

DHSS Review of Air Sample Data from the Bridgeton Landfill Area, February 11, 2014

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 February 11, 2014. 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). DHSS has reviewed this data for evaluation of potential public health concerns of short-term health effects.

VOCs

Downwind of the landfill, 8 VOCs were detected in ambient air in concentrations that generally exceeded concentrations detected upwind of the landfill. VOC concentrations ranged from 0.22 parts per billion (ppb) to 10 ppb and did not exceed health-based screening levels for acute exposure, except for one benzene concentration of 10 ppb. This one 4-hour sample slightly exceeded the most conservative acute screening level of 9 ppb (protective for exposures lasting up to two weeks). However, concentrations above a screening level do not necessarily identify a public health risk is present but that further investigation is warranted. While this concentration of benzene was above the most conservative acute screening level, it did not exceed the acute screening level for benzene of 400 ppb that is more reflective of the time period being assessed (protective for exposures lasting up to six hours). Additionally, the sample was collected near the landfill property line and dispersion is expected to reduce exposure downwind of the sample location. It should also be noted that this sample was collected near an automotive shop which may have contributed to the detection of benzene and the other downwind air sample collected did not show a concentration of benzene above an acute screening level. Benzene was also not detected in nearby locations during routine surveillance with a meter that is highly sensitive and specific to benzene.