

Subject Matter Code: E-011 UMRA - Economic Comments

---

Comment ID: CTR-059-024

Comment Author: Los Angeles County Sanit. Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-011 UMRA - Economic Comments

References: Letter CTR-059 incorporates by reference letter CTR-035

Attachments? Y

CROSS REFERENCES E-01g08

---

Comment: Economic Analysis

The Sanitation Districts commends EPA for preparing an analysis of the economic impacts of the proposed CTR, and for selecting POTWs for half of the case studies. We believe that EPA is correct in thinking that POTWs are likely to experience major impacts as a result of the promulgation of the CTR. However, we believe that this analysis is based on improper assumptions and inaccurate cost estimates, resulting in unconvincing conclusions. Our own attainability and cost analysis indicates that there are indeed fundamental flaws in the cost analysis. A few of the areas of concern are listed below:

\* The Economic Analysis presents a very weak analysis of potential benefits, which is based on limited information about ambient water quality conditions. Due to this weakness, combined with the paucity of information in the literature regarding the benefits from marginal improvements in water quality, the benefits analysis does a poor job of evaluating the marginal benefits that would result from the implementation of the CTR.

Response to: CTR-059-024

See response to CTR-003-010.

---

Subject Matter Code: E-01m Regulatory Relief

---

Comment ID: CTR-003-007  
Comment Author: City of Riverside  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/22/97  
Subject Matter Code: E-01m Regulatory Relief  
References:  
Attachments? N

**CROSS REFERENCES**

---

Comment: 7) The economic analysis assumes that where the proposed criteria cannot be economically met, the EPA or State will take some action such as setting new criteria which will result in no cost to the discharger. This is totally inappropriate. First there is no assurance that relief can or will be given. At a minimum, studies will have to be performed to support a proposed action. The cost of such studies can and historically have been significant, ranging from hundreds of thousands to millions of dollars per study. These costs are borne by the effected communities not the EPA or State. Most importantly, the EPAs position that once promulgated, they do not have the resources to modify this rule in a timely manner, is in contradiction to this assumption.

Response to: CTR-003-007

See responses to CTR-032-004 and CTR-060-019.

Note also that, because there is no assurance that specific dischargers will receive regulatory relief, EPA estimated potential compliance costs under the assumption that none of the facilities with significant costs would be allowed alternative regulatory approaches (i.e., the high scenario).

---

Comment ID: CTR-032-001  
Comment Author: Las Gallinas Val. Sanitry Dist  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01m Regulatory Relief  
References: Letter CTR-032 incorporates by reference letter CTR-035  
Attachments? N

**CROSS REFERENCES**

---

Comment: Las Gallinas Valley Sanitary District (District) submits the following comments on the proposed California Toxics Rule. The District owns and operates a 2.9 mgd advanced secondary municipal wastewater treatment plant that discharges into northern San Francisco Bay. The San Francisco Bay Regional Water Quality Control Board (RWQCB) considers the District a shallow water discharger and does not allow dilution credit in calculating effluent limits. As such, the District faces considerable difficulties in complying with end-of-the-pipe limits for copper, mercury and potentially

several toxic organics that have proposed objectives lower than the currently available analytical detection limits.

The District has had in place for several years, comprehensive source control, pollution prevention and waste minimization programs similar to those of much larger dischargers. While we continue to look for ways to improve our programs, we believe that we have passed the point of diminishing returns and that there is not a significant potential for additional pollutant removal via these mechanisms. The vast majority of copper loading, as in the case of most Bay area shallow water dischargers, is from the potable water supply and corrosion of residential copper plumbing. Plant optimization is being investigated but to date also does not appear to promise more than marginal increases in particulate copper removal, at moderate to significant costs.

Therefore, contrary to the conclusions of the CTR economic analysis, we do not believe that implementation of additional pollution prevention measures and/or plant optimization are viable mechanisms for the District to achieve current or proposed CTR criteria. Regulatory relief, as we have requested during our NPDES permit renewal process, is required.

Response to: CTR-032-001

The Las Gallinas Valley Sanitary District (District) did not provide enough information for EPA to analyze whether pollution control measures and/or process optimization would be viable mechanisms for compliance with CTR-based limits. In particular, the facility would need to provide facility engineering data and existing permit limit information and effluent data for copper and mercury. Such specific data are required to determine how the economic analysis assumptions and methodology (e.g., cost decision matrix) would apply to this particular facility. Despite this, review of the comment letter suggests that the District presently is not in compliance with existing effluent limits for copper and mercury and that regulatory relief already has been requested for these constituents. Information submitted by the Novato Sanitary District, another wastewater treatment plant discharging to northern San Francisco Bay and classified as a shallow water discharger, indicates that the present effluent limits for copper and mercury are 2.9 ug/L and 0.03 ug/L. As indicated in the response to CTR-005-001, these limits are likely to be more stringent than permit limits calculated using CTR criteria and EPA's methodology (e.g., which uses dissolved criteria and metals translators). Although the information submitted by the District is not sufficient to fully evaluate their comments, EPA believes that it is likely that the CTR would not result in insignificant costs because existing discharge limits seem to be more stringent than CTR-based limits. Nonetheless, the decision to grant regulatory relief is not a federal responsibility, but a place-based decision that must rest solely in the hands of the local community, elected officials, and other stakeholders that use the water resource affected by such decisions.

See also response to CTR-004-003.

---

Comment ID: CTR-032-004

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: E-01m Regulatory Relief

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

Attachments? N

## CROSS REFERENCES

---

Comment: The use of the \$200 and \$500 per toxic-pound equivalent of pollutant removed cost thresholds significantly skewed potential costs downward by assuming that when those cost thresholds are reached, regulatory relief options would be pursued successfully. The CTR should include an evaluation of costs assuming regulatory relief is not made available. While the District supports the various regulatory relief options referenced, such as site specific objectives and watershed based phased TMDLs, dischargers have absolutely no guarantees that such regulatory relief will indeed be provided. Furthermore, regulatory relief conveys a negative connotation to these actions; most are more accurately viewed as "sound science", actions that should be taken anyway in pursuit of more technically defensible objectives and limits that will fully protect water quality.

Response to: CTR-032-004

As described in the EA that accompanied the proposed CTR (SAIC and Jones and Stokes Associates, 1997), EPA assumed that regulatory alternatives such as phased total maximum daily loads/water quality assessments, site-specific criteria modifications, standards variances, metals translators, etc., are considered under certain circumstances. Specifically, under the low-end scenario, regulatory alternatives were assumed necessary if the cost for a sample facility exceeded \$200 per toxic pounds-equivalent (in practice, regulatory relief mechanisms are available even when costs are below \$200 per toxic pounds-equivalent).

EPA assumes that a facility, when faced with the challenge of meeting water quality-based effluent limitations (WQBELs) based on CTR criteria, will select the most cost-effective controls, including regulatory alternatives. In fact, this has been the case in California, where several major POTWs have performed studies in pursuit of regulatory alternatives such as metals translators and site-specific criteria, rather than install costly controls to comply with WQBELs. EPA acknowledges that the actual cost-effectiveness value will vary by facility depending upon many factors, including the characteristics and volume of discharge, the receiving water, etc. However, EPA disagrees that the cost trigger is unrealistic, as these avenues of regulatory relief do exist and are employed to implement the water quality standards program.

Nonetheless, in the high-end estimate developed for the cost analysis accompanying the final CTR, no cost trigger was used and, thus, EPA's high-end cost estimate did not include the use of a regulatory alternative for any sample facility.

Reference: SAIC and Jones and Stokes Associates, Inc. 1997. Analysis of Potential Costs Related to the Implementation of the California Toxics Rule. Prepared for U.S. EPA, Office of Science and Technology and U.S. EPA Region IX, May 5.

---

Comment ID: CTR-035-008d

Comment Author: Tri-TAC/CASA

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01m Regulatory Relief

References:

Attachments? N

CROSS REFERENCES E-01g08

E-01e

E-01d

E-01h

E-01c

---

Comment: Finally, we have serious concerns about the accuracy of the draft Economic Analysis and the estimates of the costs and benefits of the draft CTR (see detailed comments in Attachments I and 2). Our primary concerns related to the cost analysis include 1) that the case studies on which the cost analysis is based do not adequately represent the actual population of POTWs in California; 2) the omission of costs that could be incurred by many sectors that contribute to overall loadings, and, hence, can be expected to have to reduce their loadings (e.g., non-SIU indirect dischargers, municipal and industrial stormwater dischargers, agricultural activities, and other nonpoint sources of CTR-regulated pollutants); 3) the use of numerous assumptions that underestimate costs; and 4) the capricious removal of costs that exceed threshold values by assuming that regulatory relief measures will be granted, despite the lack of any proposed regulatory relief trigger in the proposed regulation.

To illustrate the degree of underestimation of costs for the POTW sector alone, we looked at potential compliance costs for the POTW sector. We found that the potential costs for 23 major POTWS, on an annualized basis, may reach \$400 million. We believe that this analysis demonstrates that the potential cost consequences of compliance with effluent limits based on the proposed CTR criteria would easily exceed the \$ 100 million annual cost threshold, especially when the costs of all 313 POTWs in the State are estimated. Thus, we believe that EPA must conclude that the proposed CTR could have significant economic impacts on local governments.

Response to: CTR-035-008d

See responses to CTR-021-005c, CTR-032-004, CTR-040-039, CTR-021-006b, CTR-040-037, and CTR-059-018.

---

Comment ID: CTR-035-047b

Comment Author: Tri-TAC/CASA

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01m Regulatory Relief

References:

Attachments? N

CROSS REFERENCES E-01b

---

Comment: pp. 2-24 - 2-32 (U.S. EPA, 1997b) - Cost Triggers for Alternative Regulatory Approaches The use of the \$200 and \$500 cost thresholds significantly skewed potential costs downwards by assuming that when those cost thresholds are reached, regulatory relief options would be pursued successfully, despite the fact that dischargers have absolutely no guarantees that such options will be successful, In the Preamble, in fact, EPA indicates that options such as variances and site-specific criteria will rarely, if

ever, be granted. In addition, POTW experiences to date in California suggest that it is unlikely that such options will be successful. Thus, the basic premise of the analytic approach used to determine costs needs to be reconsidered. Incidentally, we also believe that the costs attributed to such activities were seriously underestimated. Information we are familiar with suggests that many of the regulatory alternatives EPA examined can cost up to several million dollars (per pollutant) (e.g. TMDLs, UAAs). Thus, we suggest that in the future when calculating the costs for such activities, EPA should use a range where \$200,000/pollutant is the low end scenario and \$2,000,000/pollutant is the high end scenario.

Response to: CTR-035-047b

See responses to CTR-032-004 and CTR-060-019.

---

Comment ID: CTR-038-004c

Comment Author: Sonoma County Water Agency

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01m Regulatory Relief

References:

Attachments? Y

CROSS REFERENCES E-01g08

E-01h

E-01c02

---

Comment: 4. The economic analysis is seriously flawed. The major flaws include: (1) failing to do an appropriate sampling of dischargers having little or no dilution; (2) assuming in the high-end cost scenario that a 25% reduction could be achieved through source control and an additional 25% achieved through treatment plant optimization without capital improvements; (3) constraining estimates of potential costs through key assumptions, including the assumption that regulatory relief from the rule would be granted if costs were in excess of certain thresholds; and (4) exaggerating estimates of potential benefits by assuming an end (i.e., achievement of the proposed water quality criteria) that will not result from the rule. The result of these flaws is that potential costs are greatly understated and potential benefits are greatly overstated. The District's analysis demonstrates that actual costs may be an order of magnitude greater than EPA's \$500/lb threshold and that the benefits are very small.

Response to: CTR-038-004c

See responses to CTR-054-013a, CTR-032-004, CTR-021-008, CTR-040-029a, and CTR-056-018.

---

Comment ID: CTR-040-008b

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: E-01m Regulatory Relief

References: Letter CTR-040 incorporates by reference letter CTR-027  
Attachments? Y  
CROSS REFERENCES E-01c02  
E-02c

---

Comment: MAJOR CONCERNS

We do, however, have fundamental concerns with the Rule as it is presently proposed and its supporting economic analysis. We believe the Rule can be modified in a manner that will be responsive to our concerns while at the same time being consistent with applicable Federal law and regulations. Our major concerns are presented here and are followed by our recommended modifications.

II. Concern: The economic analysis upon which the Rule is based is seriously flawed.

- \* Estimates of potential costs are severely constrained due to certain assumptions including the assumption that regulatory relief from the Rule will be granted if costs are in excess of certain thresholds.
- \* Estimates of potential benefits are exaggerated by assuming, that the proposed water quality criteria will actually be achieved in receiving water bodies. This will not result from the implementation of the Rule because the Rule is only addressing permitted discharges to the receiving water bodies.
- \* The result of these flaws is that potential costs are greatly understated and potential benefits are greatly overstated.

Response to: CTR-040-008b

See responses to CTR-054-013a, CTR-032-004, and CTR-056-018.

---

Comment ID: CTR-040-031  
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: E-01m Regulatory Relief  
References: Letter CTR-040 incorporates by reference letter CTR-027  
Attachments? Y  
CROSS REFERENCES

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

- \* It is not conservative to assume that permit authorities will accept metals translators when there is no history of such acceptance in California.

Response to: CTR-040-031

EPA disagrees. The State has used metals translators in the Santa Ana River in a case in which it

adopted site-specific dissolved criteria for metals. Since the CTR would establish dissolved metals criteria on a statewide basis, EPA expects that the State will accept appropriate translator studies to convert from dissolved criteria to total recoverable permit limits. The State indicated that it would accept the use of defensible translator studies in its Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (September 11, 1997, p. 10).

---

Comment ID: CTR-040-036

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: E-01m Regulatory Relief

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

Attachments? Y

CROSS REFERENCES

---

Comment: EPA's assumption that dischargers would pursue source control, treatment plant optimization, and regulatory relief prior to constructing end-of-pipe facilities conflicts with the 5-year maximum compliance schedule allowed by the CTR. In most cases (e.g., in the Merced POTW case study) it would take 5 years to plan, design, obtain approvals, arrange financing, and construct end-of-pipe facilities. A discharger could not pursue such non-structural controls and still be assured to meeting a 5-year compliance schedule.

Response to: CTR-040-036

EPA's compliance schedule in the final rule would allow the State flexibility in establishing compliance schedules for dischargers. EPA amended the final CTR to include a provision whereupon the compliance schedule provision will sunset in five years or when the State adopts its own compliance schedule provision in the State Implementation Policy and, if EPA approves the schedule, EPA will then act to stay the EPA compliance schedule provision for the CTR. This change to the CTR will give the State discretion to develop an appropriate compliance schedule policy for California.

---

Comment ID: CTR-040-041

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: E-01m Regulatory Relief

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

Attachments? Y

CROSS REFERENCES

---

Comment: Many of the types of regulatory relief identified as possible in the analysis (and in the Preamble to the CTR) do not really constitute relief and/or are not available to dischargers under the

CTR (see Attachment B-1).

Response to: CTR-040-041

See response to CTR-032-004.

---

Comment ID: CTR-041-010b

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: E-01m Regulatory Relief

References:

Attachments? N

CROSS REFERENCES E-01n

E-01e

E-01g

---

Comment: 5. Concerns Regarding Economic Analysis

The District also has several significant concerns with the Economic Analysis that was performed for the proposed rule. Concerns about the cost estimates made for both the District and the state are presented here. (See attached Review of EPA's Economic Analysis of the Proposed California Water Quality Toxics Rule.) Overall, the District believes that problems with the Economic Analysis are serious enough that it should be redone. As stated above in our analysis of assumed costs at the SRWTP, the use of questionable data without qualification combined with unsubstantiated assumptions regarding costs to achieve compliance resulted in a gross underestimate in the cost-effectiveness ratio. The District's first concern is that if the types of problems found in our Case Study are widespread in other studies, the complete analysis is suspect.

In addition to the analysis of the District's facilities, there are several other points which have been used by EPA to lead to a potentially serious understatement of actual costs. The key assumptions involved are that: 1) no costs would occur if either no monitoring data presently exists or if that data is below analytical detection levels; 2) no treatment costs would occur whenever EPA's initial estimates showed high costs, due to successful regulatory relief; 3) no costs are included for nonpoint sources such as municipal stormwater management systems; and 4) no costs are included for indirect dischargers to the District's system that are not large enough to be considered a Significant Industrial User (SIU).

Regarding the first assumption, the District has found that there is pressure from many sides, including the Safe Drinking Water Act, to both increase the number of constituents being monitored and to lower detection levels to meet numeric criteria set by EPA and the state. To assume that monitoring of these new constituents will not lead to any treatment cost increases is simply unrealistic. Similarly, the second assumption about absolute success in every pursuit of regulatory relief is also overly optimistic. There are no guarantees that pursuit of regulatory relief will be successful in any situation, and EPA indicates elsewhere in the preamble that options such as variances and site-specific criteria will rarely, if ever, be granted.

The third and fourth key assumptions ignore present dominating trends and facts, i.e. that. prevention and control of pollutants at their sources, including very small indirect dischargers, storm runoff, and other nonpoint sources are now the major focus of EPA's wastewater programs nationally. While we agree that these management steps should be taken, there will be significant costs attached to the implementation of these steps that cannot be ignored.

Combined with concerns the District has heard from other sources such as the California Association of Sanitation Agencies (CASA), it appears that EPA has failed to make "a reasoned determination that the benefits of the intended regulation justify its costs." Therefore the District believes that the Agency is obligated to redo the draft Economic Analysis.

Response to: CTR-041-010b

See responses to CTR-032-004, CTR-021-006b, CTR-040-037, and CTR-003-011.

---

Comment ID: CTR-041-027  
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: E-01m Regulatory Relief  
References:  
Attachments? N  
CROSS REFERENCES

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that permit authorities will accept metals translators when there is no history of such acceptance in California.

Response to: CTR-041-027

See response to CTR-040-031.

---

Comment ID: CTR-041-032  
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: E-01m Regulatory Relief  
References:  
Attachments? N  
CROSS REFERENCES

---

Comment: EPA's assumption that dischargers would pursue source control, treatment plant optimization, and regulatory relief prior to constructing end-of-pipe facilities conflicts with the 5-year maximum compliance schedule allowed by the CTR. In most cases (e.g., in the Merced POTW case study) it would take 5 years to plan, design, obtain approvals, arrange financing, and construct end-of-pipe facilities. A discharger could not pursue such non-structural controls and still be assured to meeting a 5-year compliance schedule.

Response to: CTR-041-032

See responses to CTR-040-036 and CTR-032-004.

---

Comment ID: CTR-041-037

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: E-01m Regulatory Relief

References:

Attachments? N

CROSS REFERENCES

---

Comment: Many of the types of regulatory relief identified as possible in the analysis (and in the Preamble to the CTR) do not really constitute relief and/or are not available to dischargers under the CTR (see Attachment 3-1).

Response to: CTR-041-037

See responses to CTR-032-004 and CTR-060-019.

---

Comment ID: CTR-043-004c

Comment Author: City of Vacaville

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01m Regulatory Relief

References:

Attachments? Y

CROSS REFERENCES E-01g

E-01h

E-02c

E-01c02

---

Comment: 4. EPA's Economic Analysis is seriously flawed. The major flaws include:

- (1) failing to do an appropriate sampling of small dischargers having little or no dilution;
- (2) assuming in the high-end cost scenario that a 25% reduction could be achieved through source control and an additional 25% achieved through treatment plant optimization without capital improvements;
- (3) constraining estimates of potential costs through key assumptions, including the assumption that regulatory relief from the rule would be granted if costs were in excess of certain thresholds; and
- (4) exaggerating estimates of potential benefits by assuming an end (i.e., achievement of the proposed water quality criteria) that will not result from the rule.

The result of these flaws is that potential costs are greatly understated and potential benefits are greatly overstated. Moreover, the flawed economic analysis has led to the erroneous conclusion that the CTR is not a "significant regulatory action" or major rule subject to Presidential Executive Order 12866 and the Unfunded Mandates Reform Act or a rule that affects small entities protected under the Regulatory Flexibility Act.

Response to: CTR-043-004c

See responses to CTR-054-013a, CTR-021-005c, CTR-032-004, CTR-021-008, CTR-040-029a, and CTR-056-018.

---

Comment ID: CTR-044-005c  
Comment Author: City of Woodland  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01m Regulatory Relief  
References:  
Attachments? Y  
CROSS REFERENCES E-01g08  
E-01h01  
E-02c  
E-01c02  
R  
S

---

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

4. EPA's Economic Analysis is seriously flawed. The major flaws include:

- (1) failing to do an appropriate sampling of small dischargers having little or no dilution; (2) assuming in the high-end cost scenario that a 25% reduction could be achieved through source control and an additional 25% achieved through treatment plant optimization without capital improvements; (3) constraining estimates of potential costs through key assumptions, including the assumption that regulatory relief from the rule would be granted if costs were in excess of certain thresholds; and (4) exaggerating estimates of potential benefits by assuming an end (i.e., achievement of the proposed water

quality criteria) that will not result from the rule. Additional concerns with the economic analysis are presented in Exhibit F. The result of these flaws is that potential costs are greatly understated and potential benefits are greatly overstated. Moreover, the flawed economic analysis has led to the erroneous conclusion that the CTR is not a "significant regulatory action" or major rule subject to Presidential Executive Order 12866 and the Unfunded Mandates Reform Act or a rule that affects small entities protected under the Regulatory Flexibility Act. The City, for example, is a small community having a population of under 50,000 and would be greatly impacted by the proposed rule.

Response to: CTR-044-005c

See responses to CTR-054-013a, CTR-021-005c, CTR-032-004, CTR-021-008, CTR-040-029a, and CTR-056-018.

---

Comment ID: CTR-044-022  
Comment Author: City of Woodland  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01m Regulatory Relief  
References:  
Attachments? N  
CROSS REFERENCES

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that permit authorities will accept metals translators when there is no history of such acceptance in California.

Response to: CTR-044-022

See response to CTR-040-031.

---

Comment ID: CTR-044-027  
Comment Author: City of Woodland  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01m Regulatory Relief  
References:  
Attachments? N  
CROSS REFERENCES

---

Comment: EPA's assumption that dischargers would pursue source control, treatment plant optimization,

and regulatory relief prior to constructing end-of-pipe facilities conflicts with the 5-year maximum compliance schedule allowed by the CTR. In most cases (e.g., in the Merced POTW case study) it would take 5 years to plan, design, obtain approvals, arrange financing, and construct end-of-pipe facilities. A discharger could not pursue such non-structural controls and still be assured to meeting a 5-year compliance schedule.

Response to: CTR-044-027

See response to CTR-040-036.

---

Comment ID: CTR-044-032  
Comment Author: City of Woodland  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01m Regulatory Relief  
References:  
Attachments? N  
CROSS REFERENCES

---

Comment: Many of the types of regulatory relief identified as possible in the analysis (and in the Preamble to the CTR) do not really constitute relief and/or are not available to dischargers under the CTR (see Attachment 3-1).

Response to: CTR-044-032

See responses to CTR-032-004 and CTR-060-019.

---

Comment ID: CTR-045-009c  
Comment Author: Sausalito-Marín Sanitary Dist.  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/24/97  
Subject Matter Code: E-01m Regulatory Relief  
References:  
Attachments? Y  
CROSS REFERENCES E-01g08  
E-01h

---

Comment: The draft Economic Analysis has serious flaws. It underestimates the costs of the draft CTR and overestimates the benefits. For the cost analysis, EPA should reevaluate the representativeness of the sample used; the omission of impacts on many sectors that contribute to loadings, and hence, can be expected to have to reduce their loadings (e.g., small indirect dischargers, municipal and industrial stormwater dischargers, agricultural activities, and other nonpoint sources); the incorporation of

numerous assumptions that underestimate costs; and the assumption to artificially remove costs that exceed threshold values by assuming that regulatory relief measures will be granted, despite the fact that they are not automatically granted through triggers included as part of the proposed regulation.

Response to: CTR-045-009c

See responses to CTR-032-004, CTR-056-018, CTR-021-006b, and CTR-059-018.

---

Comment ID: CTR-049-006c  
Comment Author: Watereuse Assoc. of California  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/24/97  
Subject Matter Code: E-01m Regulatory Relief  
References:  
Attachments? N  
CROSS REFERENCES E-01g08  
E-01h

---

Comment: With respect to other criteria proposed for adoption in the draft CTR, we recommend that USEPA:

4. Review and correct existing flaws in the current "Economic Analysis."

With respect to the Economic Analysis conducted by USEPA, we are concerned that it underestimates the cost of the proposed CTR rule while overestimating its benefits. We suggest that USEPA re-evaluate (1) the representativeness of the sample used; (2) the omission of impacts on many sectors that contribute to loadings; (3) the incorporation of a variety of assumptions that underestimate costs; and (4) the assumption to artificially remove costs that exceed threshold values by incorrectly assuming that regulatory relief measures will be granted. For the benefits analysis, USEPA should utilize more California-specific and recent information. A further problem with the analysis relates to the establishment of criteria that are below analytical detection. Lacking credible data, it was not possible to conduct cost-benefit analyses or determine that any set of control measures would or could lead to compliance. This fundamental inability to utilize established rulemaking procedures requires, in our opinion, further work prior to the promulgation of the criteria.

Response to: CTR-049-006c

See responses CTR- 045-011, CTR-032-004, CTR-056-018, CTR-021-006b, CTR-059-018, and CTR-052-014.

---

Comment ID: CTR-054-013c  
Comment Author: Bay Area Dischargers Assoc.  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:

Document Date: 09/25/97  
Subject Matter Code: E-01m Regulatory Relief  
References:  
Attachments? Y  
CROSS REFERENCES E-01g03  
E-01q01  
E-021

---

Comment: The economic analysis is seriously flawed. The major flaws include: (1) failing to do an appropriate sampling of dischargers; (2) assuming in the high-end cost scenario that a 25% reduction could be achieved through source control and an additional 25% achieved through treatment plant optimization without capital improvements; (3) constraining estimates of potential costs through key assumptions, including the assumption that regulatory relief from the rule would be granted if costs were in excess of certain thresholds; and (4) exaggerating estimates of potential benefits by assuming an end (i.e., achievement of the proposed water quality criteria) that will not result from the rule (see Attachment 3). The result of these flaws is that potential costs are greatly understated and potential benefits are greatly overstated. BADA's analysis shows that its member agencies alone could be faced with costs in excess of \$100 million per year to achieve effluent limits based on the copper, PAH, heptachlor and aldrin criteria. BADA's analysis also indicates that the benefits associated with this expenditure will be difficult to measure. Copper loadings will be reduced by 1% and the level of compliance for PAH's and heptachlor will remain unchanged at its present high level. Certainly these benefits will not measurably improve the fishing experience or measure the number of fisherman in the Bay, significantly reduce the cancer cases, or improve property values or other nonuse benefits, as estimated in EPA's economic analysis. A further consequence of the flawed economic analysis is the conclusion that the CTR is not a major rule (i.e., one which will result in excess of \$100 million per year expenditure) subject to Presidential Executive order 12866 and the Unfunded Mandates Reform Act or a rule that affects small entities protected under the Regulatory Reform Act. BADA agencies provide service to a number of small communities with populations under 50,000 people that could be greatly impacted by the proposed rule.

Response to: CTR-054-013c

See responses to CTR-054-013a, CTR-021-005c, CTR-032-004, CTR-021-008, CTR-040-029a, CTR-056-018, and CTR-059-018.

---

Comment ID: CTR-054-026  
Comment Author: Bay Area Dischargers Associati  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01m Regulatory Relief  
References:  
Attachments? N  
CROSS REFERENCES

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that permit authorities will accept metals translators when there is no history of such acceptance in California.

Response to: CTR-054-026

See response to CTR-040-031.

---

Comment ID: CTR-054-031  
Comment Author: Bay Area Dischargers Associati  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01m Regulatory Relief  
References:

Attachments? N

**CROSS REFERENCES**

---

Comment: EPA's assumption that dischargers would pursue source control, treatment plant optimization, and regulatory relief prior to constructing end-of-pipe facilities conflicts with the 5-year maximum compliance schedule allowed by the CTR. In most cases (e.g., in the Merced POTW case study) it would take 5 years to plan, design, obtain approvals, arrange financing, and construct end-of-pipe facilities. A discharger could not pursue such non-structural controls and still be assured to meeting a 5-year compliance schedule.

Response to: CTR-054-031

See response to CTR-040-036.

---

Comment ID: CTR-054-036  
Comment Author: Bay Area Dischargers Associati  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01m Regulatory Relief  
References:

Attachments? N

**CROSS REFERENCES**

---

Comment: Many of the types of regulatory relief identified as possible in the analysis (and in the Preamble to the CTR) do not really constitute relief and/or are not available to dischargers under the CTR (see Attachment 3-1).

Response to: CTR-054-036

See response to CTR-032-004.

---

Comment ID: CTR-086-006

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: E-01m Regulatory Relief

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

Attachments? N

**CROSS REFERENCES**

---

Comment: The use of the \$200 and \$500 per toxic pound-equivalent cost thresholds significantly skewed potential costs downward by assuming that when those cost thresholds are reached regulatory relief options would be pursued successfully. The CTR should include an evaluation of costs assuming regulatory relief is not made available. While CDA supports the various regulatory relief options referenced, such as site specific objectives and watershed based phased TMDLS, dischargers, and by inference indirect dischargers, have absolutely no guarantees that such regulatory relief will indeed be provided. Furthermore, regulatory relief conveys a negative connotation to these actions; most are more accurately viewed as "sound science", actions that should be taken anyway in pursuit of more technically defensible objectives and limits that will fully protect water quality.

Response to: CTR-086-006

See response to CTR-032-004.

---

Subject Matter Code: E-01m02 Success in Reg. Relief

---

Comment ID: CTR-090-003

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: E-01m02 Success in Reg. Relief

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

Attachments? Y

CROSS REFERENCES

---

Comment: Major Concerns About the Proposed Criteria and Rule

1. The Proposal is Based on Poor Data and Will Not Result in Better Water Quality for California. We stated that our own attainability analysis and that of BADA show that San Francisco,) will be impacted by this rule. Unfortunately, due to the short time for review, the poor quality of data and basis for statements and assumptions in the proposal and the problem with detection limits we cannot specifically say what will be the cost to Sari Francisco. One analysis tell us it could be \$2.3 million per year annualized costs and another analysis tells us it could be much more. We strongly recommend major revision to the proposal and the economic analysis before final promulgation for the following reasons:

\* The costs section of the economic analysis is extremely flawed; if this rule is adopted and the State Implementation Policy does not allow for regulatory relief the cost of compliance to point sources dischargers will be orders of magnitude more than the amount stated in the proposed rule.

Response to: CTR-090-003

See responses to CTR-032-004 and CTR-056-018.

---

Subject Matter Code: E-01m03 Cost of WERs

---

Comment ID: CTR-060-019  
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: E-01m03 Cost of WERs  
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:

Economic Analysis is deficient

Additionally, the metals criteria are expressed as the dissolved concentration of the metal and have been derived from toxicity tests conducted in laboratory water that is relatively pure. Many bays and estuaries, especially back bays and estuaries contain significant concentrations of suspended organic matter. Ambient levels of organic matter can bind much of the bioavailable portion of the metal and reduce the overall toxicity due to the metal. To account for this effect, the rule allows for the use of water effects ratios (WERs) (in addition to translators) in calculating water quality based effluent limits. This may be a viable option for some dischargers to achieve compliance with the proposed criteria. However, the cost to establish a WER could be significant. EPRI(\*16) has estimated that the typical costs for a basic WER study for an acute metal criterion could range from \$20,000 to \$50,000. To develop a WER for a chronic criterion or to address spatial or seasonal variability can substantially increase the costs. It is not clear whether the economic analysis reflects the cost to the regulated community of having to develop WERs that will effectively increase the water quality based effluent limits. This cost should be added into the economic analysis.

-----  
(\*16) Implementation Manual for the Water-Effect Ratio (WER)", EPRI Report No. TR-107144, November, 1996, page 3-5.

Response to: CTR-060-019

Based upon estimates provided in SAIC (1995), the Assessment of Compliance Costs Resulting from Implementation of the Final Great Lakes Water Quality Guidance, the typical cost to facilities pursuing alternative regulatory approaches to CTR-based WQBELs is \$200,000 per pollutant. The \$200,000 per pollutant cost represents the mid-range of costs for a number of alternative regulatory approaches and was used for the economic analysis of the CTR. EPA Regional Offices and States estimate that alternative approaches range from \$20,000 for criteria modifications to \$1,000,000 per pollutant for phased-TMDLs. These costs reflect costs associated with additional monitoring, performing special studies, and other activities, to support requests from facilities for relief from the CTR-based WQBEL. EPA estimates that the cost of calculating water-effects ratio (WER) is comparable to this typical cost.

Reference: SAIC. 1995. Assessment of Compliance Costs Resulting from Implementation of the Final Great Lakes Water Quality Guidance. Prepared for U.S. EPA, Office of Science and Technology, March 13.

---

Subject Matter Code: E-01n Detection Limits

---

Comment ID: CTR-003-008  
Comment Author: City of Riverside  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/22/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? N

**CROSS REFERENCES**

---

Comment: 8) USEPA has assumed in both its low and high end cost scenario that if monitoring data for potential chemical constituents were reported as below detection limits then there would be no cost of compliance for these constituents. The City of Riverside has 35 constituents from the list of proposed criteria, applicable to its receiving water use designations, whose limits and effluent concentrations are below analytical detection levels in our matrix. The potential cost for the City to remove even one of these constituents, should it be detected as technology improves, could exceed the projected costs of this rule for the entire state. Given that this is the case for most if not all POTWs in the State, it does not seem appropriate to implement standards for which the ability to comply is not and cannot be known. The constituents of concern at our plant are: cadmium, chromium (VI), copper, lead, mercury, selenium, silver, thallium, asbestos, dioxin, acrylonitrile, benzidine, benzo(a) anthracene, benzo(a) pyrene, benzo(b) fluoranthene, benzo (k) fluorethene, chrysene, dibenzo (a,h) anthracene, (3,3) dichlorobenzidine, 1,2-diphenylhydrazine, hexachlorobenzene, indeno (1,2,3-cd) pyrene, aldrin, alpha-BHC, chlordane, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, dieldrin, endrin, heptachlor, heptachlor epoxide, PCBS, toxaphene. The compliance status of several other constituents would be in question if the human health criteria for consumption of "Water and Organisms" is used versus organisms only. Given the extremely low levels at which many of the criteria are set and unless the EPA is proposing a nation wide product ban, it is quite likely that one or more of these chemicals will show up in a POTW effluent at levels above the standards. The EPA should either remove from consideration criteria for which compliance cannot be determined or assume that it is being exceeded for the purpose of the economic analysis.

Response to: CTR-003-008

See responses to CTR-003-011 and CTR-004-002.

---

Comment ID: CTR-004-002  
Comment Author: South Bayside System Authority  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/24/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? N  
**CROSS REFERENCES**

---

Comment: SBSA has a comprehensive effluent monitoring program for metals and organics. Since the inception of the SBSA Pretreatment Program in 1975 and the operation of advanced treatment technology in 1982 there has been a significant reduction in influent and effluent pollutant loading. The more recent Pollution Prevention Program has also contributed to reduced pollutant loading. Even with the substantial reductions achieved in the past there will be severe attainability problems resulting specifically from the adoption of the proposed CTR criteria. Monitoring data from January 1996 through August 1997 shows noncompliance with six (6) metals; copper, lead, mercury, nickel, silver, and zinc. For samples from 1993 to the present there are nine (9) organics and twenty-two (22) pesticides that have proposed objectives below detection limits. There is no mechanism to assess the ability or cost of achieving compliance with these limits.

Response to: CTR-004-002

In recent years, many States have promulgated water quality criteria for various toxic pollutants that are more restrictive than the level of analytical detection. Implementation of these existing water quality criteria by many States do take into account the ability to detect the pollutant in the waste stream. For example, some States determine compliance with limits established below method detection limits (MDL) based on the minimum level (ML), where available. When a promulgated ML is not available, compliance with that limit may be based on the MDL or the practicable quantitation level (PQL).

To ensure that its cost estimates were conservative (i.e., erring on the side of higher costs), EPA used the MDL as the compliance level. Although EPA based compliance determination on the MDL, the Agency acknowledges that estimating treatment costs for WQBELs below the MDL is speculative and likely unrealistic.

However, EPA does believe that aggressive pollutant prevention/waste minimization practices, combined with conventional end-of-pipe treatment, can effectively reduce all detectable amounts of particular pollutants of concern from the discharge, resulting in compliance with WQBELs below detection levels. EPA agrees that some facilities will want to ensure compliance with WQBELs below detection levels through the use of additional or enhanced end-of-pipe treatment. EPA believes that appropriate costs were included in the cost analysis by including costs for both pollution prevention/waste minimization techniques (such as material substitution, process modification, and/or recycling, reuse, or treatment of internal waste streams) and end-of-pipe treatment. Where the pollutant is present at detectable levels, and where the facility implements control measures directed specifically at eliminating these pollutants, the controls will likely result in reduction of the pollutant to below the level of detection. Because there is no evidence that reductions cannot reach a level in compliance with WQBELs, EPA has no reason to believe that its assumption of compliance is not reasonable. EPA compiled two documents, Overview of Pollution Prevention Approaches at POTWs and Pollution Prevention at POTWs, a Resource List (available in the record for this rulemaking), which identify successful programs to reduce mercury and lindane through public education and source controls. See also response to CTR-034-010b.

---

Comment ID: CTR-021-013

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: E-01n Detection Limits

References: Letter CTR-021 incorporates by reference letter CTR-035

Attachments? Y

**CROSS REFERENCES**

---

Comment: The CTR Analysis of POTW Compliance with Organics is Based on the Flawed Assumption that Analytical Detection Limits Will Not Improve and thus POTW Plants that Currently Meet the Proposed Organic Effluent because Effluent Monitoring Results are Less than the Detection Limit will Meet the Limits into the Future

A significant number of organic compounds contained in the CTR have detection limits greater than the proposed criteria. For example, endrin and pentachlorophenol are the two cited in the Sunnyvale economic analysis. A significant and potentially costly incorrect assumption of the "Analysis of Potential Costs ..." document was that if all values were reported as below the detection limit, there would be no costs attributable to implementing the CTR. This dismisses a very likely scenario, namely that analytical detection limits will improve over time and that some of these organics may then be detected in the effluent.

If this occurs, POTWs will most likely be facing installation of Granular Activated Carbon (GAC) for low level organics removal, as was recommended for the City of Merced in the CTR Economic Analysis appendix. There are no assurances that the proposed pollution prevention and waste minimization measures would be effective in reducing levels to the extent required. Reverse osmosis (RO) is not extremely effective at removing many of these organics to these low levels so even if Sunnyvale had installed RO for trace metals removal, it would still be facing use of GAC for organics compliance. This would cost approximately \$12 million/year for the 29.5 mgd Sunnyvale plant based on the over \$4 million/year estimate for the 10 mgd Merced plant.

Response to: CTR-021-013

See responses to CTR-004-003, CTR-003-011, and CTR-004-002.

---

Comment ID: CTR-033-003b

Comment Author: San Bernardino Muncpl Wtr Dept

Document Type: Water District

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01n Detection Limits

References: Letter CTR-033 incorporates by reference letter CTR-020

Attachments? Y

**CROSS REFERENCES C-28**

---

Comment: Experiments to determine whether a chemical is carcinogenic are performed (on animals) with high concentrations to produce statistically significant results within the time frame of the experiment. The numbers are then extrapolated to determine an estimated "safe" concentration for human populations. All of the factors in the extrapolation process use conservative assumptions (one in a million risk, bioaccumulation potential, carcinogenic potential, etc.) which builds in and multiplies safety

factors. For 39 of the constituents in the CTR, the extrapolated criteria levels are below current levels of detection.

The EPA recognizes this as the proposed rule states: "EPA is aware that the criteria proposed today for some of the priority toxic pollutants are at concentrations less than EPA's current analytical detection limits. Analytical detection limits have never been an acceptable basis for setting water quality criteria since they are not related to actual environmental impacts. The environmental impacts of a pollutant are based on a scientific determination, not a measuring technique that is subject to change. Setting the criteria at levels that reflect adequate protection tends to be a forcing mechanism to improve analytical detection methods. See 1985 Guidelines p. 21. As the methods improve, limits closer to the actual criteria necessary to protect aquatic life and human health become measurable. The Agency does not believe it is appropriate to propose or promulgate criteria that are not sufficiently protective." The rule goes on to add, "the use of detection limits are appropriate for determining compliance with National Pollutant Discharge Elimination System (NPDES) permit limits."

Since the criteria are established on high dosage results that cannot be substantiated at low levels due to statistical significance and inability to see beyond detection limits, the values are predictions. Questions that come to mind are, what would this procedure determine for fat-soluble vitamins A, D and K? In high doses, these vitamins are harmful, though in low dosages, valuable. For constituents below detection, these determinations cannot be scientifically verified by analyses, only mathematically generated based on worst case assumptions. Although caution is warranted when establishing criteria, future unforeseen levels and effects cannot be predicted.

While the EPA believes that compliance determinations are based on detection limits, to assume no cost in the economic analysis for values that are below detection is not a valid assumption. As noted above, the detection limits will be forced to lower levels, and therefore become moving compliance targets without additional economic review should detection's begin to occur.

In summary, the detection levels should serve as the criteria with a "<" designator. The criteria for the affected constituents should be reviewed on a regular basis to reflect current approved analytical techniques, with lower levels promulgated after appropriate economic evaluations.

Response to: CTR-033-003b

See responses to CTR-004-002 and CTR-005-009.

---

Comment ID: CTR-038-009b  
Comment Author: Sonoma County Water Agency  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? Y  
CROSS REFERENCES C-28  
R  
S

---

Comment: 8. EPA should not adopt criteria for any pollutant where the method detection limit exceeds the objective and there is insufficient detectable, reliable data to determine if the pollutant could reasonably be expected to interfere with designated uses. The proposed rule includes criteria for a number of constituents where there is insufficient data to determine whether the discharge of such pollutants could reasonably be expected to interfere with the designated uses. EPA has chosen to promulgate criteria for these constituents even though section 303 (c)(2)(B) of the Clean Water Act requires States to adopt numeric criteria only for constituents "...the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support such designated uses." Clearly, this "play-it-safe" approach goes beyond the requirements of the Clean Water Act and is therefore unnecessary. By taking this approach, however, EPA is unable to fulfill its duty (under Presidential Order 12866, the Unfunded Mandates Reform Act, and the Regulatory Flexibility Act) to assess the costs, benefits, and impacts of the rule on local government and small entities. While this may be the conservative approach for EPA, it places dischargers throughout the State at risk. As analytical detection limits improve, dischargers may find they are unable to achieve the criteria without costly end-of-pipe controls. But, by then, it will be too late for EPA to evaluate the costs and benefits of the criteria and alternative criteria. For these reasons, EPA must not adopt criteria for those constituents. If EPA does adopt criteria for those constituents, EPA must evaluate the costs and benefits of the criteria, as well as alternative criteria, using worst case assumptions (i.e., assume that discharge levels and ambient levels are at the detection limits). With respect to the District's discharge and Schell Slough and Second Napa Slough, the criteria in this category include, but are not necessarily limited to, the following : benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, aldrin, 4,4'-DDD, 4,4'-DDE, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, heptachlor, heptachlor epoxide, toxaphene, PCB-1016, OCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, PCB-1260, and hexachlorobenzene (see Table 3).

Response to: CTR-038-009b

See responses to CTR-021-005c and CTR-004-002.

---

Comment ID: CTR-041-008b

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: E-01n Detection Limits

References:

Attachments? N

CROSS REFERENCES C-28

---

Comment: 3. Recommend Against Adopting Criteria with Insufficient Detectable Data

The District strongly recommends that the EPA not adopt criteria where the method detection limit exceeds the objective and there is insufficient detectable, reliable data to determine if the pollutant could reasonably be expected to interfere with designated uses. The proposed rule includes criteria for a number of constituents where there is insufficient data to determine whether the discharge of such

pollutants could reasonably be expected to interfere with the designated uses. EPA has chosen to promulgate criteria for these constituents even though section 303 c(2)(B) of the Clean Water Act requires States to adopt numeric criteria only for constituents "...the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support such designated uses." EPA has chosen a "safe approach" which clearly goes beyond the Clean Water Act and is clearly unnecessary. This approach does not allow EPA to fulfill its duty (under Presidential Order 12866, the Unfunded Mandates Reform Act and the Regulatory Flexibility Act) to assess the costs, benefits, and impacts of the rule on local government and small entities. While this may be the safe approach for EPA, it places dischargers throughout the State at risk.

As analytical detection limits improve, dischargers may find they are unable to achieve the criteria without costly end-of-pipe controls. But, by then, it will be too late for EPA to evaluate the costs and benefits of the criteria and alternative criteria. For these reasons, EPA should not adopt criteria for those constituents. If EPA does adopt these criteria, EPA should, prior to that, evaluate the costs and benefits of the criteria, as well as alternative criteria, using worst case assumptions (i.e., assume that discharge and ambient levels are at the detection limits). The criteria in this category include the following: Aldrin, Alpha-BHC, Beta-BHC, Chlordane, 4,4'-DDD, 4,4'-DDT, 4,4'-DDE, Dieldrin, Endosulfan I, Endosulfan II, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, Toxaphene, PCB- 1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, PCB-1260, Hexachlorobenzene, N-Nitrosodipropylamine, Pentachlorophenol, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoroanthene, Benzo(k)fluoroanthene, Chrysene, Dibenzo(a,h)anthracene, and Indeno(1,2,3-cd)pyrene.

Response to: CTR-041-008b

See response to CTR-004-002 and CTR-005-009.

---

Comment ID: CTR-041-010a  
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: E-01n Detection Limits  
References:  
Attachments? N  
CROSS REFERENCES E-01m  
E-01e  
E-01g

---

Comment: 5. Concerns Regarding Economic Analysis

The District also has several significant concerns with the Economic Analysis that was performed for the proposed rule. Concerns about the cost estimates made for both the District and the state are presented here. (See attached Review of EPA's Economic Analysis of the Proposed California Water Quality Toxics Rule.) Overall, the District believes that problems with the Economic Analysis are serious enough that it should be redone. As stated above in our analysis of assumed costs at the SRWTP, the use of questionable data without qualification combined with unsubstantiated assumptions regarding costs to achieve compliance resulted in a gross underestimate in the cost-effectiveness ratio. The District's first

concern is that if the types of problems found in our Case Study are widespread in other studies, the complete analysis is suspect.

In addition to the analysis of the District's facilities, there are several other points which have been used by EPA to lead to a potentially serious understatement of actual costs. The key assumptions involved are that: 1) no costs would occur if either no monitoring data presently exists or if that data is below analytical detection levels; 2) no treatment costs would occur whenever EPA's initial estimates showed high costs, due to successful regulatory relief; 3) no costs are included for nonpoint sources such as municipal stormwater management systems; and 4) no costs are included for indirect dischargers to the District's system that are not large enough to be considered a Significant Industrial User (SIU).

Regarding the first assumption, the District has found that there is pressure from many sides, including the Safe Drinking Water Act, to both increase the number of constituents being monitored and to lower detection levels to meet numeric criteria set by EPA and the state. To assume that monitoring of these new constituents will not lead to any treatment cost increases is simply unrealistic. Similarly, the second assumption about absolute success in every pursuit of regulatory relief is also overly optimistic. There are no guarantees that pursuit of regulatory relief will be successful in any situation, and EPA indicates elsewhere in the preamble that options such as variances and site-specific criteria will rarely, if ever, be granted.

The third and fourth key assumptions ignore present dominating trends and facts, i.e. that prevention and control of pollutants at their sources, including very small indirect dischargers, storm runoff, and other nonpoint sources are now the major focus of EPA's wastewater programs nationally. While we agree that these management steps should be taken, there will be significant costs attached to the implementation of these steps that cannot be ignored.

Combined with concerns the District has heard from other sources such as the California Association of Sanitation Agencies (CASA), it appears that EPA has failed to make "a reasoned determination that the benefits of the intended regulation justify its costs." Therefore the District believes that the Agency is obligated to redo the draft Economic Analysis.

Response to: CTR-041-010a

See responses to CTR-032-004, CTR-021-006b, CTR-040-037, and CTR-003-011.

If pressure from the Safe Drinking Water Act results in increases in monitoring of constituents or lowering of detection levels, any associated costs should not be attributed to this rule but would be attributed to actions taken under drinking water regulations. To account for those costs under this rule would be double counting because a cost analysis of drinking water rules would already have accounted for those costs. From the outset of the national water quality standards program, EPA has explained that while economic factors may be considered in designating uses, scientific and technical factors must justify the criteria to meet those uses. Additionally, with regard to benefits justifying costs, Executive Order 12866 states in section 1(b) that this is limited "to the extent permitted by law and where applicable." See also response to 042-007a.

---

Comment ID: CTR-045-011

Comment Author: Sausalito-Marin Sanitary Dist.

Document Type: Sewer Authority

State of Origin: CA  
Represented Org:  
Document Date: 09/24/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? Y

**CROSS REFERENCES**

---

Comment: Several criteria are below current analytical detection. It was therefore not possible to conduct cost-benefit analyses or determine that any set of control measures would or could lead to compliance.

Response to: CTR-045-011

EPA acknowledges the limitations of detection levels for certain bioaccumulative pollutants. However, indirect dischargers to municipal treatment plants often have detectable levels of these pollutants. Similarly, within industrial plants, discharges are often detectable prior to treatment. Once detectable sources are identified, mass balance methods can be used to determine if the facility is discharging at concentrations that exceed instream water quality standards. Fish tissue concentrations can also be used as an indicator that discharges may be causing an exceedance of standards.

---

Comment ID: CTR-066-015a  
Comment Author: Delta Diablo Sanitation Dist.  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? N  
**CROSS REFERENCES C-28**

---

Comment: The areas with which we find concerns and the requested changes include the following:

A further problem with the analysis relates to the establishment of criteria that are below analytical detection. Our District finds 34 separate criteria that fall into this category. Lacking this credible data, it was not possible to conduct cost-benefit analyses or determine that any set of control measures would or could lead to compliance. This fundamental inability to utilize established rulemaking procedures mandates further work prior to the promulgation of the criteria.

Response to: CTR-066-015a

See response to CTR-045-011.

---

Comment ID: CTR-067-004a  
Comment Author: Ojai Valley Sanitary District

Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? N  
CROSS REFERENCES K

---

Comment: \* In addition, EPA cannot make an accurate determination of the costs and benefits of promulgating CTR criteria for those criteria that are below achievable detection limits. Because detection limits for some pollutants will most likely improve in the near future, dischargers who are reporting regulatory compliance with current detection limits may not be in compliance when lower detection limits are achievable. OVSD (and likely other dischargers as well) have historically been required to report pollutant results with little regard to the detection limit achieved by the contract laboratory conducting the testing. This may have led to EPA's grossly under estimating the cost impact of the CTR. Detection limits of many priority pollutants identified in the CTR are actually lower than those achieved during recent special testing of OVSD's effluent to identify low pollutant levels. Therefore, the potential compliance costs to our commercial and residential dischargers could be significant, yet the Economic Analysis for the draft CTR could not estimate such costs. As a more reasonable alternative, OVSD recommends that a watershed approach be used to address these pollutants. OVSD's receiving water (the Ventura River) is currently managed using the watershed approach.

Response to: CTR-067-004a

EPA recognizes that regulation of point source discharges alone cannot address all existing or future environmental problems from pollutants in inland surface waters, enclosed bays, and estuaries in California. For example, in addition to discharges from point sources, toxic pollutants are also potentially contributed from other sources such as industrial and municipal emissions to the air, resuspension of pollutants from contaminated sediments, urban and agricultural runoff, hazardous waste and Superfund sites, municipal landfills, and spills. Restoration and maintenance of a healthy ecosystem will require significant efforts in many of these areas.

EPA believes that in certain parts of California, nonpoint sources and other diffuse sources of pollution are responsible for significant amounts of the loadings of some pollutants of concern. Where such continuing contribution of toxic pollutants by these sources occurs, increased controls by point sources may not lead to cost-effective environmental improvement.

EPA encourages all States and Tribes to implement water quality protection programs on a watershed basis. EPA's Watershed Protection Approach is based on the assumption that water quality and ecosystem problems are most efficiently managed at the watershed level rather than an individual water body or discharger level. However, the decision to regulate at the watershed level rests with the State and will be dependent upon many site-specific factors applicable to the watershed (e.g., number and types of pollutant sources).

EPA also recommends that States and Tribes establish total maximum daily loads (TMDLs) when dealing with difficult environmental problems, for example, persistent, ubiquitous pollutants and water quality impacts resulting in large part from nonpoint sources and lack of data and scientific uncertainty. Wasteload and load allocations recommended by a TMDL may be based on a reasonable expectation that

water quality standards will be met in a reasonable period of time after appropriate controls are put in place. When there is a reasonable expectation that standards will be achieved in a reasonable period of time, TMDLs may schedule implementation activities, including collecting performance data, that would result in a more cost-effective control strategy and lower costs than the methodology used to estimate compliance costs for the CTR.

See also response to CTR-004-002.

---

Comment ID: CTR-070-003  
Comment Author: Sewerage Agency of Sthrn Marin  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/22/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? Y  
CROSS REFERENCES

---

Comment: Other impacts Significant impacts may also result from dramatic reductions in discharge limits for PAH'S. Calculated discharge limits for SASM are an order of magnitude lower than the detection limits currently used for SASM effluent.

Response to: CTR-070-003

While it is true that SASM's estimates indicate significant required loading reductions (86% to 91%) based on current and projected effluent limits, the maximum effluent concentration is below detection levels indicating that the pollutants have never been detected. SASM does not provide detailed effluent data or describe existing treatment processes, thus EPA cannot estimate CTR-based limits for this facility nor assess whether additional treatment is required or pollution prevention or process optimization would be sufficient to ensure compliance with CTR-based limits. Because the pollutants have never been detected, EPA would most likely estimate zero costs under its low scenario and, under its high scenario, would probably include costs for pollution prevention or process optimization (depending on the facts relevant for the particular facility) for these pollutants as a result of the CTR.

---

Comment ID: CTR-082-009a  
Comment Author: City of Burbank  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/24/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? N  
CROSS REFERENCES C-28  
B Comment Period

---

Comment: The subject rule has a significant impact on our facility discharge and the citizens of the City. We therefore present the following comments for your consideration to re-open the comment period for this rule in order to facilitate a more complete review by public and in particular by those in the POTW community:

\* A further problem with the analysis relates to the establishment of criteria that are below analytical detection. Lacking credible data, it was not possible to conduct cost-benefit analyses or determine that any set of control measures would or could lead to compliance. This fundamental inability to utilize established rulemaking procedures mandates further work prior to the promulgation of the criteria.

Response to: CTR-082-009a

See responses to CTR-045-011 and CTR-005-009.

---

Comment ID: CTR-085-018a  
Comment Author: Camarillo Sanitary District  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/24/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? N  
CROSS REFERENCES C-28

---

Comment: The District supports the following positions of CASA and SCAP where changes need to be made in the proposed California Toxics Rule:

\* A further problem with the economic analysis relates to the establishment of criteria that are below analytical detection. Lacking credible data, it was not possible to conduct cost analysis or determine that any set of control measures would or could lead to compliance. This fundamental inability to utilize established rule making procedures mandates further work to the promulgation of the criteria.

Response to: CTR-085-018a

See response to CTR-045-011.

---

Comment ID: CTR-107-002c  
Comment Author: Brian E. Hill  
Document Type: Citizen  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? Y  
CROSS REFERENCES E-01

Comment: On September 17, I attended a hearing on the proposed CTR at the EPA's regional office in San Francisco. Here are some key issues from the testimony at that hearing:

- \* Some of the limits are below normal detection limits, therefore agencies have no background data in order to perform accurate attainability analysis.
- \* The cost of implementation by the EPA is grossly underestimated. The economic analysis shows at maximum implementation cost of \$87 million. If preliminary estimates by publicly owned treatment works (POTW) are correct, implementation of the CTR will far exceed the \$100 million provision of the Porter-Cologne Act. If this is the case, feasibility of implementation will be in jeopardy. The City of Merced, CA estimates that their additional cost would be \$4 million annually. Merced has a very small treatment facility.
- \* Robert Reid, speaking on behalf of California Association of Sanitation Agencies (CASA), said that four San Francisco Plants estimate their total implementation costs to be \$160 million annually.
- \* Charles Batts of Bay Area Dischargers Authority (BADA) estimated five BADA POTWs costs to be \$12 million per year to meet the strict limit on copper and \$56 million per year to meet the organics limit.
- \* The Regional Water Quality Control Board testified that San Francisco discharges twenty percent of the four percent discharged into the San Francisco Bay by POTWs, noting that POTWs are only a minor part of the volume discharged into the Bay. Thus, the reduction to the prescribed limits would cause a negligible decrease in the total mass of pollutants discharged.
- \* The City of Sacramento projects a \$200 million annual cost will be required to meet the copper limit.

All of the testimony at the hearing echoed these concerns. I am sure that you have access to a transcript. The Clean Water Act has been and is instrumental in cleaning up our rivers, lakes, bay and estuaries. We can continue on this steady path by setting gradual attainable limits and through increased public education. Limits on pollutants should continue to get stricter, but this has to occur on a gradual curve that will not place an unreasonable burden on the individual taxpayer.

Response to: CTR-107-002c

See responses to CTR-107-002a, CTR-041-018, CTR-038-003, CTR-056-018, CTR-021-010, CTR-021-005c, CTR-040-039, CTR-035-011a, and CTR-035-064.

---

Comment ID: CTRH-002-019  
Comment Author: Ing-Yig Cheng  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: L.A. Bureau of Sanitation  
Document Date: 09/18/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? N

## CROSS REFERENCES

---

Comment: Another point we would like to make with respect to the economic analysis deals with the fact that this analysis ignores a potential cause related to compliance for criteria that are being set at below-method detection limits. Again, using Tillman as a case study, the limit on lindane was specified at 19 parts per trillion in the Inland Surface Water Plan. And at the time of promulgation of ISWP, no lindane was detected in the Tillman effluent. However, soon after the new permit was issued, better analytical methods for lindane became available, and subsequently we found Tillman to be consistently in non-compliance. Since that time, Tillman has had lindane concentrations of around 30 parts or so in excess of the permit limit of 19, and the cost for lindane compliance was an unexpected factor that we were forced to address because of better detection limits of lindane, not because Inland Surface Water Plan did not address the issue.

So I think on -- on the other hand that, you know, we can say that no economic analysis could be or need to be performed when the only data available are non-detects. But this issue is real and we are experiencing that. EPA minimally must provide a mechanism to incorporate this scenario into the economic process as they occur.

Response to: CTRH-002-019

See responses to CTR-045-011 and CTR-035-064.

---

Comment ID: CTRH-002-022  
Comment Author: Ing-Yig Cheng  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: L.A. Bureau of Sanitation  
Document Date: 09/18/97  
Subject Matter Code: E-01n Detection Limits  
References:  
Attachments? N  
CROSS REFERENCES

---

Comment: MS. FRANKEL: I have just one question. If I could ask you -- I missed the first thing that you had mentioned. You said that you were putting in some treatment to comply with the existing permit?

DR. CHENG: In the case of lindane, we would have to go to really drastic measures. And no, we have not. We are still in noncompliance. And while we were contemplating on project to deal with the lindane case back in 1994, that was about the time that Inland Surface Water Plan was rescinded, and therefore we were basically taking the approach "wait and see what happens" without spending hundreds of millions of dollars. I think -- I believe the figure was \$200 million to go through our own whatever necessary to remove lindane.

I might as well mention, at that time methylene chloride is a similar case. But the City in good faith effort pursue all avenues, and actually we were able to bring the methylene chloride issue to compliance through very aggressive retreatment program. So we're very proud of that, and that supports the EPA's program in source control and a lot of other things.

But we believe, in our case, that the case of lindane, we have exhausted all of the industrial potential dischargers and it comes to perhaps home use, head lice treatment, doing shampoo, that type of thing. And since 1992 we have entertained request with state consumer product affair regulations to see if they could do something about it. But these are the type of things that are beyond our capabilities other than putting in real expensive treatment. And I hope you understand why we are so concerned with the detection limits and making the need to be provided as these things will occur because scientists are going to make progress and we're going to find where we didn't think there was a problem.

MR. MORRIS: The other comment you made is that the cost when the limit is below the quantitation level - -

DR. CHENG: Yes.

MR. MORRIS: -- and the analysis does to a certain extent look at those types of costs. In the high-end scenario, it is a limit-to-limit analysis. So if you look at the WQBEL for PCBS, let's say, the typical WQBEL for PCBs is the quantitation level; the WQBEL for the CTR will be below the quantitation level. In those, if there was a difference between those two limits which are below the quantitation level, we would cost the treatment to give the current statement to ours. So there is an element in there that deals with WQBELs below quantitation.

We've done similar type analysis for other rule-making; but you've got to understand that, when you do those, they're highly speculative because a lot of times you don't really know if it's there or not. And when we do these types of regulations in other parts of the country, a lot of times the dischargers and the municipalities say the same thing. We've all got this pollutant. You can't quite see it because it's right below the detection level.

What we've done in the past when we go out in the field and try to find these pollutants, they don't really exist. So I guess what I'm saying to do is that when we spend a lot of money going out to try to identify whether or not you have it, the likelihood is it's like mercury which is fairly ubiquitous. What we're finding is they're down under a part per billion for dischargers.

DR. CHENG: Thank you. I understand what you're saying and I highly respect your economic analysis because I'm an economist. However, maybe I have not made the case real clear.

The case about lindane is real clear. Back in 1991, I believe our detection limit was about 200 parts per trillion. Nobody had detected anything using the best method. Criteria was set at 19 for the highest WP, but it's just such a coincidence that my labs were getting better, using capillary columns and all these other things, and better control of even the gas chromatograph injection techniques; but now we go below 19 and all of a sudden we found out that we are about 30. It's real. It's generating permit violations every month just about. So I can recall only maybe a handful of months throughout the six- or seven-year period that we were not exceeding the 19.

So while I can appreciate that there are case histories where it's just a big worry that the sky might fall, in this case the sky has fallen. And so I would like to just make it clear that I have not gone through your analysis to fully understand about WQBEL and how you do it, but perhaps one practitioner's point of view, the cost that we assess to comply with lindane, for example, is in the hundreds of million of dollars, and because the only technology based on what we know was based on something like reverse osmosis, is that something that through the economic analysis will be washed out?

MR. MORRIS: If in our analysis we have a permit limit for that pollutant and the state's permit limit and you're violating that limit, we would not take the hit for you getting into compliance with your current state permit limit.

DR. CHENG: I understand EPA's approach and EPA's policy. However, it does behoove us to recognize that it is an unfair situation. The legal basis for Inland Surface Water Plan is not there. And can we not -- Looking at the books I see it.

MR. MORRIS: I think that in your particular case, if you truly have this problem and you're truly looking at the kind of economic impacts that you say you're going to RO, or whatever you need to get to this limit, I would apply for a variance. I would continue to aggressively implement and apply for a variance and lay the facts on the table and, let's say, look at them, make a decision. But I think that requires going public, putting the data on the table, showing them what you've done, showing that its -- you can't find the source, it's ubiquitous, and there is no way you can take it out other than going to plant treatment. But the public has to review the facts and make a decision.

DR. CHENG: I appreciate very much your suggestion indeed, since the City of L.A. has been basically trying its best to address all pollution concerns. We are confident that it is -- We are concerned that it's got to be addressed one way or another.

Response to: CTRH-002-022

See responses to CTR-045-011, CTR-032-004, CTR-060-019, CTR-040-026, and CTR-035-064.

EPA agrees that benefits are likely to be highly site specific. However, sites likely to experience a disproportionate share of the benefits are also likely to incur a disproportionate share of the costs.

In addition, once water quality standards are in place, sites that are currently less impacted by toxic pollutants may experience cost savings by preventing future cleanup costs. That is, it may be more cost-effective to prevent toxic pollutants from entering surface waters than to clean up and remediate the impacts once toxic pollutants are released. However, should the State determine through a total maximum daily load (TMDL) allocation that controls on nonpoint sources are a more cost-effective approach to achieving standards, the State can redistribute the allocations through the TMDL process.

The range of estimated benefits in part reflects the range in loadings reductions that may result from point source controls given the flexibility in State implementation procedures. The decision as to which implementation procedures will be employed, and therefore what costs and benefits will result, will be made by state and local entities for specific locations.

---

Subject Matter Code: E-01n01 Non-Detects, No Cost

---

Comment ID: CTR-040-028

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: E-01n01 Non-Detects, No Cost

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

Attachments? Y

CROSS REFERENCES

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that if monitoring data was available but all values were reported as below analytical detection levels, that the discharger will not incur costs as a result of the CTR.

Response to: CTR-040-028

If a discharger had no effluent data, EPA did not automatically assume that the discharger would have no costs as a result of the CTR. When effluent data was available, however, EPA used the method in EPA's Technical Support Document for Water Quality-based Toxics Control (1991) to determine reasonable potential and then followed the methodology (i.e., the cost-decision matrix) described in the Economic Analysis (EA) of the final CTR to estimate costs. In the absence of data under the high scenario, reasonable potential was assumed if the discharger had an existing permit limit for a pollutant and EPA then estimated costs using the methodology described in the EA. See also response to CTR-003-011.

---

Comment ID: CTR-041-024

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: E-01n01 Non-Detects, No Cost

References:

Attachments? N

CROSS REFERENCES

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that if monitoring data was available but all values were reported as below analytical detection levels, that the discharger will not incur costs as a result of the CTR.

Response to: CTR-041-024

See response to CTR-003-011 and CTR-005-009.

---

Comment ID: CTR-044-019  
Comment Author: City of Woodland  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01n01 Non-Detects, No Cost  
References:  
Attachments? N

**CROSS REFERENCES**

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that if monitoring data was available but all values were reported as below analytical detection levels, that the discharger will not incur costs as a result of the CTR.

Response to: CTR-044-019

See response to CTR-003-011.

---

Comment ID: CTR-054-023  
Comment Author: Bay Area Dischargers Associati  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01n01 Non-Detects, No Cost  
References:  
Attachments? N

**CROSS REFERENCES**

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that if monitoring data was available but all values were reported as below analytical detection levels, that the discharger will not incur costs as a result of the CTR.

Response to: CTR-054-023

See response to CTR-003-011.

---

Subject Matter Code: E-01o Background Levels

---

Comment ID: CTR-003-010

Comment Author: City of Riverside

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/22/97

Subject Matter Code: E-01o Background Levels

References:

Attachments? N

**CROSS REFERENCES**

---

Comment: 10) In general we were impressed by the level of effort used in the economic analysis. However the paucity of data at levels sensitive enough to characterize the compliance status of the waters and the underlying assumptions used in their place, completely overshadowed it's finer points. For example, the use of zero for the ambient receiving water background concentration in the absence of reported numbers is not appropriate for chemicals typically found in the environment but may be appropriate for exotic chemicals if their use is non-existent in the area. Given the extremes in potential costs involved here, it would have been appropriate to run the analysis once under the assumption that it is zero and again assuming that it equals the detection level for that chemical.

Response to: CTR-003-010

For analysis of the final CTR, EPA collected the most recent publicly available data and information for each of the sample facilities including permits fact sheets, permit applications and monitoring data. Data submitted as a part of the public comments were also reviewed and considered. However, because only four of the sample facilities are allowed dilution, EPA applied the CTR criteria directly as effluent limits for most of the sample facilities (i.e., since no dilution was provided, background data did not affect the stringency of the effluent limit).

---

Subject Matter Code: E-01p Risk Level Costs

---

Comment ID: CTR-035-050  
Comment Author: Tri-TAC/CASA  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01p Risk Level Costs  
References:  
Attachments? N

**CROSS REFERENCES**

---

Comment: pp. 5-1 - 5-2 (U.S. EPA, 1997b) -- Analysis of 10E-5 Risk Level for Carcinogens We disagree with EPA's conclusion that "the changes in estimated costs and pollutant load reductions based on the lower risk level of 10E-5 are minimal." In fact, under the low cost scenario, the analysis shows that there would be >25 percent cost savings, with only a 3 percent lowering in pollutant reductions. We believe that analysis demonstrates that it is probably cost-effective to lower the risk level for carcinogens. However, given the equivocal results for the high cost scenario, we recommend that EPA re-analyze the impacts of modifying the risk level, and look not only at the attainability and cost analysis, but analyze the actual change in risk levels that would result, given the uncertainty factors that are built into the criteria. Based on all of the conservative assumptions included in the calculation of the criteria, there is significant uncertainty in the numbers, which may translate to negligible risk from using lower risk levels. EPA should factor this uncertainty into the risk assessment, along with population exposure, when evaluating risk levels for the human health criteria.

Response to: CTR-035-050

See response to CTR-003-011.

---

Comment ID: CTR-035-056c  
Comment Author: Tri-TAC/CASA  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01p Risk Level Costs  
References:  
Attachments? N  
CROSS REFERENCES E-01c02  
E-01c01

---

Comment: Introduction

On behalf of CASA and Tri-TAC, M.Cubed reviewed the U.S. Environmental Protection Agency 's (USEPA) Economic Analysis (Analysis), as well as the report's underlying benefit and cost data and analyses. M.Cubed's overall reaction is that policy makers and the regulated community can place little

confidence in either the benefit or cost analyses -- the uncertainties and broad assumptions contained in these analyses largely undermines their findings. Based on the information provided by USEPA, M.Cubed's judgement is that the proposed California Toxics Rule (Rule) will result in multi-million dollar annual costs -- and have substantial impacts on individual publicly-owned treatment works (POTWS) and dischargers -- and may result in no noticeable benefits to public health or the environment. A critique of specific weaknesses in the cost and benefit analyses is provided below.

#### Weaknesses in Overall Report Findings

The Analysis' overall findings exhibit a number of flaws, as follows:

USEPA's estimates indicate that Rule costs outweigh benefits, both on an annualized and present value basis. USEPA's claim that comparison "...of both annualized benefits and costs and discounted benefits and costs indicates that the monetized benefits of the CTR are of the same general magnitude as the costs" is simply not true (U.S. EPA, 1997a, page 9-2). For example, using USEPA's comparison of a twenty-year phase-in of benefits at a 3 percent discount rate against a ten-year phase-in of costs at a 7 percent discount rate, or benefits of between approximately \$20 to \$600 million against costs of about \$180 million to \$1 billion (setting aside the significant weaknesses in the analysis; differences in the probabilities of low or high outcomes; and questions over the appropriate discount rate to apply)(\*2) indicates a low cost scenario which is nine times higher than the estimated benefits, and a high cost scenario which is almost twice as high as benefits.(\*3)

Executive Order 12866, which requires the economic review, defines "significant regulatory action" as one that is likely to "adversely affect ... a sector of the economy." Yet, although the USEPA finds that two sectors will incur the majority of the regulatory costs -POTWs and chemical/petroleum products -- it provides no analysis of whether or not these costs are "significant" to these sectors. Likewise, USEPA does not examine the potential costs or their implications to small businesses (e.g., health care providers; automobile repair shops), small communities, or non-significant industrial users (SIUs) in general (i.e., industries that are regulated by POTWs through local ordinances, rather than under federal rules)

USEPA's conclusion that the use of different risk levels would not significantly influence compliance costs is not supported by its data. Based on USEPA's own data, use of a 10E-5 risk level for carcinogens would induce a 25 percent cost savings relative to a 10E-6 risk level under the low cost scenario, with a 3 percent change in pollutant loadings.(\*4)

-----  
(\*2) Noticeable benefits seem unlikely to emerge in the near term, if at all, due to the persistence of existing contaminants in the environment, while costs will be incurred over one to two decades. Use of a lower discount rate for benefits would reflect the greater value future generations may place on environmental amenities, an assumption which is open to debate.

(\*3) The large differences between benefits and costs is mirrored by the wide range in estimated pollution reduction. Under USEPA's low scenario, only .63 million toxic pounds- equivalent are expected to be reduced under the rule, compared to a high scenario reduction of 7 million pounds equivalent. That is, reductions under the high scenario are eleven times higher than under the low scenario.

(\*4) Under the high cost scenario cost reductions are less than 1 percent, with a 7 percent change in pollutant loadings.

Response to: CTR-035-056c

See responses to CTR-021-005c, CTR-056-018, and CTR-003-012.

---

Comment ID: CTR-052-016

Comment Author: East Bay Dischargers Authority

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01p Risk Level Costs

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

Specify carcinogenicity risk factor of  $10E-5$ . EPA should acknowledge that a significant portion of the attainability, cost, and benefit issues can be addressed by the simple modification of the carcinogenicity risk factor. EPA should clearly state that the criteria are based on a risk factor of  $10E-5$ , and strongly urge its use by the State in its Implementation Plan. As noted in the analysis by Larry Walker Associates, Authority and BADA attainability and cost issues are essentially resolved if the criteria are based on a risk factor of  $10E-5$ . In addition, existing permit limits and high level of compliance remain in place.

Response to: CTR-052-016

See response to CTR-003-012.

---

Subject Matter Code: E-01q Source Reduction

---

Comment ID: CTR-004-003

Comment Author: South Bayside System Authority

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: E-01q Source Reduction

References:

Attachments? N

**CROSS REFERENCES**

---

Comment: Industrial source control and pollution prevention activities cannot be relied on to achieve the reductions that may be needed. The Sources of Pollutants of Concern and Waste Minimization Plan study, conducted by SBSA in 1992, identified that most of the pollutants of concern are not from industrial or commercial users. Complete elimination of industrial and commercial discharges would not resolve the compliance problems. The conceptual cost estimate for metals and organics removal treatment (reverse osmosis) technology at SBSA is around \$18 million dollars per year.

Response to: CTR-004-003

EPA agrees that pollution prevention may not be applicable or effective in all circumstances. Before estimating costs for the final Great Lakes Water Quality Guidance, which was used as the basis of pollution prevention cost estimates for the CTR, EPA attempted to collect additional data related to the cost and effectiveness of pollution prevention techniques for the pollutants being regulated under the final Guidance. The result of these efforts, which generally constituted an extensive review of the EPA Pollution Prevention Information Clearinghouse (PPIC), indicated that limited documentation was available regarding the effectiveness of pollution prevention to remove many of the pollutants included in the CTR. The limited information did, however, suggest that facilities could eliminate toxic constituents from their operations using pollution prevention techniques such as raw materials substitution and process modifications (EPA, 1992; EPA, 1994).

In estimating costs for the CTR, EPA used a decision matrix for purposes of estimating the types of controls and costs associated with these controls to avoid unjustified use of waste minimization/pollution prevention techniques to achieve CTR water quality-based effluent limits (WQBELs). Under the decision matrix, waste minimization/pollution prevention was considered only after consideration of modifying existing treatment systems to achieve CTR-based WQBELs. Further, waste minimization/pollution prevention controls were considered when the production process or source generating the pollutant was amenable to pollution prevention techniques, and when addition of treatment was not justifiable. Three cases where EPA assumed that the addition of treatment would not be justified are detailed below.

1. Existing discharge data indicate that the pollutant is most often in compliance with projected CTR-based effluent limits. The reported maximum effluent concentration or existing permit limit does not reflect standard discharge levels. For instance, treatment costs were not assigned to pollutants reported above detection levels only once in three years. A pollutant was considered most often in compliance with projected limits if sufficient data were available and approximately 80% or more of the observations were already in compliance with the projected permit limit.

2. Discharge monitoring data are inconclusive to assume treatment costs. It was assumed that a facility would not add treatment without having sound proof that it was needed. Treatment was not selected if discharge monitoring data were not available or very limited (i.e., 1 or 2 data points), discharge data were not recent (i.e., previous to 1993) or did not reflect existing operating conditions, in particular when operating practices described in a recently re-issued permit indicated the decrease in the discharge of pollutants.

3. The pollutant loading reduction is insignificant in terms of percentage load reduction (i.e., 10-25%).

As an alternative to the use of waste minimization/pollution prevention, EPA also considered the use of the flexibility provided through the National water quality standards and NPDES programs (i.e., alternative regulatory approaches such as phased total maximum daily loads/water quality assessments, site-specific criteria modifications, standards variances, metals translators, etc.) as a control alternative in estimating costs for the CTR. However, the use of alternative regulatory approaches was limited to only those facilities under the low-end scenario where the estimated cost was disproportionately high as compared to the resulting estimated pollutant reduction.

#### References:

U.S. EPA. 1992. Pollution Prevention Options in Metal Fabricated Products Industries; A Bibliographic Report. EPA/560/8-92/001A. Washington, DC. Pages 20 - 23.

U.S. EPA. 1994. 33/50 Program Company Profiles: Reduction Highlights. EPA-745-K-94-017. Washington, DC. Pages 2, 4, and 7.

---

Comment ID: CTR-021-012

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: E-01q Source Reduction

References: Letter CTR-021 incorporates by reference letter CTR-035

Attachments? Y

CROSS REFERENCES

---

Comment: The CTR Incorrectly Extrapolates Assumptions Regarding the Effectiveness of the City's Source Control Program Regarding Metals Control Measures that Leads to Erroneous Conclusions Regarding Compliance with Projected CTR Effluent Limits

CTR Appendix I-B-1 1 refers to Sunnyvale's 1994 Local Limits Compliance Strategy report relative to an alternative analysis of copper compliance. The appendix asserts that implementation of the City's recommended pollution prevention and source control activities "is believed to be sufficient to the 4.9 ug/L limit" and that costs to achieve a 5.5 ug/L CTR limit would range from \$400,000 to \$2,000,000. The City's reports do not support this conclusion, but rather indicate that the WPCP would probably not attain the limits. It is important to note that since the 1994 report, the City has fully implemented the copper control measures recommended in that report and the effluent quality is above the 4.9 or 5.5 ug/l

level 30-40% of the time. As described elsewhere in this memo, the CTR authors continue to confuse compliance with a non-existent monthly average limit with the actual daily maximum limit which cannot be exceeded on any day.

The majority of copper now entering the treatment plant is from the local water supply, from corrosion of residential copper plumbing. This is not a source that is under the control of the City although the City has worked with the water purveyors to help optimize their corrosion control efforts. This CTR appendix needs to be corrected to reflect Sunnyvale has implemented the "reasonable control measures" and there is no basis for assuming that further pollution control measures will achieve copper compliance.

Response to: CTR-021-012

EPA's revised Economic Analysis of the CTR does not include the alternative analysis for copper compliance that was presented in the draft version (Appendix I-B-1 of the Technical Support Document dated May 5, 1997). Therefore, Sunnyvale's comments regarding the feasibility of this cost estimate are no longer applicable. In its revised cost analysis, EPA used dissolved water quality criteria for copper and assumed that the criteria would be implemented using metals translators (EPA used a site specific translator of 2.6 for copper). Effluent quality data for copper indicate that the facility is in compliance with CTR criteria (only one effluent data point collected between 1995 and 1997 was above the CTR-based limit). Thus, EPA concluded that a pollution prevention program was sufficient to ensure compliance with the CTR-based limit and estimated costs for this program.

In addition, Sunnyvale asserted that EPA confused compliance with a nonexistent monthly average limit with the actual daily maximum limit. The methodology EPA used to derive permit limits for the draft and final economic analyses of the CTR establishes that for each pollutant assumed to have reasonable potential, a maximum daily limit and an average monthly limit are calculated. This is a standard NPDES permitting requirement and is detailed in the Technical Support Document for Water Quality-based Toxics Control (U.S. EPA, 1991). For the final Economic Analysis, EPA used the average monthly limit as the projected CTR-based limit because it is the most stringent limitation imposed on this facility. EPA estimated pollution control costs based on individual violations of the average monthly limit, as if the average monthly limit was a maximum daily limit. As a result of these assumptions, EPA's estimates are more conservative than those based on maximum daily limits.

EPA recommends referring to Box 5-2, "Calculating Permit Limits Based on Two-Value Wasteload Allocation," (page 100) of the Technical Support Document for Water Quality-based Toxics Control, for a step by step explanation of EPA's methodology.

See also the response to CTR-021-017.

---

Comment ID: CTR-035-062  
Comment Author: Tri-TAC/CASA  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01q Source Reduction  
References:  
Attachments? N

## CROSS REFERENCES

---

Comment: Weaknesses in Cost Analysis The report's cost estimates exhibit a number of significant weaknesses, as follows:

\* The Analysis assumes a very loose and highly effective trigger for use of low-cost waste minimization/pollution prevention techniques. USEPA asserts that 10 to 25 percent reductions in current discharge levels is "insignificant," and would be fully addressed by low-cost waste reduction strategies. (\*10) Little data is provided to support this assertion. Individual POTWs and dischargers may already be implementing all feasible low cost techniques; or these techniques may be insufficient to obtain the necessary reductions. As indicated by USEPA itself, "...without process-specific information, it is unknown if waste minimization is technically feasible." (U.S. EPA, 1997b, page 2-33).

-----  
(\*10) It is equally plausible that it will be extremely expensive to obtain an additional one to ten pounds per day of reductions, such as may be required in the City of San Jose.

Response to: CTR-035-062

See response to CTR-004-003.

---

Comment ID: CTR-040-030

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: E-01q Source Reduction

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

Attachments? Y

CROSS REFERENCES

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that if a constituent only occasionally exceeds a calculated effluent limit, that the effluent limit can be achieved through source control even if the required reduction is on the order of 90% to 99% (as was done in the analysis of mercury and aldrin for the Sacramento POTW case study).

Response to: CTR-040-030

The results of the final CTR cost analysis indicate that aldrin is no longer a pollutant of concern for the Sacramento POTW. These results support the draft analysis in that no major costs should be associated with aldrin removal. No reasonable potential to exceed was concluded because no permit limit exists for aldrin and because the constituent was recorded consistently below detection levels during the last three years of monitoring (twenty-one observations).

Mercury criteria are 0.05 ug/l for freshwater and 0.05 ug/l for saltwater. In analysis of the final CTR, the required reduction for mercury is 72%. EPA still assumes that pollution prevention/waste minimization will be sufficient to comply with CTR limits. Forty-nine observations were made at the discharge from 1994 to 1997, and only three observations were recorded slightly above the proposed CTR limit. Since the facility is capable of complying with the proposed limit 95% of the time, EPA expects that the facility would find more cost-effective methods to comply with the CTR limit, and not incur the expense of adding treatment process units. See also response to CTR-004-003.

---

Comment ID: CTR-041-026  
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: E-01q Source Reduction  
References:  
Attachments? N  
**CROSS REFERENCES**

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that if a constituent only occasionally exceeds a calculated effluent limit, that the effluent limit can be achieved through source control even if the required reduction is on the order of 90% to 99% (as was done in the analysis of mercury and aldrin for the Sacramento POTW case study).

Response to: CTR-041-026

See response to CTR-040-030.

---

Comment ID: CTR-044-021  
Comment Author: City of Woodland  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/26/97  
Subject Matter Code: E-01q Source Reduction  
References:  
Attachments? N  
**CROSS REFERENCES**

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that if a constituent only occasionally exceeds a calculated effluent

limit, that the effluent limit can be achieved through source control even if the required reduction is on the order of 90% to 99% (as was done in the analysis of mercury and aldrin for the Sacramento POTW case study).

Response to: CTR-044-021

See response to CTR-040-030.

---

Comment ID: CTR-054-025

Comment Author: Bay Area Dischargers Associati

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01q Source Reduction

References:

Attachments? N

**CROSS REFERENCES**

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that if a constituent only occasionally exceeds a calculated effluent limit, that the effluent limit can be achieved through source control even if the required reduction is on the order of 90% to 99% (as was done in the analysis of mercury and aldrin for the Sacramento POTW case study).

Response to: CTR-054-025

See response to CTR-040-030.

---

Subject Matter Code: E-01q01 25% Assumption

---

Comment ID: CTR-040-029a

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: E-01q01 25% Assumption

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

Attachments? Y

CROSS REFERENCES E-01h01

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that POTWs can achieve a 25% reduction through source control and an additional 25% reduction through treatment plant optimization.

Response to: CTR-040-029a

EPA acknowledges that the effectiveness of source controls and process optimization techniques will vary from facility-to-facility, and will depend upon many factors, including for example, the volume of discharge, the type of manufacturing process used, and the inputs to the production process. However, EPA believes that, on average, assuming that reductions of less than 25% can be controlled by the use of source controls or process optimization is reasonable. EPA considered minor, low-cost modifications or adjustments of existing treatment feasible if the literature indicated that the existing treatment process could achieve the revised WQBEL and if the additional pollutant reduction was relatively small (e.g., 10% to 25% of current discharge levels). EPA assumes that prior to incurring capital expenditures, most facilities will evaluate low-cost alternatives for pollutant reduction.

It should be noted that in the analysis of costs for the Economic Analysis for the final CTR, EPA performed a literature search to verify the costs associated with treatment process optimization. As a result of this effort, EPA revised upward its estimate of process optimization costs to a range of \$60,000 to \$233,000 depending upon the general type of treatment processes being used at a facility and the volume of discharge. These estimates include costs for performing a process optimization study, as well as process modifications.

See also response to CTR-004-003.

---

Comment ID: CTR-041-025a

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: E-01q01 25% Assumption

References:

Attachments? N

CROSS REFERENCES E-01h01

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that POTWs can achieve a 25% reduction through source control and an additional 25% reduction through treatment plant optimization.

Response to: CTR-041-025a

See response to CTR-040-029a.

---

Comment ID: CTR-044-020a

Comment Author: City of Woodland

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01q01 25% Assumption

References:

Attachments? N

CROSS REFERENCES E-01h01

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that POTWs can achieve a 25% reduction through source control and an additional 25% reduction through treatment plant optimization.

Response to: CTR-044-020a

See response to CTR-040-029a.

---

Comment ID: CTR-054-013b

Comment Author: Bay Area Dischargers Assoc.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01q01 25% Assumption

References:

Attachments? Y

CROSS REFERENCES E-01g03

E-01m

E-02l

---

Comment: The economic analysis is seriously flawed. The major flaws include: (1) failing to do an appropriate sampling of dischargers; (2) assuming in the high-end cost scenario that a 25% reduction could be achieved through source control and an additional 25% achieved through treatment plant optimization without capital improvements; (3) constraining estimates of potential costs through key assumptions, including the assumption that regulatory relief from the rule would be granted if costs were in excess of certain thresholds; and (4) exaggerating estimates of potential benefits by assuming an end (i.e., achievement of the proposed water quality criteria) that will not result from the rule (see Attachment 3). The result of these flaws is that potential costs are greatly understated and potential benefits are greatly overstated. BADA's analysis shows that its member agencies alone could be faced with costs in excess of \$100 million per year to achieve effluent limits based on the copper, PAH, heptachlor and aldrin criteria. BADA's analysis also indicates that the benefits associated with this expenditure will be difficult to measure. Copper loadings will be reduced by 1% and the level of compliance for PAH's and heptachlor will remain unchanged at its present high level. Certainly these benefits will not measurably improve the fishing experience or measure the number of fisherman in the Bay, significantly reduce the cancer cases, or improve property values or other nonuse benefits, as estimated in EPA's economic analysis. A further consequence of the flawed economic analysis is the conclusion that the CTR is not a major rule (i.e., one which will result in excess of \$100 million per year expenditure) subject to Presidential Executive order 12866 and the Unfunded Mandates Reform Act or a rule that affects small entities protected under the Regulatory Reform Act. BADA agencies provide service to a number of small communities with populations under 50,000 people that could be greatly impacted by the proposed rule.

Response to: CTR-054-013b

See responses to CTR-021-008, CTR-040-029a, CTR-032-004, CTR-054-013a, CTR-056-018, CTR-021-005c, and CTR-059-018.

---

Comment ID: CTR-054-024a  
Comment Author: Bay Area Dischargers Associati  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01q01 25% Assumption  
References:  
Attachments? N  
CROSS REFERENCES E-01h01

---

Comment: Although EPA goes to great length to label its cost analysis as "conservative" the analysis is anything but conservative:

\* It is not conservative to assume that POTWs can achieve a 25% reduction through source control and an additional 25% reduction through treatment plant optimization.

Response to: CTR-054-024a

See response to CTR-040-029a.



Subject Matter Code: E-01q03 Unit Cost Assumption

---

Comment ID: CTRH-001-037b  
Comment Author: Robert Reid  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: CASA  
Document Date: 09/17/97  
Subject Matter Code: E-01q03 Unit Cost Assumption  
References:  
Attachments? N  
CROSS REFERENCES E-01c02  
E-01h02

---

Comment: Second, the interaction between the CTR and the state's implementation policy is particularly important given our second concern, which is namely that the EPA's economic evaluation underestimates the costs and overestimates the benefits of implementing this rule.

Our concern about the cost estimates is based on the fact that the cost analysis appears to undervalue the magnitude of difficulty dischargers will have complying with permits issued based on this rule.

We are also concerned that the cost estimates for various compliance activities such as source control and treatment process optimization made in the case studies are overly optimistic and not reflective of the true actions that will need to be taken to insure compliance.

Overall, we are concerned that the expenditures that may be necessary for many POTWS to comply with the CTR will be large, these costs may not be matched by commensurate benefits, and that EPA has not analyzed whether point source controls are in fact a cost-effective way to achieve water quality standards.

Our preliminary analysis for just five agencies in the Bay Area to comply with the proposed standard for copper alone could amount to more than \$60 million per year -- 60 million. This number would be far higher if calculated for every pollutant listed in the CTR for the entire POTW industry in California.

Since this estimate would undoubtedly exceed the high end of the range contained in EPA's analysis, we believe it is necessary for EPA to redo the economic analysis to fully comply with its legal responsibilities.

In addition, revised economic analysis is necessary to provide a sound basis for the State to use in its analysis of the economic impacts of the implementation policy.

Response to: CTRH-001-037b

See responses to CTR-041-018, CTR-035-057, CTR-056-018, CTR-004-003, and CTR-040-039.

---

Subject Matter Code: E-01r Economic Variances

---

Comment ID: CTR-035-060

Comment Author: Tri-TAC/CASA

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01r Economic Variances

References:

Attachments? N

**CROSS REFERENCES**

---

Comment: Weaknesses in Cost Analysis The report's cost estimates exhibit a number of significant weaknesses, as follows:

\* USEPA's use of averages to estimate individual POTW costs may mask significant expense variations. For example, some facilities may experience the great majority of total costs, while others may face less significant expenses. Likewise, the Analysis does not address costs associated with maintaining reliable water quality levels in the face of time or weather-related variations in discharges, such as peak loading.

Response to: CTR-035-060

See responses to CTR-035-061 and CTR-035-048.

---

Subject Matter Code: E-01s 2ndary,Indirect Cost Impact

---

Comment ID: CTR-009-008a  
Comment Author: City of Thousand Oaks  
Document Type: Local Government  
State of Origin: CA  
Represented Org:  
Document Date: 09/22/97  
Subject Matter Code: E-01s 2ndary,Indirect Cost Impact  
References:  
Attachments? Y  
CROSS REFERENCES E-02o  
E-02c

---

Comment: The City does not agree with the economic analysis. It is incomplete and misrepresents the actual costs and benefits. The analysis does not include costs of expensive AWT to meet more stringent limits based upon the proposed criteria. It does not include the first second, and third order costs to the community, individuals and businesses, of the economic dislocations resulting from huge capital costs, especially for small and economically distressed communities, that divert scarce resources from other priorities or out of the area. It does not include cost impact assessments to low and fixed-income households - ignoring the economic aspects of environmental justice. The benefits assessments make vast unsupported assumptions about the benefits of reductions in constituent concentrations that are barely, if even, measurable, and assigns unrealistic contingent valuations to these assumed benefits. The cost analyses does not follow EPA's own economic assessment guidance (which, itself, is fatally flawed). These points were brought up during the Task Force meetings in 1995 and 1996, but were dismissed outright by EPA. The City hereby raises these issues for the formal record.

The City of Thousand Oaks appreciates the opportunity to comment on the proposed California Toxics Rule.

Sincerely,

Donald H. Nelson Public Works Director

Response to: CTR-009-008a

EPA's own economic assessment guidance (Interim Economic Guidance for Water Quality Standards, EPA-823-B-95-002, March 1995) is intended to assist States and applicants in understanding the economic factors that may be considered, and the types of tests that can be used to determine if a designated use cannot be attained, if a variance can be granted, or if degradation of high-quality water is warranted. In order to remove a designated use or obtain a variance, or if degradation of high-quality water is warranted, the state or discharger must demonstrate that attaining the designated use would result in substantial and widespread economic and social impacts. Although EPA is responsible for approving a State's water quality standards, the State is responsible for interpreting the circumstances of each case and determining where there are substantial and widespread economic and social impacts, or where important social and economic development would be precluded.

Estimating the economic impact of the CTR in California requires a detailed econometric model of the region's economy. EPA did not conduct such an analysis of the rule and the Clean Water Act does not

require such a analysis (see CTR-042-007a). However, for a similar toxics rule in the Great Lakes Basin, an econometric analysis was performed independent of the regulatory impact analysis for the Council of Great Lakes Governors (The Great Lakes Water Quality Initiative: Cost Effective Measures to Enhance Environmental Quality and Regional Competitiveness. DRI/McGraw-Hill, San Francisco, California, July 1993). This analysis showed a minimal impact of the rule on the region's economy for a worst case scenario, a scenario with costs far exceeding those estimated by EPA. Manufacturing output was estimated to fall by between 0.008% and 0.337% over a range of four scenarios evaluated, while personal income loss was estimated at between 0.002% and 0.094% for these scenarios. As a result, the study authors concluded that the impact of the rule on the region's economy would be "nearly imperceptible." Thus, similar controls on toxic pollutants have been shown to be affordable in other regions of the country.

EPA agrees that the contingent valuation method (CVM) elicits an individual's stated willingness to pay or accept compensation. The benefit-cost comparisons in EAs are prepared to inform the public and policy makers. Thus, the strengths and weaknesses of all aspects of the EA, including methodologies for estimating benefits, need to be made clear so that readers are aware of the limits and uncertainties. However, a 1993 Blue Ribbon Panel convened by the National Oceanic and Atmospheric Administration (NOAA) evaluated CVM and found it to be an appropriate methodology for measuring values. It is also the only method accepted by the U.S. Department of the Interior (DOI) to estimate nonuse values and has withstood Federal Court review for its use in litigation contexts.

Additionally, much of the criticism of CVM is conceptual rather than based on empirical research. Where CVM can be compared to other research techniques (e.g., use values estimated by the travel cost methodology or the hedonic price method), CVM is shown to yield similar values (see Brookshire et al., 1982 and Smith et al., 1986). Additionally, in several field experiments, actual purchase decisions were compared to hypothetical purchase decisions (Bishop and Heberlein, 1978 and Dickie et al., 1987). In all of these studies, hypothetical behavior was sufficiently predictive of actual behavior that researchers concluded meaningful values could be obtained for benefit-cost analysis or damage assessment.

Bishop, R.C. and T.A. Heberlein. 1978. Measuring values of extra-market goods: Are indirect measures biased? *American Journal of Agricultural Economics* 61(5): 926-930.

Brookshire, D., M. Thayer, W.D. Schulze, and R. d'Arge. 1982. Valuing public goods: A comparison of the survey and hedonic approaches. *American Economic Review* 72(1): 165-177.

---

Comment ID: CTRH-001-023  
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: E-01s 2ndary,Indirect Cost Impact  
References:  
Attachments? N  
CROSS REFERENCES

---

Comment: And one final point that I would like to make is that the management of the City of Merced is really looking hard at ending our discharge to surface waters because of the uncertainties of how much it

is going to cost in enforcement liability with the California Toxics Rule.

If that would happen, we would be doing a disservice to a thriving ecosystem. And I believe that the economic impact of people having to cease discharges because of the regulations should be taken into account as part the economic analysis.

Thank you.

Response to: CTRH-001-023

See response to CTR-021-008.

---

Subject Matter Code: E-01u Economic Consid. Task Force

---

Comment ID: CTR-032-008a  
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: E-01u Economic Consid. Task Force  
References: Letter CTR-032 incorporates by reference letter CTR-035  
Attachments? N  
CROSS REFERENCES E-01c02

---

Comment: Economic Analysis

The District supports CASA/Tri-TAC's conclusions that the Economic Analysis has significant technical weaknesses, is based on a large number of assumptions and minimal empirical data, and that it almost certainly understates costs and overestimates benefits. There is a critical need for a sound economic analysis. We also agree with their recommendation that EPA and the SWRCB undertake a collaborative process with interested members of the public to revise the Economic Analysis based on guidelines in the Economic Considerations Task Force Report.

Response to: CTR-032-008a

See responses to CTR-056-018 and CTR-034-016.

---

Comment ID: CTR-034-016  
Comment Author: SCAP  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01u Economic Consid. Task Force  
References: Letter CTR-034 incorporates by reference letter CTR-035  
Attachments? N  
CROSS REFERENCES

---

Comment: \* Based on these and other issues discussed in the attachments, we strongly urge EPA to revise its Economic Analysis, and recommend that EPA and the SWRCB work together with stakeholders to craft a revised approach that is mutually acceptable. We would be pleased to assist in such an effort.

Response to: CTR-034-016

EPA has worked very closely with the State to develop the results of the Economic Analysis (EA). The Agency considered all comments and information regarding the EA that accompanied the proposed CTR and revised the EA, as appropriate. In the post proposal process, EPA also met with stakeholders, as

requested, to discuss their concerns regarding the EA and made revisions, where necessary. EPA did not want to alter the EA methodology without another round of public comment which likely would have resulted in enormous additional costs and more delays. This was not justifiable given that the methodology was sound and the criteria are science, and not economically, based.

---

Comment ID: CTR-035-011a  
Comment Author: Tri-TAC/CASA  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/25/97  
Subject Matter Code: E-01u Economic Consid. Task Force  
References:  
Attachments? N  
CROSS REFERENCES M  
B Comment Period

---

Comment: EPA's Economic Analysis is important not only for EPA's rulemaking, but for the SWRCB's promulgation of the State's Implementation Policy. Without significant improvements, we do not believe that EPA's Economic Analysis would comply with the requirements of the state Porter-Cologne Act if used by the SWRCB to support the State Proposal. We propose that EPA and the SWRCB undertake a collaborative process with interested members of the public to revise the Economic Analysis, based on methodologies and assumptions Jointly agreed 91 upon. Such a process was recommended by the Economic Considerations Task Force convened by the SWRCB in 1995, based on the process used in the Bay-Delta process. Guidelines for embarking on a collaborative process were proposed in the Task Force Report (SWRCB, 1995, Section VIII). We believe that this process could result in a mutually acceptable and defensible analysis that both EPA and the SWRCB could use to satisfy their respective rulemaking requirements for economic analysis.

Based on the extensiveness of the modifications we believe EPA should make to both the proposed rule and the accompanying Economic Analysis, we request that EPA re-propose the rule for public review and comment before publishing the CTR as a final rule.

Response to: CTR-035-011a

See responses to CTR-021-004 and CTR-034-016.

The EA is part of a Federal action that is not subject to the requirements of the Porter-Cologne Act. The State, in the development of its Implementation Plan, is solely responsible for compliance with the requirements of the Porter-Cologne Act and other relevant State statutes. EPA is unable to comment on whether or not the State's future actions will withstand potential judicial review. However, EPA stands by its economic analysis as being an appropriate estimate of the costs likely to be incurred by California facilities as a result of implementation of the CTR.

---

Comment ID: CTR-045-014  
Comment Author: Sausalito-Marín Sanitary Dist.  
Document Type: Sewer Authority

State of Origin: CA  
Represented Org:  
Document Date: 09/24/97  
Subject Matter Code: E-01u Economic Consid. Task Force  
References:  
Attachments? Y

**CROSS REFERENCES**

---

Comment: EPA and SWRCB should undertake a collaborative process with interested members of the public to revise the Economic Analysis, based on methodologies and assumptions jointly agreed upon, similar to the process recommended by the SWRCB's Economic Considerations Task Force.

Response to: CTR-045-014

See responses to CTR-021-004 and CTR-034-016.

---

Comment ID: CTR-049-007  
Comment Author: Watereuse Assoc. of California  
Document Type: Trade Org./Assoc.  
State of Origin: CA  
Represented Org:  
Document Date: 09/24/97  
Subject Matter Code: E-01u Economic Consid. Task Force  
References:  
Attachments? N

**CROSS REFERENCES**

---

Comment: The accuracy of the Economic Analysis as contained in the CTR is extremely important. As such, we encourage the USEPA and the SWRCB to undertake a collaborative process with interested members of the public to revise the existing Economic Analysis to be based on methodologies and assumptions which are jointly agreed upon.

We respectfully submit these comments to the draft CTR for your consideration. If you should have any questions about WateReuse or the remarks contained in this correspondence, please feel free to contact me at (916) 442-2746 or our Executive Director Peter MacLaggan at (619) 523-4661. Thank you for your continued support of recycled water.

Response to: CTR-049-007

See responses to CTR-021-004 and CTR-034-016.

---

Comment ID: CTR-056-023  
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: E-01u Economic Consid. Task Force

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

Attachments? N

**CROSS REFERENCES**

---

Comment: Because of the importance of the Economic Analysis, EBMUD and many other public agencies affected by the CTR believe that EPA and the SWRCB should adhere to the recommendation of the SWRCB's Economic Considerations Task Force convened by the SWRCB in 1995, and use a collaborative process in cooperation with interested members of the public to revise the Economic Analysis based on methodologies and assumptions jointly agreed upon. We believe that such a process will result in a mutually acceptable and defensible analysis that can satisfy the respective rulemaking requirements for an economic analysis.

Response to: CTR-056-023

See responses to CTR-021-004 and CTR-034-016.

---

Comment ID: CTR-066-018

Comment Author: Delta Diablo Sanitation Dist.

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01u Economic Consid. Task Force

References:

Attachments? N

**CROSS REFERENCES**

---

Comment: The areas with which we find concerns and the requested changes include the following:

\* Because of the importance of the Economic Analysis, EPA and the SWRCB should undertake a collaborative process with interested members of the regulated community and public to revise the analysis, based on methodologies and assumptions jointly agreed upon, similar to the process recommended by the SWRCB's Economic Considerations Task Force.

Response to: CTR-066-018

See responses to CTR-021-004 and CTR-034-016.

---

Comment ID: CTR-082-012

Comment Author: City of Burbank

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/24/97

Subject Matter Code: E-01u Economic Consid. Task Force

References:

Attachments? N

CROSS REFERENCES

---

Comment: The subject rule has a significant impact on our facility discharge and the citizens of the City. We therefore present the following comments for your consideration to re-open the comment period for this rule in order to facilitate a more complete review by public and in particular by those in the POTW community:

\* Because of the importance of the economic analysis USEPA and SWRCB should undertake a collaborative process with interested members of the public to revise the economic analysis based on the methodologies and assumptions jointly agreed upon similar to the process recommended by the SWRCB's Economic Consideration Task Force.

Response to: CTR-082-012

See responses to CTR-021-004 and CTR-034-016.

---

Comment ID: CTR-096-009

Comment Author: City of Modesto

Document Type: Local Government

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01u Economic Consid. Task Force

References:

Attachments? N

CROSS REFERENCES

---

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

Specifically, the City submits the following comments:

I. Lastly, because of the importance of the economic analysis, EPA and the SWRCB should undertake a collaboration process with interested members of the public to revise the Economic Analysis, based on methodologies and assumptions jointly agreed upon, similar to the process recommended by the SWRCB's Economic Considerations Task Force.

Response to: CTR-096-009

See responses to CTR-021-004 and CTR-034-016.

---

Subject Matter Code: E-01v Discharge Over Time

---

Comment ID: CTR-034-014d

Comment Author: SCAP

Document Type: Trade Org./Assoc.

State of Origin: CA

Represented Org:

Document Date: 09/25/97

Subject Matter Code: E-01v Discharge Over Time

References: Letter CTR-034 incorporates by reference letter CTR-035

Attachments? N

CROSS REFERENCES E-01g08

E-01b

E-01e

J

---

Comment: \* In general, we are pleased that EPA prepared an analysis of the economic impacts of the proposed CTR, and that a major portion of EPA's work focused on determining the potential impacts on POTWs. However, we believe that this analysis is based on improper assumptions and inaccurate cost estimates, resulting in unconvincing conclusions. Detailed comments can be found in Attachment 2. A few of the areas of concern are listed below:

- \* Small facilities appear to be under represented in EPA's sample of POTWS, especially for minor dischargers.
- \* The cost triggers used as regulatory relief thresholds are unrealistic, and are not consistent with EPA regulations and policies.
- \* The assumptions used to determine cost estimates for indirect dischargers appear to omit a large proportion of potentially affected industries.
- \* The Economic Analysis does not take into account projected population and industrial growth over time, which may influence effluent quality and quantity. Statewide, the population is projected to grow by nearly 50% by 2020.
- \* The use of average cost estimates masks economic impacts on individual dischargers, which may be particularly acute for small communities.
- \* The economic Analysis ignores the costs that may be incurred by stormwater dischargers and nonpoint sources to reduce loadings so that CTR criteria may be met in ambient waters.

Response to: CTR-034-014d

See responses to CTR-032-004, CTR-035-061, CTR-021-006b, CTR-040-037, CTR-059-018, and CTR-035-048.

---

Comment ID: CTR-059-021

Comment Author: Los Angeles County Sanit. Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01v Discharge Over Time

References: Letter CTR-059 incorporates by reference letter CTR-035

Attachments? Y

CROSS REFERENCES

---

Comment: Economic Analysis

The Sanitation Districts commends EPA for preparing an analysis of the economic impacts of the proposed CTR, and for selecting POTWs for half of the case studies. We believe that EPA is correct in thinking that POTWs are likely to experience major impacts as a result of the promulgation of the CTR. However, we believe that this analysis is based on improper assumptions and inaccurate cost estimates, resulting in unconvincing conclusions. Our own attainability and cost analysis indicates that there are indeed fundamental flaws in the cost analysis. A few of the areas of concern are listed below:

\* The Economic Analysis does not take into account projected population and industrial growth over time, which may influence effluent quality and quantity. For example, in Los Angeles County the population is projected to grow to nearly 13 million (36%) by 2020.

Response to: CTR-059-021

See response to CTR-035-061.

---

Subject Matter Code: E-01w Cost per Facility

---

Comment ID: CTR-005-001  
Comment Author: Novato Sanitary District  
Document Type: Sewer Authority  
State of Origin: CA  
Represented Org:  
Document Date: 09/23/97  
Subject Matter Code: E-01w Cost per Facility  
References:  
Attachments? Y  
**CROSS REFERENCES**

---

Comment: Dear Ms. Frankel:

The Novato Sanitary District (District) thanks you for the opportunity to comment on the proposed California Toxics Rule (CTR). Unfortunately, we had insufficient time to analyze all aspects of the rule and the supporting economic analysis. This letter summarizes the comments based on our review to date.

As background, the District has two tertiary treatment plants (each with secondary treatment plus nitrification and filtration) which discharge through a common outfall to the shallow waters of San Pablo Bay. As a shallow water discharger, we are not allowed a dilution credit under the current Basin Plan and receiving water criteria are generally incorporated directly into our permit as effluent limits. The District has a population of approximately 57,000 and is basically residential in nature with supporting commercial development. We have no significant industrial dischargers to our system. We have established an aggressive pollution prevention program targeted primarily at copper (corrosion control and vehicle services control programs), and as a result our effluent copper levels have been reduced significantly (from over 50 ug/l several years ago to generally between 10 and 20 ug/l).

Sampling of residential and commercial discharges to our sewer system has established that influent copper levels are equivalent to residential copper levels and that 87% of the copper loading is attributable to tap water (the result of corrosion of copper pipes). The local water agency has already implemented a corrosion control project. Pursuant to the District's request, the agency has increased the pH beyond that required by the lead and copper rule to achieve maximum potential reduction of corrosivity. Our effluent monitoring has for several years employed clean sampling techniques and appropriate QA/QC. In the case of mercury, for example, we have been using Frontier GeoScience, the recognized expert in mercury analysis.

The District has evaluated low-cost alternatives for improving copper removals at the least efficient of our two treatment plants and concluded that addition of chemicals without significant capital improvements would not be effective. The District has further determined that significant improvement in copper removals (although far less than needed to achieve compliance) would require capital improvements of \$2.8 million and total annual costs of \$480,000.

Response to: CTR-005-001

The Navato Sanitary District states that capital improvements of \$2.8 million total and annual costs of \$480,000 would be required for the District to achieve significant copper removal at one of its wastewater treatment plant facilities. Moreover, the district indicates that this investment will not be

sufficient to achieve compliance levels.

Review of the information submitted by the District is not sufficient to determine if the costs estimated by the District are consistent with the estimates obtained for sample facilities of the same industrial category and flow range. The existing permit limit for copper is not indicated in the documentation submitted by the District. Review of the NPDES Permit issued in 1992, which was to expire in 1997, indicates that a final copper permit limit of 2.9 ug/L was to become effective in April 11, 1996. This limit is more stringent than a limit calculated using CTR criteria for a facility with the characteristics of the Novato Sanitary District. Therefore, if the 1992 final permit limit were used to assess existing (baseline) conditions, it is unlikely that the Novato Sanitary District would show any cost as a result of the CTR.

Additionally, the cost estimates submitted by the District seem to be based on compliance with an estimated permit limit of 2.9 ug/L. These costs are included in the amendment request for the copper effluent limit submitted by the District to the California Regional Water Quality Control Board on January 31, 1996. A CTR-based permit limit for a facility with the characteristics of the Novato Sanitary District facility would use a 3.1 ug/L dissolved criteria for copper. Metal translators could also be used to derive permit limits and, if desired, the facility could complete a water effect ratios study which may result in a less stringent limit. For example, based on studies completed by the Regional Board and the City of San Jose (a San Francisco Bay discharger), water effect ratios for the Bay range between 1.7 and 3. Additionally, a metal translator of 3.2 could be calculated based on the U.S. EPA theoretical partitioning coefficient and an assumed total suspended solids (TSS) concentration of 20 mg/L. The resulting permit using CTR criteria and accepted implementation procedures would result in a limit of 16.8 ug/L for copper in comparison to the 2.9 ug/l limit the District used for its cost estimates.

Based on the above considerations, EPA does not believe the District cost estimates are comparable with the estimates obtained for the economic analysis of the CTR.

---

Comment ID: CTR-059-022

Comment Author: Los Angeles County Sanit. Dist

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01w Cost per Facility

References: Letter CTR-059 incorporates by reference letter CTR-035

Attachments? Y

CROSS REFERENCES

---

Comment: Economic Analysis

The Sanitation Districts commends EPA for preparing an analysis of the economic impacts of the proposed CTR, and for selecting POTWs for half of the case studies. We believe that EPA is correct in thinking that POTWs are likely to experience major impacts as a result of the promulgation of the CTR. However, we believe that this analysis is based on improper assumptions and inaccurate cost estimates, resulting in unconvincing conclusions. Our own attainability and cost analysis indicates that there are indeed fundamental flaws in the cost analysis. A few of the areas of concern are listed below:

\* The use of average cost estimates masks economic impacts on individual dischargers.

Response to: CTR-059-022

See response to CTR-035-048.

---

Comment ID: CTR-070-002a

Comment Author: Sewerage Agency of Sthrn Marin

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/22/97

Subject Matter Code: E-01w Cost per Facility

References:

Attachments? Y

CROSS REFERENCES E-01d01

---

Comment: Economic analysis The attached table shows that implementation of the proposed limits will result in the reduction of SASM's copper limit from 37 ug/l to 12 ug/l. It is expected that reverse osmosis will be the most economical method to reach this level and that the cost of this operation will be approximately \$550,000 per year. This equates to a 30% increase in SASM's budget. This cost is also higher than EPA's estimated costs of \$27,000 to \$480,000 per plant per year. It appears that the Economic Analysis underestimates the potential statewide cost and should be revised.

Response to: CTR-070-002a

SASM does not describe their existing treatment processes or provide detailed effluent data, thus EPA is not able to estimate a CTR-based effluent limit or evaluate whether process optimization is a viable alternative to reverse osmosis for controlling copper concentrations. EPA estimated that process optimization would be sufficient for the City of Colton (a secondary treatment wastewater sample facility with 9.9 MGD) to meet its estimated CTR-based limit for copper which require a loading reduction of less than 25%. EPA revised its cost estimates for the final CTR and now estimates that per facility costs for POTWs range from \$61,000 to \$325,000.

See response to CTR-045-012b.

---

Comment ID: CTR-081-005a

Comment Author: West County Agency

Document Type: Sewer Authority

State of Origin: CA

Represented Org:

Document Date: 09/26/97

Subject Matter Code: E-01w Cost per Facility

References:

Attachments? N

CROSS REFERENCES E-01d

---

Comment: \* Based on the comments at the hearing of September 17, and our own estimates, the EPA's economic analysis has serious flaws and does not reflect the full costs for implementation of the CTR. The comments of the California Association of Sanitation Agencies should be given significant weight in this regard.

\* For example, the WCA plants will not be able to meet the new criteria for copper, lead, and nickel, as well as some organics. This is true even after maximizing source control, pollution prevention, and process control improvements. Both our plants would need additional "end-of-pipe" treatment, such as reverse osmosis.

\* Based on our analysis of the proposed CTR, we will need to implement reverse osmosis in order to meet the requirements of the proposed CTR. Based on this, we estimate that our potential annualized costs for compliance will be \$11,220,000. These costs are significantly higher than EPA's estimated costs per plant of \$27,000 to \$480,000 per year. Thus, we believe strongly that the draft Economic Analysis significantly underestimates the potential statewide costs associated with adoption of the CTR and should be revised.

Response to: CTR-081-005a

EPA disagrees that its Economic Analysis (EA) underestimates costs. West County Agency does not provide the details of their \$11.2 million cost estimate, thus EPA cannot evaluate its validity or conduct its own analysis. Based on EPA's sample of 14 POTWs in California, EPA predicts that the state-wide cost impact on POTWs would range from \$7.8 million to \$41.6 million per year. See the EA for details on the EPA's methodology and costs.

See responses to CTR-056-018, CTR-004-003, and CTR-045-012b.

---

Subject Matter Code: E-01y Cost of Efforts to Date

---

Comment ID: CTR-092-022c

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: E-01y Cost of Efforts to Date

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

Attachments? Y

CROSS REFERENCES E-01c

E-01b01

---

Comment: Comment #6: General Cost Analysis Concerns

The City of San Jose has several generalized concerns about the costs utilized in the Economic Analysis, which raise questions regarding the validity of that analysis, as follows:

Q.6-1) We believe the real point of undertaking the CTR is to assure water quality throughout State that protects beneficial uses. How can the existing Economic Analysis be sufficient if it does not address the cost of meeting the CTR standards from all sources of discharge? Especially given the amount and cost of aggressive intervention in reducing point source pollution undertaken in California to date?

Q.6-2) Throughout the text of the CTR and within the Economic Analysis, EPA refers repeatedly to the assumption that the State will provide regulatory relief to mitigate severe cost impacts engendered by the CTR. What happens to EPA's cost benefit analysis if even one of those assumptions of regulatory relief is not implemented by the State? While we support EPA's attempt to indicate available regulatory options for the State, local level governments and POTW's have little past experience on which to rationalize acceptance of such assumptions.

Q.6-3) EPA has not estimated the cost to local governments/POTW's/indirect dischargers of securing regulatory relief, nor has that cost been incorporated into the estimate of the CTR impact. How would EPA estimate the cost of securing regulatory relief and how would that additional cost affect the Economic Analysis? Especially since very costly studies may be required in order to qualify for regulatory relief.

Q.6-4) The preamble to the CTR discusses the linkage between the CTR and the National Toxics Rule, and EPA's intent to create a level playing field by setting the CTR standards within the National Toxics Rule Framework. There does not seem to have been a similar attempt to analytically level the playing field vis a vis implementation costs, however, as no indexing or calibration has been undertaken to account for the cumulative costs of efforts to date (see also Q. 4-3), cost equivalency data is rooted in experience outside California, and simple average costs are used to represent widely variable ranges. How would the CTR cost/benefit relationship be affected by adjusting for California's significant previous efforts on water quality control mechanisms and California cost data?

Response to: CTR-092-022c

See responses to CTR-032-004, CTR-060-019, CTR-004-003, CTR-035-048, and CTR-092-022a.

---

Comment ID: CTRH-002-018  
Comment Author: Ing-Yig Cheng  
Document Type: Public Hearing  
State of Origin: CA  
Represented Org: L.A. Bureau of Sanitation  
Document Date: 09/18/97  
Subject Matter Code: E-01y Cost of Efforts to Date  
References:  
Attachments? N  
CROSS REFERENCES

---

Comment: DR. CHENG: Hi. My name is Ing-Yih Cheng. I'm here today representing the City of Los Angeles, Department of Public Works, Bureau of Sanitation. City of Los Angeles has three treatment plans that are being affected by CTR. They are Tillman Water Reclamation Plant, Los Angeles-Glendale Water Reclamation Plant, and the Terminal Island Treatment Plant. We appreciate the opportunity to testify on the proposed CTR. We have three issues to briefly address because of time limitations, and a more detailed written comment will be forthcoming.

The first and foremost issue concerns with the economic analysis that you have performed on the Tillman plant. When the State Inland Surface Water Plan came out in 1991, the City conducted probable cause assessment for the Tillman plant. The study was completed in April 1992 after a new ISWP-based NPDES permit had been issued. A comparison between this detailed study and EPA economic analysis showed that your economic analysis underestimated the cost required for compliance by orders of magnitude. And the reason for this is because EPA's EA compared CTR to essentially ISWP requirements, since the NPDES permit limits reflect ISWP limits criteria. This is inherently unfair because it ignores treatment costs for those constituents that we are yet to be in full compliance with. We have discussed this matter with our attorney who has advised us to exhaust all legal remedies and hold EPA to the requirement that it prepare a legally defensible economic analysis. We will be glad to make details of our cost estimates available to you, if you like. And on the basis of this comment for one plant alone, we object to EPA's finding that CTR is not a significant rulemaking.

Response to: CTRH-002-018

See responses CTR-021-005c and CTR-035-058.

---