



President
William L. Pugh
Public Works Director
City of Tacoma
Public Works Department
Tacoma, WA

Association of
Metropolitan
Sewerage Agencies

Vice President
Gurnie C. Gunter
Director
Kansas City Water
Services Department
Kansas City, MO

October 31, 2000

Treasurer
Paul Pinault
Executive Director
Narragansett Bay Commission
Providence, RI

Ms. Yvonne Martin
U.S. Environmental Protection Agency, Region 4
Water Management Division
61 Forsyth Street, S.W.
Atlanta, GA 30303-8960

Secretary
Thomas R. "Buddy" Morgan
General Manager
Water Works & Sanitary
Sewer Board
Montgomery, AL

**SUBJECT: PROPOSED TMDLS FOR MERCURY FOR THE OCHLOCKNEE,
SATILLA AND SUWANEE RIVER BASINS**

Executive Director
Ken Kirk

Dear Ms. Martin:

Thank you for the opportunity to review Region 4's proposed TMDLs for mercury in the Ochlocknee, Satilla and Suwanee River Basins. The Association of Metropolitan Sewerage Agencies (AMSA) represents the interests of more than 250 publicly-owned wastewater treatment agencies and publicly owned treatment works (POTWs). AMSA's members treat 18 billion gallons of wastewater every day and provide service to the majority of the United States' sewered population. In addition to their primary responsibility for treating the Nation's domestic and industrial wastewater, member agencies play a major part in their local communities, often leading watershed management efforts, promoting industrial/household pollution prevention and water conservation, and developing urban stormwater management programs.

We have reviewed the proposed mercury TMDLs and would like to compliment EPA on making some important changes in its TMDL approach in response to comments made on the proposed TMDL for the Savannah River. These changes include considering all sources of mercury, particularly air deposition, and acknowledging relative source contributions from point and non-point sources. However, we still have some concerns over the approach used by the Agency in developing the TMDLs and would also like to offer comments on the options proposed for wasteload allocations to point sources.

October 31, 2000

Page 2

TMDL Targets.

Although EPA has used a different approach than that used for the draft Savannah River TMDL, we still have concerns over how the targets were derived.

- First, since Georgia has no numeric human health criterion for mercury, EPA elected to interpret the state narrative standard to derive an appropriate target by using Georgia's (non-enforceable) fish consumption guidelines. These guidelines are advisory levels, intended to provide consumers of fish with information that they can use to make informed choices about their personal fish consumption, not water quality standards that can be used to determine if the "fishable use" of that water has been attained or lost. EPA's approach clearly violates existing requirements that mandate the use of adopted water quality standards when developing TMDLs. By arbitrarily developing its own target, EPA is in essence espousing the use of underground regulations. In Simpson Tacoma Kraft v. Dept. of Ecology, 119 Wash 2nd 640, 835 P. 2nd 1030 (Wash 1992) the Washington State Supreme Court rejected Washington Department of Ecology's attempt to translate narrative water quality standards into a numeric limit without going through the proper rulemaking procedures. A similar recent administrative decision in South Carolina (Western Carolina Regional Sewer Authority et al. V. South Carolina Department of Health and Environmental Control et. al., Docket Nos. 98-ALJ-07-0267-CC and 98-ALJ-07-0585-CC, September 22, 1999) invalidates the use of non-promulgated water quality criteria (a nutrient trophic state index (TSI) in this case) for listing impaired waters and developing TMDLs. Moreover, Section 303(c)(4) of the Clean Water Act sets forth the appropriate procedure that EPA must use to declare a State standard inadequate. If the State does not make appropriate revisions, EPA can issue a new standard for the State. However, EPA has not followed that procedure here, but has developed its own target based on a interpretation of a guideline, not a standard, and EPA's draft (not adopted) human health methodology.
- Second, we have concerns about using the draft human health methodology to calculate targets. After the draft methodology was proposed in August 1998, EPA convened a peer review panel, which issued a report in 1999 that pointed out substantial technical problems and uncertainties in EPA's proposed bioaccumulation factor (BAF) procedure and recommended that the procedure be revised and then sent back to the panel for another review. It was our understanding that when the proposed methodology was issued, EPA stated that the current human health methodology, which uses bioconcentration factors instead of BAFs, was appropriate to use while the new methodology was being finalized. Since the draft methodology has not been finalized, it should not be used to develop TMDL targets.
- Third, EPA used inadequate data in calculating the target. The method allows for the calculation of a water column target concentration by using a mercury reference dose, body weight, fish

consumption rate, BAF and the fraction of total mercury as methyl mercury (Fraction Me Hg). In making this calculation, EPA relied on BAF and Fraction Me Hg values based on a single sampling event that consisted of only two water column samples, two sediment samples and five fish samples collected in June 2000 for each watershed. This limited amount of information does not accurately reflect current biologic and ambient water quality conditions and locations within the watersheds. This inadequacy is recognized in the TMDL reports based on EPA's statements that:

"The water quality target was determined using data from a one-time sampling event in June 2000. Since the annual average load and flow are used in the determination of human health criteria, the water quality target could be re-visited when more data is available to determine the annual average condition for total mercury in the water column."

One of the basic principles in developing good TMDLs is to use good data. In this case, inadequate data were used to develop two of the key factors in calculating the target, the BAFs and Fractions Me Hg. As a result, there were significant ranges for each factor and for the resulting targets as shown below in Table 1. If this becomes EPA's general approach in setting targets, there will be significant impacts on wasteload allocation and significant cost consequences if targets are over- or under-estimated.

Table 1 - TMDL Targets

River Basin	TMDL Target ng/L	BAF	% Methyl Mercury
Ochlocknee	0.65	4,190,744	14
Satilla	1.51	1,246,573	21
Suwanee	4.0	3,383,857	16 ^a
^a <i>Note: EPA should correct this value from 16% to 3% based on water column data.</i>			

Compliance With Water Quality Standards.

The most obvious deficiency of this TMDL is that it does not attain water quality standards since significant reductions from non point sources are required to achieve the targets as shown below in Table 2.

Table 2 - Source Reductions and Contributions

River Basin	Source Reduction to Meet TMDL	Contribution	
		Non Point Source	Point Source
Ochlocknee	89%	99%	1%
Satilla	74%	99%	1%
Suwanee	62%	99%	1%

In the TMDL reports, EPA states that:

“EPA recognizes that the sources of this atmospheric mercury are national and international in scope and that restoring waters impaired by atmospheric deposition and related surface runoff may require control measures of a similar national and international scope.”

In light of this finding and the reality that national and international control measures are not likely to happen in the short-term or even long-term, EPA should carefully consider whether the use is attainable or not. Have mercury levels in fish remained essentially the same 1975 or have levels changed? For the targets developed for the draft TMDLs, EPA has stated that the purpose of the TMDLs is to reduce mercury in fish tissue to acceptable levels. The goal of an acceptable level has been translated into unrestricted consumption of fish even though the mercury target is designed to prevent neurological damage in fetuses and children. Based on the fish data collected in June 2000 and Georgia’s guidelines, the fish are still consumable. Rather, it is the amount of fish that should be restricted. While reducing mercury levels in fish is a commendable goal, the more appropriate focus would be to reduce exposure, particularly to pregnant women and small children. Fish are a good source of protein and are low in saturated fat. One can still get the benefits of eating fish by choosing how often and how much fish to eat, and how fish are cleaned and cooked.

Comments on Wasteload Allocations.

With regard to wasteload allocations, EPA acknowledges that discharges of mercury from point sources are small with no discernable impact on the waters in their present condition, and that the discharges would not cause the waters to be impaired if restored to full health. EPA also acknowledges that the elimination of these discharges could be very expensive and technically infeasible and could cause significant social and economic disruption with no water quality benefits. With that preface, EPA is

October 31, 2000

Page 5

soliciting comments on three options for waste load allocations (WLAs) for point sources:

- Option 1: No WLA for point sources, which assumes the river has no existing assimilative capacity.
- Option 2: A WLA equal to the target concentration (criteria end-of-pipe), which would satisfy the Clean Water Act requirement that effluent limitations be set at a level to meet water quality standards.
- Option 3: Allow dischargers a choice of Option 2 or choose a WLA authorizing a discharge above criteria end-of-pipe limits by agreeing to a set of additional permit conditions such as implementation of mercury source identification and reduction strategies, accepting subsequent mercury effluent limits based on the feasible removals demonstrated by these strategies, and providing support and funding for data collection on sources and reductions to attain water quality standards. EPA is seeking comments on whether participation in data-gathering should be different for different classes of dischargers (industrial vs small municipal), and whether significant dischargers of mercury should be treated differently than those with no discernable impacts.

In our opinion, the first two options unfairly and illegally place the burden of compliance on point source dischargers, which contribute an extraordinarily small fraction of the pollutant causing the impairment. Moreover, we believe that the permitting regulations (40 CFR 122.44) clearly allow EPA to select Option 3 as the WLA option. The regulations require that permit shall include conditions that meet the following requirements:

“ . . . (d) Water quality standards and State requirements: any requirements . . . necessary to: (1) Achieve water quality standards established under section 303 of the CWA”
(40 CFR § 122.44(d).)

“Limitations must control all pollutants or pollutant parameters . . . which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standards” (40 CFR § 122.44(d)(1)(i)).

“When developing water quality-based effluent limits under this paragraph the permitting authority shall ensure that: (A) The level of water quality to be achieved by limits on point sources established under this paragraph is derived from, and complies with[,] all applicable water quality standards” (40 CFR § 122.44(d)(1)(vii)).

Under Options 1 and 2, EPA has incorrectly assumed that when a discharger adds even an iota of the substance to the water segment, it is causing or contributing “to an excursion above [the] State water quality standards.” Causation is a concept that is usually defined by the “substantial factor” test. In order to be a cause, an event must be a substantial factor influencing the outcome. Although the regulation uses the words “cause” and “contribute”, the concept is the same. An event contributes to an outcome when it, in combination with other events, causes the outcome.¹ Conversely, an event that does not substantially contribute is not a cause. For example, a person who throws lit matches into a forest fire does not cause or contribute to that fire, because the amount of extra fire is insignificant in the conflagration. Nothing in the regulation suggests that agencies must impose effluent limits on insignificant sources.

If causation concept is applied to the three watersheds, one would conclude, and EPA has agreed, that the discharges of mercury from point sources are insignificant and have no observable effect on the amounts of mercury, and thus the zero discharge or end-of-pipe criteria options for point sources will not achieve water quality standards.

Under Option 3, EPA is taking a positive step in recognizing that an alternative strategy is needed to deal with mercury that addresses the virtual elimination of mercury from point sources. The permitting conditions that EPA is recommending, although somewhat ambiguous, embody this virtual elimination concept by focusing on source identification and reduction strategies and data collection. These steps assure reasonable progress in reducing mercury where feasible and practical. However, because EPA provides no specific descriptions of what these permit conditions might entail, it would be difficult to wholeheartedly accept them sight unseen. Perhaps, EPA could provide some examples or further information on what a “mercury source identification and reduction strategy” might look like, and what level of commitment is expected to provide “support and funding” for data collection efforts.

With regard to EPA’s question about the treatment of different dischargers, we believe that the some distinction should be made for POTWS taking into consideration that the level of reduction should be tied to the availability of feasible and effective source reduction options. For example, in the case of publicly owned treatment works, it is not technically possible to achieve zero loadings either through pollution minimization or treatment. AMSA has conducted a study that evaluated the concentrations and sources of mercury in purely domestic wastewater, and the feasibility of controlling those mercury sources.² The

¹ Causation is sometimes defined by the “but for” test, in which an event is a cause only if the result would not have happened but for that event. The “cause and contribute” language of the regulation can be read as calling for the broader substantial-factor test, rather than the narrower but-for test.

² *Evaluation of Domestic Sources of Mercury*, Association of Metropolitan Sewerage Agencies, August 2000.

October 31, 2000

Page 7

results of this work show that most of the mercury in domestic wastewater comes from uncontrollable sources (feces, urine, food and domestic products). Background mercury concentrations averaging greater than 100 ng/L can be expected in POTW wastewater influents, even if complete elimination of industrial point source discharges is accomplished.

Thank you for the opportunity to comment on the proposed TMDLs. If you have any questions, please feel free to contact me at 202/833-9106 or Margaret Nellor, Chair AMSA Mercury Workgroup, at 562/699-7411, extension 2502.

Sincerely,



Mark Hoeke

Director, Government Affairs

cc: Margie Nellor, AMSA Mercury Workgroup Chair
Norm Leblanc, AMSA Water Quality Committee Chair
David Katz, AMSA Legal Affairs Committee Vice-Chair