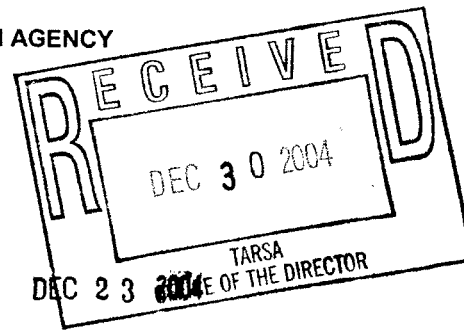




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029



Richard Eskin, Director  
Technical and Regulatory Services Administration  
Maryland Department of the Environment  
1800 Washington Boulevard, Suite 450  
Baltimore, Maryland 21230-1718

Dear Dr. Eskin:

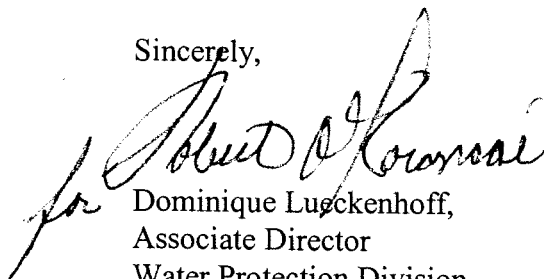
The Environmental Protection Agency (EPA) Region III, has reviewed the report "Water Quality Analysis of Zinc in Back River, Baltimore County and Baltimore City, Maryland," which was submitted by the Maryland Department of Environment (MDE) for final agency review on October 13, 2004.

EPA agrees with MDE that the current data show that a zinc TMDL is not necessary for Back River. Back River was listed by Maryland on its 1996, 1998, and 2002 Section 303(d) lists as impaired by nutrients, suspended sediments, chlordane, polychlorinated biphenyls (PCBs) - sediments, zinc, fecal coliform, and impacts to biological communities.

The monitoring data collected show that zinc concentrations ranged from Zn = ND to 38.3 µg/l. Hardness ranged from 221 mg/l to 1862 mg/l. The concentration range of zinc is well below the associated fresh water aquatic life chronic Hardness Adjusted Criteria (HAC). The criterion, 382.4 µg/l, was not exceeded by any of the zinc samples. Furthermore, bottom sediment samples used for bioassay toxicity tests demonstrate no impacts on survival and reproduction. Sediment chemistry analysis demonstrated that zinc concentrations at Stations BR-26 and BR-36 were significantly below the Effects Range Median (ERM), therefore zinc was not an impairing substance. In cases where zinc concentration was much greater than the ERM, an Acid Volatile Sulfide-Simultaneously Extracted Metals (AVS-SEM) test and porewater analysis verified that zinc was not a source of toxicity.

Thank you for the opportunity to review the Water Quality Analysis. If you should have any questions, please contact Thomas Henry at 215-814-5752.

Sincerely,

  
Dominique Lueckenhoff,  
Associate Director  
Water Protection Division  
Office of Watersheds

cc: Melissa Chatham, MDE-TARSA