West Lake Update

October 27, 2016

Part 3: MDNR Air Monitoring

This is the third installment of a three-part series regarding air quality in the areas surrounding the Bridgeton and West Lake Landfills. To see Parts 1 and 2, please visit our website: https://www.epa.gov/mo/west-lake-landfill

Since 2013, both EPA and MDNR have conducted air quality monitoring at the West Lake and Bridgeton Landfills, respectively, at the fence line and in communities surrounding the Bridgeton Landfill. EPA has also established agreements with Bridgeton Landfill, LLC and the other West Lake Landfill responsible parties to conduct on-site air monitoring following strict protocols reviewed by both the agency and the state. The previous installment discussed the air monitoring conducted by EPA. This installment focuses on air quality monitoring conducted by MDNR.

Odor Monitoring

Odors can be a source of public and private nuisance and can be an important environmental issue because it can affect the community's quality of life. While the federal Clean Air Act (CAA) regulates air quality in many different forms, it does not specifically regulate "odors." Some odors can potentially be associated with air pollutants that are regulated by the federal CAA, such as SO2.

The State of Missouri has air quality regulations that address objectionable odors. Missouri has authority over odor issues and is the sole enforcer of these state requirements. MDNR conducts odor monitoring around the perimeter of Bridgeton Sanitary Landfill two times per day at 13 locations surrounding the landfill or as needed based upon community complaints received between the two daily cycles. To submit an odor concern visit: https://dnr.mo.gov/bridgeton/concern.htm. For additional background on State of Missouri's odor laws, see 10 CSR 10-6.165.

In addition to conducting twice daily odor monitoring at the 13 locations surrounding the landfill, MDNR also conducts air monitoring at these locations using a hand-held hydrogen sulfide (H2S) detector and a benzene detector. MDNR has conducted extensive air monitoring through an AreaRae multi-sensor system that collects data on total volatile organic compounds (VOCs), H2S, carbon monoxide (CO) sulfur dioxide (SO2) and gamma radiation on a 24 hour per day/7 days per week basis at three stations at the perimeter of the landfill. Along with these air monitoring efforts, MDNR conducts chemical-specific air sampling for VOCs on a weekly basis and Total Reduced Sulfur compound on a monthly basis.

MDNR posts its air monitoring reports twice weekly on Tuesdays and Fridays, along with the Missouri Department of Health and Senior Services (MDHSS) reviews at http://dnr.mo.gov/bridgeton and for MDHSS at http://health.mo.gov/living/environment/bridgeton/?/bridgeton.

The results collected to date have been generally consistent with levels found in other urban environments. As noted in DHSS's weekly data review posts, SO2 excursions determined on an hourly basis have, on occasion during the more than three years of monitoring, exceeded the one-hour (1-hr) health-based criterion established by the Agency for Toxic Substances and Disease Registry (ATSDR).

Rider Trail

In May 2016, MDNR added an ambient SO2 air monitor to the existing Rider Trail, I-70 air monitoring station. The purpose of the SO2 monitor at this location is to help evaluate SO2 levels in the general area using methods that can be compared to the 1-hr SO2 National Ambient Air Quality Standards (NAAQS). SO2 concentrations monitored at Rider Trail may be influenced by multiple emission sources in the area. If the monitor records SO2 at levels of concern, MDNR will gather additional information to determine which sources are causing or contributing to the levels of concern. MDNR will evaluate the levels recorded after one year of operation and decide whether it is appropriate to continue operating an ambient SO2 monitor at this location. The initial short-term Rider Trail SO2 monitoring results show levels substantially below the 1-hr SO2 NAAQS of 75 parts per billion (ppb).

MDNR maintains a summary report, which is updated weekly and is available at: http://dnr.mo.gov/env/apcp/docs/so2monitoringdata.pdf

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