



Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion

Summary

EPA is publishing its final *Guidance for Implementing the January 2001 Methylmercury Water Quality Criterion*. This document will help protect waters and human health by giving guidance to states, territories, and authorized tribes (states and tribes) for adopting a fish tissue-based methylmercury water quality criterion into their water quality standards and implementing the criterion through other water quality programs. You can download the document from EPA's web site at www.epa.gov/waterscience/criteria/methylmercury/index.html.

Background

Methylmercury in surface waters can enter the aquatic food chain and become stored in fish and shellfish muscle tissue. Eating fish and shellfish contaminated with methylmercury in amounts that exceed EPA's criterion can result in a variety of health effects in humans. For example, children who were exposed to low concentrations of methylmercury before they were born might be at risk of poor performance on neurobehavioral tests, such as those measuring attention, fine motor function, language skills, visual-spatial abilities, and verbal memory.

In January 2001, EPA published a new water quality criterion for methylmercury that, for the first time, expresses a human health criterion as a concentration in fish and shellfish tissue concentration rather than in the water. Adopting the fish tissue criterion into water quality standards presents several challenges, such as implementing the fish tissue criterion in National Pollutant Discharge Elimination System (NPDES) permit limits. In a 2001 Federal Register announcement, EPA stated its intention to develop implementation guidance to address these issues. Subsequently, EPA sought input from state environmental agencies to develop the guidance. EPA released draft guidance for public comment in 2006 and developed the final guidance to address the comments received.

About This Guidance Document

The Guidance helps states and tribes adopt and implement a methylmercury water quality criterion expressed as a fish tissue value. It consolidates existing EPA guidance and practice relevant to methylmercury and also includes new information, such as alternative approaches for implementing the new methylmercury criterion where bioaccumulation data are not available for developing a water column translation and NPDES permits must be issued. In these cases, where a point source discharge could cause or contribute to an exceedance of the mercury water quality standard, the guidance recommends that the permitting authority include permit conditions requiring the permittee to implement a mercury minimization plan tailored to the facility's potential mercury discharge. The permitting authority would also require effluent monitoring to determine whether the mercury minimization measures are effective.

This approach does not generally require or recommend translating the fish tissue concentration into a water column concentration using site-specific bioaccumulation factors that can be costly to develop. However, where direct discharges of mercury to a waterbody are high, EPA recommends that permit authorities work with mercury dischargers in the watershed to collect data necessary to develop a total maximum daily load (TMDL), an analysis of sources and loading capacity similar to what a TMDL would provide, or a water column translation of the fish tissue criterion for future permitting.

How to Get Additional Information

If you do not wish to download the guidance document from EPA's web site, you can instead order a copy of the document from EPA's Water Resource Center by calling (202) 566-1729 or emailing: center.water-resource@epa.gov. Ask for EPA document number 823-R-10-001. You may also email Fred Leutner at leutner.fred@epa.gov or Holly Green at green.holly@epa.gov for further information.