**MCHM in the Elk and Kanawha Rivers after the January 2014 Spill**

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In January 2014, an estimate of 10,000 gallons of a mixture of crude-MCHM (primarily 4-methylcyclohexanemethanol) and stripped-PPH (assumed to be primarily dipropylene glycol phenyl ether and propylene glycol phenyl ether) spilled into the Elk River, near Charleston, WV. This presentation will cover findings of studies that assess the fate and transport of the chemicals in the Elk River, Kanawha River, and a drinking water treatment plant in Charleston, WV. Field samplings and monitoring of the chemical concentrations in river waters and tap water in selected households were conducted to assess the chemical concentrations immediately after the spill and in the following weeks. Laboratory studies were conducted to evaluate the effectiveness of typical drinking water and wastewater treatment methods for removing the chemicals. In addition, a three dimensional water quality model was developed to simulate migration and fate of 4-metheylcyclohexanemethanol (MCHM) in an approximately 1.6 mile reach of Elk River during the spill event in 2014. The monitoring and laboratory studies help answer critical questions about how the chemicals attenuate in the riverine and drinking water treatment and distribution systems. The modeling results are useful for determining the peak concentration of MCHM at different river depths, optimal distances from the intake for implementing early detection, and the amount of time for a water intake facility to shut down under this type of spill condition. These findings can be used for developing emergency measures that prevent and remove the chemicals from the drinking water facilities; improving water intake design; and decision making to reduce vulnerability of the drinking water infrastructure.