

DHSS Review of Air Sample Data from the Bridgeton Landfill Area, August 10, 2013

The Department of Health and Senior Services (DHSS) has reviewed air sample data collected for the Department of Natural Resources (DNR) near Bridgeton Landfill on August 10, 2013. Samples were collected at two locations upwind of the landfill and two locations downwind of the landfill for laboratory determination of concentrations of volatile organic compounds (VOCs), aldehydes, reduced sulfur compounds, and sulfur dioxide. DHSS has reviewed this data for evaluation of potential public health concerns of short-term health effects.

VOCs

Concentrations of VOCs were well below levels of public health concern. Downwind of the landfill, 24 VOCs were detected in ambient air in concentrations that generally exceeded concentrations detected upwind of the landfill. VOC concentrations ranged from 0.08 parts per billion (ppb) to 14.7 ppb and did not exceed health-based screening levels for acute exposure.

Aldehydes

Concentrations of aldehydes were well below levels of public health concern. Downwind of the landfill, 6 aldehydes were detected which ranged in concentration from 0.13 ppb to 1.3 ppb and did not exceed health-based screening levels for acute exposure.

Reduced Sulfur Compounds

Reduced sulfur compounds were not detected in any of the samples. While low concentrations of hydrogen sulfide were detected by the Jerome meter in downwind locations on the same day, those concentrations were less than the detection limits of the laboratory analysis. During the 4-hour sample collection period, reduced sulfur compounds were detected by two AreaRAE monitors located in nearby downwind locations. However, AreaRAE concentrations are total reduced sulfur compound concentrations. Concentrations of individual compounds were apparently less than the detection limit of the laboratory analysis.

Sulfur Dioxide

Sulfur dioxide was not detected in any of the samples. During the 4-hour sample collection period, sulfur dioxide was detected by one AreaRAE monitor located in a nearby downwind location. However, the average concentration detected was less than the detection limit of the laboratory analysis for sulfur dioxide.