



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

MAY 12 2010

Mr. Scott G. Mandirola, Director
West Virginia Department of Environmental Protection
Division of Water and Waste Management
601 57th Street, SE
Charleston, West Virginia 25304

Dear Mr. Mandirola:

The U.S. Environmental Protection Agency (EPA) is in the process of reviewing West Virginia's water effect ratio (WER) submission for the derivation of acute and chronic site-specific copper criteria applicable to the Charleston Sanitary Board (CSB) discharge. According to the submittal from the CSB, the WER was developed using EPA's Streamlined Water-Effect Ratio Procedure for Discharges of Copper (EPA-822-R-01-005). EPA's regulations require that any water quality standards submitted to EPA for approval under Clean Water Act Section 303(c) are both based on sound science and protective of the designated use. 40 CFR 131.11(a)(1). As part of its review of the data provided by CSB, EPA has evaluated whether the WER was developed consistent with EPA's WER Streamlined guidance and whether the resulting WER-adjusted site-specific criteria are protective of the state's designated uses, taking into account the latest science available.

In the course of our review, EPA has identified some issues that we are hoping the West Virginia Department of Environmental Protection (WVDEP) can assist us in addressing. Primarily, EPA's WER Streamlined guidance provides that in addition to copper and hardness, the effluent mixed with upstream water at design flow be analyzed for alkalinity, pH, dissolved organic carbon, and total suspended solids. Those parameters are intended to provide ancillary information for understanding the chemistry influencing the observed results.

In our review of the data provided with the WER submittal, we are assuming that the data from the first sampling event indicated as Sampling ID "Site Water Control" is the simulated site water. There appears to be no corresponding data provided for the second sampling event. EPA is requesting that WVDEP work with the discharger to identify that data if it is available.

EPA is reviewing the submission to ensure that the resulting WER-adjusted site-specific criteria are protective of the aquatic life designated use in the Kanawha River. Therefore, EPA's review involves evaluating the latest science available to confirm that the resulting WER and criteria are protective. As

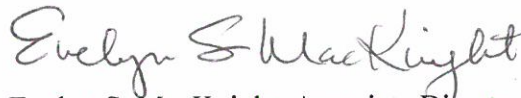


we have indicated, the intent of obtaining the additional parameters is to understand the chemistry influencing the observed results of CSB's WER analysis and calculation of the site-specific criteria. The level of dissolved organic carbon (DOC) in the simulated site water does not appear to support the resulting site-specific criteria calculated based on the WER, even using the WER calculated based on the species mean acute value (SMAV). EPA is requesting that WVDEP work with the discharger to identify any other data available - not only for DOC, alkalinity, pH or total suspended solids, but also calcium, magnesium, sodium, potassium, sulfate, or chloride - to facilitate as comprehensive an evaluation, as possible, of the protectiveness of the criteria. In addition, if available, please provide the relative humic acid and fulvic acid content of the upstream water, effluent, and simulated site water. The levels of humic and fulvic acid could explain the DOC data inconsistency EPA is observing.

EPA is also looking forward to the results of the mussel survey in the area of the discharge that WVDEP will be conducting shortly. Understanding the presence or absence of federally listed threatened and endangered mussel species will also inform EPA's decision on the protectiveness of the site-specific criteria. Please inform us of the results of that survey as soon as possible.

If you have any questions regarding the issues identified in this letter, please contact me, or have your staff contact Denise Hakowski at (215)814-5726.

Sincerely,



Evelyn S. MacKnight, Associate Director
Office of Standards, Assessment and TMDLs
Water Protection Division