms to "translate" between dissolved metal in ambient waters and total recoverable metal in effluent. 62 Fed. Reg. at 42,173, col. 2. But EPA's discussion of only certain provisions of the Translator Guidance creates an implication that only those portions of the Translator Guidance are applicable to this rulemaking. For example, the proposal requires use of conversion factors for converting a metal criterion expressed as the total recoverable fraction in the water column to a criterion expressed as the dissolved criterion in the water column. The Translator Guidance provides greater flexibility; it states: "[A] translator is required to derive a total recoverable permit limit from a dissolved criterion" but caveats this statement with the following footnote:

As a reasonable worst case, however, it may be assumed that metal in the receiving environment would be biologically available to the same extent as during toxicity testing; and the conversion factors may be used as translators if a site-specific translator is not developed. In that case, the water quality criterion that already has been multiplied by the conversion factor would be divided by the conversion factor.

Translator Guidance, p. 5, n. 6.

Therefore, to avoid any implication that only part of the Translator Guidance is applicable to this rulemaking, UWAG requests that EPA make general reference to the translator Guidance and approve, without reservation, its entire contents.

Response to: CTR-030-008

EPA clarifies that the State in implementing its policy on translators may consider the entire contents of the guidance. EPA did not intend to imply that only a portion of the guidance could be used by the State to implement CTR criteria.

Comment ID: CTR-032-002c
Comment Author: Las Gallinas Val. Sanitary Dist
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-09 Translators
References: Letter CTR-032 incorporates by reference letter CTR-035

Attachments? N
CROSS REFERENCES G-01
C-22
C-24a
C-24
K
G-04
G-05
G-02

Comment: Regulatory Flexibility and Relief

The District supports EPA's use of "sound science" and current data in developing the proposed criteria in the California Toxics Rule (CTR). The District strongly supports language in the Preamble that references and endorses recommendations of the State Task Forces including use in permitting of:

* reasonable potential analyses * dissolved metals criteria * translators * water effects ratios * site specific objectives * innovative TMDL processes such as effluent trading * performance based interim limits * chronic and acute mixing zones, and * compliance schedules in NPDES permits.

Response to: CTR-032-002c

See response to CTR-004-004d.

Comment ID: CTR-035-002f
Comment Author: Tri-TAC/CASA
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-09 Translators
References:
Attachments? N
CROSS REFERENCES C-22
C-01a
C-08a
G-05
G-04
K-01
C-24a

Comment: Second, we commend EPA for its inclusion in the CTR of several innovative and flexible regulatory approaches, such as metals criteria expressed as dissolved rather than total recoverable concentrations, and the revised human health criterion for mercury. In addition, in light of the issues surrounding the human health criteria for arsenic we support EPA's decision not to promulgate human health criteria at this time. With respect to implementation issues discussed in the Preamble, we support EPA's policies and guidance regarding the application of mixing zones and dilution credits. the use of interim permit limits while Total Maximum Daily Loads (TMDLs) and other special studies are being

performed, and EPA's guidance to Regional Water Quality Control Boards (RWQCBs) that they may use any of the methods described in EPA's guidance document on the use of translators. We also support EPA's proposal to create a rebuttable presumption for Water Effects Ratios (WERs), allowing the RWQCBs and SWRCB to develop site-specific WERs that can be approved by EPA during the NPDES permit approval process. We believe that this approach will help facilitate the development of appropriate site-specific adjustments for metals criteria.

Response to: CTR-035-002f

See response to CTR-004-004d.

Comment ID: CTR-035-018

Comment Author: Tri-TAC/CASA

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-09 Translators

References:

Attachments? N

CROSS REFERENCES

Comment: p. 42173 -- Translators for Dissolved to Total Recoverable Metals Limits We support EPA's guidance to RWQCBs that they may use any of the methods described in EPA's guidance document on the use of translators (U.S. EPA, 1996b). We believe that the development of site-specific translators should be allowed in those cases where a discharger is willing to conduct the studies in accordance with EPA-approved methods. As such, we believe the recommendation that the State "adopt a statewide policy on the use of translators so that the most appropriate method or methods are used consistently within California" is unnecessary, and this recommendation should be deleted from the Preamble.

Response to: CTR-035-018

EPA believes its recommendation that the State "adopt a statewide policy on the use of translators so that the most appropriate method or methods are used within California" is useful. This recommendation does not preclude the State from allowing dischargers to conduct site-specific translator studies in accordance with EPA methods if the State so chooses within its discretion to write NPDES permits. In fact, in its proposed implementation policy, the State's expressed its acceptance of site-specific translator methods.

Comment ID: CTR-038-002f

Comment Author: Sonoma County Water Agency

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: G-09 Translators

References:

Attachments? Y
CROSS REFERENCES C-22
C-24a
C-01a
G-04
G-05

Comment: 2. The following provisions of the rule are supported (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury; and (4) the Preamble discussions regarding metals translators, mixing zones, and interim permit limits.

Response to: CTR-038-002f

See response to CTR-004-004d.

Comment ID: CTR-040-002c
Comment Author: County of Sacramento Water Div
Document Type: Storm Water Auth.
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-09 Translators
References: Letter CTR-040 incorporates by reference letter CTR-027
Attachments? Y
CROSS REFERENCES C-24a
C-01a
G-05

Comment: PROVISIONS SUPPORTED

We support a number of provisions of the Rule, including: (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury- and (4) the Preamble discussions regarding metals translators and mixing zones. These provisions provide a firmer scientific base for the water quality-based approach to pollution control and are a marked improvement over the old Inland Surface Waters Plan. We would urge EPA to retain these provisions in the final Rule.

Response to: CTR-040-002c

See response to CTR-004-004d.

Comment ID: CTR-041-003a
Comment Author: Sacramento Reg Cnty Sanit Dist

Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-09 Translators
References:
Attachments? N
CROSS REFERENCES C-24a

Comment: Second, the District supports with reservations EPA's proposals on two subjects directly related to dissolved metals criteria, i.e. the proposed guidance on both (1) translators to convert from dissolved metals criteria to total recoverable permit limits and (2) the water-effect ratio (WER) as the method to compare the bioavailability and toxicity of a pollutant in receiving waters and in laboratory waters. Both of these two proposals must be implemented on a site-specific basis using local data, not statewide or watershed-wide data. Translators, however, should be developed whenever a discharger is willing to conduct studies in accordance with EPA-approved methods. The proposed procedure for a default value of 1.0 for a WER should mean that when a site-specific WER is to be determined, an additional EPA rulemaking process would not be required. Instead, this rule should pre-authorize the use of correctly applied WERs that are approved by the State.

Response to: CTR-041-003a

EPA agrees that translators derived using site-specific methods are generally preferable to a generic method using statewide or regional data. However, the State is the lead authority with respect to NPDES permit implementation and may choose any method that is consistent with the Clean Water Act. In its proposed implementation policy, the State expressed its acceptance of site-specific translator methods.

Comment ID: CTR-043-002f
Comment Author: City of Vacaville
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-09 Translators
References:
Attachments? Y
CROSS REFERENCES C-22
C-24a
G-01a
G-04
G-05

Comment: 2. The following provisions of the rule are supported: (1) adoption of metals criteria as dissolved concentrations; (2) expression of the metals criteria as a function of the water-effect ratio; (3) adoption of the proposed new human health criterion for mercury; and (4) the Preamble discussions regarding metals, translators, mixing zones and interim permit limits.

Response to: CTR-043-002f

See response to CTR-004-004d.

Comment ID: CTR-044-003d
Comment Author: City of Woodland
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-09 Translators
References:
Attachments? Y
CROSS REFERENCES C-22
C-24a
C-01a
G-05
G-04

Comment: We have reviewed the proposed CTR and offer the following comments:

2. The following provisions of the rule are supported:
 - (1) adoption of metals criteria as dissolved concentrations;
 - (2) expression of the metals criteria as a function of the water-effect ratio;
 - (3) adoption of the proposed new human health criteria for mercury; and
 - (4) the Preamble discussions regarding metals translators, mixing zones, and interim permit limits.

Were the old human health criterion for mercury (0.012 ug/l) to be adopted, the City would have to remove its discharge from Tule Canal and go to land disposal. The capital cost to do this would be \$22.1 million and the total present worth cost would be \$23.1 million (see Exhibit B, Required Capital Improvements and Costs for Beryllium and Mercury). This would translate to an annual cost of \$3.1 million per year (at 7% over 10 years) and would require that monthly sewer service charges be increased by more than 100%.

Response to: CTR-044-003d

See response to CTR-004-004d.

With respect to the comment about the economic impact of the old criterion for mercury of 0.012 ug/l, EPA has not evaluated these costs since the CTR does not promulgate a mercury criteria of 0.012 ug/l.

Comment ID: CTR-052-002c
Comment Author: East Bay Dischargers Authority

Document Type: Sewer Authority
State of Origin: SC
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-09 Translators
References: Letter CTR-052 incorporates by reference letters CTR-035 and CTR-054
Attachments? Y
CROSS REFERENCES C-22
C-01a
G-05
G-04

Comment: EPA will recall the State Water Quality Plans Task Forces that included all stakeholders, including EPA. The Authority appreciates the incorporation of many of the consensus recommendations from the Task Forces into the CTR, including:

- * Adoption of the metals criteria as dissolved concentrations and the expression of the criteria as a function of the water-effect ratio
- * Adoption of the proposed new human health criterion for mercury
- * Preamble discussions regarding metals translators, mixing zones, and interim permit limits

Response to: CTR-052-002c

See response to CTR-004-004d.

Comment ID: CTR-054-004a
Comment Author: Bay Area Dischargers Assoc.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-09 Translators
References:
Attachments? Y
CROSS REFERENCES G-05
G-04

Comment: BADA supports the Preamble discussions regarding metals translators, mixing zones, and interim permit limits. Translators and mixing zones will provide a better scientific basis for the application of the criteria and will go a long way toward protecting against the imposition of unnecessary or unreasonable controls. Interim permit limits will allow dischargers faced with potential attainability problems to pursue reasonable actions, such as pollution prevention, treatment plant optimization, pollutant trading, TMDLS, etc. prior to being faced with final effluent limitations. BADA endorses the recommendation of the State Plan Public Task Forces on the issue of interim limits.

Response to: CTR-054-004a

See response to CTR-004-004d.

Comment ID: CTR-056-008

Comment Author: East Bay Municipal Util. Dist.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/22/97

Subject Matter Code: G-09 Translators

References: Letter CTR-056 incorporates by reference letter CTR-054

Attachments? N

CROSS REFERENCES

Comment: Second, EBMUD would like to express to EPA its support for inclusion of:

* EPA's guidance to Regional Water Quality Control Boards stating that they may use any of the methods described in EPA's guidance document on the use of translators ["The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion," EPA 823-B-96-007, June 1996],

Response to: CTR-056-008

See response to CTR-004-004d.

Comment ID: CTR-060-009

Comment Author: San Diego Gas and Electric

Document Type: Electric Utility

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: G-09 Translators

References:

Attachments? N

CROSS REFERENCES

Comment: PROVISIONS SDG&E DOES NOT SUPPORT

As described in the following comments SDG&E does not support the following provisions:

EPA's chemical translator guidance should be clarified

EPA describes in the preamble (see 62 Fed. Reg. at 42,173, Col. 2) the importance of permitting authorities of having the ability to translate between dissolved metals in ambient waters and total recoverable metal in effluent and refers to its Chemical Translator Guidance document "The Metals

Translator. Guidance for Calculating a Total Recoverable Permit Limit From a Dissolved Criterion"(EPA 823-B-96-007, June 1996) (the "Translator Guidance"). However, the preamble describes only certain provisions of the translator guidance document, implying that other portions may not be applicable to California. EPA should clarify the translator guidance document is applicable in its entirety to California.

Additionally, the preamble should specifically identify, as the Translator Guidance indicates in footnote No. 6 on Page 5, that, in the absence of a site-specific translator, the conversion factor should be used as the translator.

Response to: CTR-060-009

See response to CTR-030-008.

Comment ID: CTR-066-006
Comment Author: Delta Diablo Sanitation Dist.
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-09 Translators
References:
Attachments? N
CROSS REFERENCES

Comment: Our preliminary review of the CTR finds several areas that we believe are positive changes and will enhance the rulemaking. The areas that we support as now written are as follows:

* The guidance to RWQCBs that they may use any of the methods described in EPA's guidance document on the use of translators.

Response to: CTR-066-006

See response to CTR-004-004d.

Comment ID: CTR-081-002e
Comment Author: West County Agency
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/26/97
Subject Matter Code: G-09 Translators
References:
Attachments? N
CROSS REFERENCES G-04
C-24a
G-02

C-22
C-01a
C-08a
G-05

Comment: * There are many aspects of the CTR that we support. These include: a) Application of interim limits while special studies are performed. b) Approach to water effect ratios for determining site specific criteria. c) Inclusion of provision for compliance schedules. However, this should be modified to allow inclusion of compliance schedules of up to 15 years in permits if deemed appropriate by Regional Boards. d) Metals criteria expressed as dissolved rather than total recoverable concentrations. e) EPA's guidance to Regional Boards regarding use of translators. f) EPA's proposal to create a rebuttal presumption for Water Effects Ratios, g) Revised human health criteria for mercury h) Decision to not promulgate human health criteria at this time in light of issues surrounding health criteria for arsenic. I) EPA's policies regarding application of mixing zones and dilution credits.

Response to: CTR-081-002e

See response to CTR-004-004d.

Comment ID: CTR-085-007
Comment Author: Camarillo Sanitary District
Document Type: Sewer Authority
State of Origin: CA
Represented Org:
Document Date: 09/24/97
Subject Matter Code: G-09 Translators
References:
Attachments? N
CROSS REFERENCES

Comment: On several aspects of the California Toxics Rule, the District is in agreement with CASA and SCAP comments:

* The EPA's guidance to RWQCB's that they may use any of the methods described in the EPA's guidance document on the use of translators.

Response to: CTR-085-007

See response to CTR-004-004d.

Comment ID: CTR-086-004c
Comment Author: EOA, Inc.
Document Type: Trade Org./Assoc.
State of Origin: CA
Represented Org: California Dent

Document Date: 09/26/97

Subject Matter Code: G-09 Translators

References: Letter CTR-086 incorporates by reference letter CTR-035

Attachments? N

CROSS REFERENCES G-01

C-22

C-24a

C-24

K-03

G-04

G-05

G-02

Comment: Regulatory Flexibility and Relief

CDA supports language in the CTR Preamble that references and endorses recommendations of the State Task Forces including in part the use of.

* reasonable potential analyses * dissolved metals criteria * translators * water effects ratios * site specific objectives * innovative TMDL processes such as effluent trading * performance based interim limits * chronic and acute mixing zones, and * compliance schedules in NPDES permits.

Response to: CTR-086-004c

See response to CTR-004-004d.

Comment ID: CTR-089-001g

Comment Author: Las Virgenes Mncpl Water Dist.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: G-09 Translators

References:

Attachments? N

CROSS REFERENCES C-22

C-01a

C-08a

G-05

K-01

G-02

Comment: The draft California Toxics Rule (CTR) is clearly the product of substantial effort by USEPA staff, and we applaud this effort and its intent. On several issues of concern to public utilities, the CTR strikes a good balance between the need to promulgate standards and the need to base those standards on sound science. Examples include the use of dissolved concentrations rather than the total recoverable concentrations for metals, the deferral of human health criteria for arsenic until adequate information is available, and the revision of the human health criterion for mercury. We are also pleased with the

CTR's guidance and flexibility, on mixing zones and dilution credits, total maximum daily loads (TMDLs), compliance schedules, and translators.

Response to: CTR-089-001g

See response to CTR-004-004d.

Comment ID: CTR-092-003

Comment Author: City of San Jose, California

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: G-09 Translators

References: Letter CTR-092 incorporates by reference letter CTR-035

Attachments? Y

CROSS REFERENCES

Comment: Translators to Convert from Dissolved Metals Criteria to Total Recoverable-Permit Limits

The City supports EPA's discussion of the metals translation process contained in "The Metals Translator, Guidance, for Calculation of a Total Recoverable Limit From a Dissolved Criterion" (EPA 823-B-96-007, June 1996). The City supports the use of EPA's translator methods by Regional Water Quality Control Boards to develop water quality-based permit limits. The City also supports EPA's encouragement for the development of a statewide policy on the use of translators and for the consistency of their use statewide.

Response to: CTR-092-003

See response to CTR-004-004d.

Comment ID: CTRH-001-045b

Comment Author: Charles Batts

Document Type: Public Hearing

State of Origin: CA

Represented Org: Bay Area Dischargers Assc

Document Date: 09/17/97

Subject Matter Code: G-09 Translators

References:

Attachments? N

CROSS REFERENCES B

Comment: We would ask the EPA to extend the comment period to encourage further comments.

We would encourage you to look at actual agencies' calculations, that all translators be reviewed to ensure accuracy, even if special studies are required by individual dischargers.

Response to: CTRH-001-045b

EPA will review translator methods used by the State as a part of EPA's usual NPDES permit review process.

Comment ID: CTRH-001-049
Comment Author: Michael Lozeau
Document Type: Public Hearing
State of Origin: CA
Represented Org: S.F. Bay/Delta Keeper
Document Date: 09/17/97
Subject Matter Code: G-09 Translators
References:
Attachments? N
CROSS REFERENCES

Comment: The notion of translators is a scary one to me in terms of what that means for any given permit process. You're talking about a very complicated permit process at that point, and I don't expect certainly the dischargers to pass up that opportunity. I would expect to see a very complicated permit process for every single one of the criteria that you have proposed here, unless you include a total recoverable number.

Response to: CTRH-001-049

EPA believes translators for metals is an appropriate tool for converting from dissolved metals criteria to total recoverable permit limits. Dissolved criteria are applicable only to a subset of priority toxic pollutants and would not be applicable to all criteria in the final rule. While the use of translators may make the permit process somewhat more complex, in some cases, EPA believes this extra effort will be worthwhile and will allow the State to develop the most appropriate effluent limits for metals discharges.

EPA's basis for using dissolved metals is described in the preamble to the proposed CTR at 62 Fed. Reg. 42171 (Aug. 5, 1997), the preamble to the final rule, and in the administrative record to the final rule (PLACEHOLDER FOR DOCUMENT TITLE).

Comment ID: CTRH-001-057e
Comment Author: Dave Tucker
Document Type: Public Hearing
State of Origin: CA
Represented Org: San Jose Env. Serv. Dept.
Document Date: 09/17/97
Subject Matter Code: G-09 Translators
References:
Attachments? N
CROSS REFERENCES K-03
C-24a
G-04
G-07

C-22
G-05

Comment: Some of the flexibility that the City highly supports is the water effect ratio investigations to adjust statewide criteria to site-specific conditions; the interim limits concept while special studies are being conducted by the dischargers and other entities; a variance procedure to allow dischargers to achieve progress toward effluent limit attainment without violating applicable water quality standards; dissolved criteria for metals to reflect the toxicological conditions; translators to adjust dissolved criteria to total permit limitations; trading programs to attain and maintain water quality; and a mixing zone that reflects true instream pollutant conditions and that protects beneficial uses.

Response to: CTRH-001-057e

See response to CTR-004-004d.

Subject Matter Code: G-10 Pretreatment

Comment ID: CTR-096-004a
Comment Author: City of Modesto
Document Type: Local Government
State of Origin: CA
Represented Org:
Document Date: 09/25/97
Subject Matter Code: G-10 Pretreatment
References:
Attachments? N
CROSS REFERENCES R

Comment: Thank you for the opportunity to comment on the proposed California Toxics Rule. The City's comments are related to five main concepts:

4. The environmental consequences of the necessary treatment facilities and changes in operating practices to meet these discharge standards is very significant and has not been addressed in promulgating the proposed rule.

Specifically, the City submits the following comments:

F. A comparison of the Water Quality Standards (WQS) used by its City during the Local Limits Study and the proposed WQS is shown in Table 1. There is a little variation in limits for cadmium, copper, nickel, and zinc as these values are dependent on receiving stream hardness. The values shown in Table I for the City were developed using a hardness of 170 mg/l as CaCO₃ while the standards from the CTR are based on 100 mg/l as CaCO₃. The WQS from the CTR are actually expressed as dissolved fractions. A factor of 1 has been used to convert from dissolved to total fractions for the comparison to take place.

Table 1

Comparison of Water Quality Standards

	City Report		WQS		1996	1997	-----	
	Chronic	Acute	Chronic	Acute				
Arsenic, ppb	190.0	360.0	150.0	340.0	Cadmium, ppb	1.7	7.1	2.2
4.3 Chromium, ppb	10.0	15.0	11.0	16.0	Copper, ppb	19.0	29.0	9.0
13.0 Nickel, ppb	250.0	2200.0	52.0	470.0	Zinc, ppb	170.0	180.0	
120.0 Mercury, ppb	120.0	N/A	2.1	.77	1.4			

Table 1 indicates that the City's Local Limits for arsenic, cadmium, chromium, and zinc would have little difficulty meeting the CTR. However, limits for copper, nickel and mercury may be drastically impacted. This impact in developing a stricter local limit may result in an economic hardship to many small business enterprises that currently do metal plating. These businesses may be forced to close down due to the implementation of these limits. Modesto experiences a chronic unemployment rate above 12%, and economic development is critical to this community.

Response to: CTR-096-004a

The commenter has not provided enough information to enable EPA to respond to the assertion that metal plating businesses in Modesto may endure economic hardship and be forced to close down due to implementation of the CTR.

The commenter's derivation of 1997 WQS in Table 1 appears to be based on the CTR criteria. This is a "worst case scenario" since it does not address possible adjustments (all allowable for implementation of the CTR) for dilution, hardness, and translation from dissolved criteria to total recoverable effluent limits, all of which could result in an effluent limit for the POTW that may be less stringent than the levels indicated in Table 1. In addition, the commenter did not provide information on how local limits for indirect dischargers (such as metal plating businesses) would be calculated nor any data on historical discharge levels of pollutants from metal plating businesses. Therefore, EPA cannot come to any conclusion whether the implementation of CTR water quality criteria could have an adverse economic impact on Modesto's metal plating businesses or force the businesses to close.

EPA notes that the comment regarding the stringency of proposed aquatic life mercury criteria is no longer relevant since EPA is not promulgating a final aquatic life mercury criteria in the final CTR.

Subject Matter Code: G-11 Intake Credits

Comment ID: CTR-084-001

Comment Author: City of Redding

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: G-11 Intake Credits

References:

Attachments? N

CROSS REFERENCES

Comment: ISSUES OF CONCERN

F. 3. Implementation, 62 FR 42185. Total Maximum Daily Load (TMDL's) should not be required if water quality criteria for a water body segment are exceeded due to discharges from upstream dischargers who operate with federal waivers or variances to water quality standards.

F. 3. Implementation, 62 FR 42184. The proposed California Toxics Rule (CTR) does not specifically afford municipal credits for pollutants in the intake water supply. The City of Redding is concerned about how the proposed CTR will be implemented with regard to upstream acid mine dischargers who are operating with federal waivers to water quality standards. If credits for pollutants in the intake water supply were intended, they should be specifically included in the current proposal under F. 3. Implementation, to allow public comment at this time.

BACKGROUND

Previous Task Force and Sacramento River Watershed Program discussions and recommendations to the EPA have focused on acid mine discharges (AMDs) to the Sacramento River, as sources that are largely unregulated and contribute great amounts of metals to the river. The City of Redding has annually commented in our pretreatment program reports, on the deleterious affect of upstream heavy metal discharges from Iron Mountain Mine (IMM) into the Sacramento River and the downstream City water supply.

Prior to classification as a superfund site, IMM had previously been under a NPDES permit issued by the Central Valley Regional Water Quality Control Board. A review of a fact sheet by EPA on Iron Mountain Mine Superfund Site (May 1996) indicates the IMM site: under Superfund law, requires EPA cleanup actions to comply with all federal and state environmental requirements or of applicable or relevant and appropriate requirements" (ARARs), but allows a waiver of those requirements for interim actions such as collection and treatment of IMM Slickrock Creek flows. Although the interim actions will provide an environmental improvement, they are not expected to achieve full compliance with all of these environmental requirements. The fact sheet references that the ARARs waiver for "Interim Measures" is provided for under 40 CFR 300.430 (f)(1)(ii)(C)(1) and invited comment on whether it would be appropriate to rely on a waiver of these standards on the basis of "technical impracticability" under 40CFR 300.430 (f)(1)(ii)(C)(3).

Presently and for an indefinite period of time, IMM will remain without water quality criteria (WQC) compliance requirements. Additionally, it appears that there will be no enforcement actions against IMM

for failure to comply with WQC requirements. Apparently, this will not be the case for municipalities downstream of this and other AMDs on the Sacramento River according to the proposed CTR.

Monitoring of heavy metal concentrations in the Sacramento River by the City of Redding, indicate IMM interim actions implemented to date have produced an environmental improvement; however, the Sacramento River still violates water quality criteria proposed in the CTR. The very fact that the river will continue to experience violations of the proposed water quality criteria makes continuous POTW NPDES compliance impossible during AMDs upstream excursions of these same criteria. It would be unfair and cost prohibitive to require downstream POTW's to comply with increased water quality standards, where the water body quality has been significantly degraded because of the actions or inactions of the federal and state regulators on upstream discharges.

The City of Redding discharges back into the same water source (Sacramento River) from which it receives its primary municipal intake water. Wastewater discharge compliance with the proposed WQC would be very problematic, as ambient Sacramento River concentrations of heavy metals can fluctuate widely and be higher than the proposed WQC during any given river monitoring event. In contrast to theoretical models which assume the worst case scenario occur during low river flows, the upper Sacramento River commonly experiences the highest metal concentrations during high winter flows.

Even though the City of Redding does not have NPDES permit limits for metals at the current time, we must assume it will some day. Therefore, the above issue is significant and in need of comment at this time.

SUMMARY

Federal Regulations contained within the proposed CTR prohibit the discharge of toxic constituents in toxic concentrations. Iron Mountain Mine, as a superfund site discharger to the Sacramento River, will not fall under the proposed CTR due to the federal waiver granted to them in 1996. The proposed CTR should address the issue of effluent limit adjustments based upon intake water concentrations from upstream AMDs and provide a means of implementing a fair and affordable approach to adjust or provide relief to municipalities whose sources of water are already at or above the proposed water quality criteria. The City of Redding believes it is urgent that U.S. E.P.A. include in the preparation of the final California Toxics Rule, effluent limit adjustments based upon intake water ambient concentrations due to AMDs or other upstream toxics for all applicable water bodies found within the State of California.

Therefore, we request that language be added to the proposed rule as follows, "Any discharger downstream of a water body which has been granted a federal or state variance or waiver, and whose primary source of water supply is impaired by such shall be allowed credit in their NPDES discharges by either 1) an extension of that variance or waiver to affected downstream dischargers and/or 2) allowing intake credits to affected downstream dischargers."

If you have any questions, please contact Wastewater Superintendent Stephen Craig at (916) 224-6063 or Industrial waste Supervisor Richard Elliott at (916) 224-6050.

Response to: CTR-084-001

The State has discretion to use implementation tools such as appropriate intake credits to apply to dischargers that have poor intake or receiving water which is beyond their control. Implementation of water quality standards through various regulatory and non-regulatory tools is primarily a State responsibility and is beyond the scope of the CTR. Since the proposed CTR was issued, the State

released a draft Policy for Implementation of Toxic Water Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, September 11, 1997. The draft policy included a provision for intake water credits (See pp. V-60-V-70). EPA has provided a copy of your comments to the State Water Resources Control Board for consideration.
