

## **Bromide Discharges from Power Plants: a Safe Drinking Water Act/Clean Water Act Integration Story**

### ***A case study of collaboration by Clean Water Action, American Water Works Association (AWWA), Rural Community Assistance Partnership (RCAP), and the Association of Metropolitan Water Agencies (AMWA)***

In September, 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.

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 filed a drinking water focused comment letter with AWWA, AMWA and RCAP (all Source Water Collaborative members.) 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. 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 high-level EPA officials, as well as with the 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.

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 NPDES permittees consider water quality based effluent limits for bromide, impacted States set water quality standards for bromide, and requires any new coal plants to control bromide discharges. This is a textbook case of Clean Water Act/Safe Drinking Water Act integration, and we believe collaboration played a key role in achieving a better outcome than would have occurred without it.

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>>.