



CREATIVE PARTNERSHIPS CASE STUDY

Bromide Discharges from Power Plants: A Clean Water Act and Safe Drinking Water Act Integration Story

The Issue: In September 2015, the U.S. Environmental Protection Agency (EPA) published a final Clean Water Act (CWA) rule to update technology-based limits on steam electric power plant wastewater discharges to our nation's water. Coal plants in particular are responsible for discharges of metals, nutrients and other contaminants into waters of the United States. Some coal plants discharge significant quantities of bromide, which if discharged near public water system intakes can lead to disinfection byproduct formation during treatment. Even small quantities of bromide in raw water can have significant health impacts (Regli et al. 2015). This is a textbook case of the potential for a CWA program to impact a Safe Drinking Water Act program.

Throughout the rule-making process, several factors suggested that bromide might not be dealt with in the final "Effluent Limitations Guidelines and Standards (Steam Power ELG)." For example, bromide discharges were mentioned but the proposed regulatory option that would have required power plants to limit bromide discharges was not one of EPA's "preferred" regulatory options. Nor has EPA set national water quality standards for bromide, an important tool for CWA permit writers in the states when incorporating ELGs into NPDES permits

The Response: Clean Water Action drew attention to the bromide issue during a broad campaign around the 2013 comment period on the draft Steam Power ELG. Clean Water Action partnered with several other Source Water Collaborative members, including American Water Works Association (AWWA), Association of Metropolitan Water Authorities (AMWA) and Rural Community Assistance Partnership (RCAP). Together they filed a drinking water focused comment letter. The Environmental Integrity Project also filed comments focused specifically on the lack of quantification of drinking water and public health risks and benefits in the supporting benefit-cost analysis for the ELG.

THE PARTNERS:

- Clean Water Action
- American Water Works Association
- Rural Community Assistance Partnership
- Association of Metropolitan Water Agencies

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As finalization neared in 2015, it was critical to make sure EPA heard that the final ELG should not leave water systems to grapple with bromide when a CWA program could help them to avoid Safe Drinking Water Act compliance problems caused by pollution discharges upstream. Clean Water Action, AWWA and AMWA met with technical staff in the Office of Water and with senior-level EPA officials, as well as with the White House Council on Environmental Quality and the Office of Management and Budget/Office of Information and Regulatory Affairs during rule review. AWWA made sure recent research was available and provided new analysis of treatment costs to make the case for additional attention to bromide in steam power plant effluent and its consequences.

The Results: In the end, the final rule includes detailed discussion of bromide impacts on drinking water, requires that downstream water systems be notified of potential bromide discharges, recommends that state National Pollutant Discharge Elimination System (NPDES) permit writers consider water quality based effluent limits for bromide, and impacted States set water quality standards for bromide, and require any new coal plants to control bromide discharges. This is a textbook case of Clean Water Act/Safe Drinking Water Act integration, and collaboration played a key role in achieving a better outcome than would have occurred without it.

Citations

Regli, Stig et al. 2015. "Estimating Potential Increased Bladder Cancer Risk Due to Increased Bromide Concentrations in Sources of Disinfected Drinking Waters." *Environmental Science and Technology*. 49(22): 13094-13102. <<http://pubs.acs.org/doi/abs/10.1021/acs.est.5b03547>>.