Background:

- Beginning in April 2014, EPA R7 established an air monitoring/sampling (monitoring) network outside the perimeter of the West Lake Landfill Site (WLLS) in order to collect data that are representative of outdoor air conditions surrounding the Site to:
  (1) Evaluate pre-construction concentrations of chemical and radiological parameters of potential concern in outdoor air, and
  (2) Optimize the sampling and monitoring plan for off-site air monitoring to occur during construction of the isolation barrier.

- Daily air monitoring activities began at this network in April 2014, with some monitors not fully functional until June 2014. Five stations were set up in/around the Bridgeton area to ensure broad coverage around the perimeter of the WLLS and nearby residential populations. (See attached table and map for more details regarding the capability and location of the five EPA off-site monitors.)

- The results of the preconstruction monitoring will be used for comparison with data that may be collected during potential construction of an isolation barrier in order to determine if there is any impact on the air quality of the community surrounding the landfill site during that construction that requires an on-site response or modification of construction activities.

- Since April 2013, MDNR has operated an air monitoring network near the site fence line to measure emissions from the Bridgeton landfill. These data are compared to health-based criteria by MDHSS and the results of that comparison are released to the public. (See attached table and map for more details regarding MDNR's on-site monitors.)

- Republic is expected to begin operation of an air monitoring network consisting of thirteen on-site locations. Six monitoring sites will be located immediately adjacent to OU-1 Areas 1 and 2 and one site located at the southern site perimeter. (See attached table and map for more details regarding Republic's on-site monitors.)

Considerations:

- To date, approximately nine (9) months of monitoring data has been collected which spans the entire summer and fall seasons and touches on winter and the spring.

- Our analysis of the radiological and VOC data from April to November 2014 found it to be consistent with normal outdoor background levels in the St. Louis metropolitan area.

- We have concluded the data we collected for H2S, CO and SO2 is not of sufficient quality for comparison with health-based criteria such as the National Ambient Air Quality Standards (NAAQS) due to uncertainties associated with the type of instruments and methodologies we used.

WLLFOIA4312 - 014 - 0148161

- MDNR has employed similar monitoring technology as EPA at their fixed monitoring stations mentioned above. However, we believe MDNR's data to be more robust with regard to H2S and benzene in particular since they supplemented their fixed monitoring stations with twice-daily monitoring surveys using highly sensitive instruments for both H2S and Benzene. These monitoring surveys have consistently measured H2S concentrations substantially lower than the fixed monitoring stations because the fixed stations are sensitive to other sulfur containing compounds found in landfill gas. MDHSS review of the H2S monitoring data collected at the perimeter of the Bridgeton/Westlake complex to date has concluded that there have been no H2S concentrations sufficient to cause a public concern.

- The removal program has been performing the off-site air monitoring as assessment work however that cannot continue indefinitely. As a part of the Pre-Construction Removal Order, the PRPs have agreed to set up an air monitoring system that would be used during construction of an isolation barrier. When a barrier is installed, EPA may elect to perform air monitoring oversight of the PRP's system.

- EPA has approved the PRP's air monitoring workplan and the PRP is currently working on installation of its network.

- The community has voiced the most concern about possible exposures in their community to radiological contaminants and H2S. EPA has a monitor located in the nearby community of Spanish Village.

Recommendations:

- EPA modify its landfill air monitoring network to consist of one location, the existing station located in Spanish Village, and to monitor only for radiological parameters, the primary contaminants of concern at the West Lake Superfund Site, until we have one year's worth of data. After the one year mark, EPA should re-evaluate the need for further monitoring at this location.

- MDNR continue in the lead of monitoring for H2S and VOCs at the Bridgeton Landfill. Region 7 will further explore with MDNR what support we may be able to provide from our ambient air monitoring program.

- EPA provides oversight of the PRP's air monitoring system.

WLLFOIA4312 - 014 - 0148162