

**Department of Health and Senior Services Review of Air Monitoring Data from the
Bridgeton Landfill Area, May 20, 2013**

The Department of Health and Senior Services (DHSS) has reviewed air quality screening data collected by the Department of Natural Resources (DNR) at Bridgeton Landfill on May 20, 2013. On April 23, DNR began routine, twice daily, surveillance of hydrogen sulfide, benzene, and odor levels around the entire periphery of the landfill. In addition, DNR has provided continuous monitoring of reduced sulfur compounds (reported as hydrogen sulfide), sulfur dioxide, carbon monoxide, and total volatile organic compounds (VOCs) at three fixed locations. DHSS has reviewed both sets of data to identify potential public health concerns. It should be noted that during routine data verification in the field, some high monitor readings for hydrogen sulfide and sulfur dioxide were not confirmed; however, DHSS evaluated the data as valid to be protective of public health.

Reduced Sulfur Compounds

All readings with the Jerome meter, which specifically detects hydrogen sulfide only, were well below acute levels of public health concern, with a maximum concentration of 7.9 parts per billion (ppb). DNR AreaRAE monitors detected reduced sulfur compounds at two of the monitoring locations, east and west of the landfill. While hourly average concentrations exceeded acute health-based guidelines for hydrogen sulfide, the compounds detected by AreaRAE monitors are not just hydrogen sulfide but primarily another reduced sulfur compound with lower toxicity.

Sulfur Dioxide

Concentrations of sulfur dioxide exceeded health-based guidelines for acute exposure at two of the monitoring locations, west and south of the landfill. While exposure to sulfur dioxide at these concentrations may cause irritation or other short-term symptoms, considerable dispersion is expected to reduce potential exposure levels at nearby residential areas. Sulfur dioxide concentrations were not detected at levels predicted to cause more serious short-term or long-lasting effects.

Odors

Low odors were identified near the landfill today. DHSS continues to recommend that during periods of objectionable odor, sensitive individuals should stay indoors as much as possible, avoid outdoor exercise, and seek medical advice for any acute symptoms. Symptoms associated with exposure to strong odors include headache, nausea, and fatigue. Symptoms generally associated with strong odors typically disappear once the odors dissipate.

Benzene, Total VOCs and Carbon Monoxide

Benzene was not detected in ambient air at any of the surveillance locations around the landfill. Hourly average concentrations of carbon monoxide and total VOCs did not exceed levels of health concern.

Gamma Radiation Rates

Gamma radiation levels are monitored continuously at three locations around the site using AreaRae instruments equipped with radiation detectors. Gamma radiation rates continue to be at levels that are at or near natural background levels.