Julietta Landfill Neighborhood
Groundwater Assessment Summary

Background

The Julietta Landfill, located at the southeast corner of US 52 and Senour Rd, was in operation from the late 1960s and closed in 1976. Material deposited at the landfill included domestic, commercial, and industrial wastes; in addition, hazardous liquid wastes and oil sludge were dumped into several ponds on the premises. From 1982 through 1985, dried sewage sludge from the wastewater treatment plant was mixed into the upper soil, capped, and seeded. In the 1980s, the neighborhood surrounding the landfill was surveyed and wells tested. At that time it was determined that there was no contamination due to the landfill. As a follow up, a groundwater survey was conducted from June to August 2016. The neighborhood boundaries are approximately Brookville Rd to the north, Kitley Rd to the east, Vandergriff Rd to the south, and Davis Rd to the west (see attached map). Letters requesting well samples were sent to 95 properties with a door-to-door survey following.

Survey Results

A total of 95 properties were surveyed. Six properties were found to be vacant and 15 were connected to municipal water. Of the remaining 74 residences, 38 properties were sampled, resulting in a 51% response rate.

Sampling Results

Bacteria

E.coli bacteria were found in two of the samples and total coliform bacteria were present in 20 wells. Results are unsatisfactory for 22 properties, or 56% of samples. This rate is only slightly higher than unsatisfactory rates for past well surveys. Chlorination instructions were sent out with the lab reports and follow-up inspections were scheduled.

VOCs

No volatile organic compounds were found above detection limits in any of the samples taken.

Anions

Well samples were tested for the following anions: Chloride, Fluoride, Nitrates, Nitrites, Phosphates, and Sulfates. All anions were below the Maximum Contaminant Levels (MCLs).

Metals

Samples were analyzed for the following metals: Arsenic, Barium, Boron, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Selenium, Thallium, and Zinc. The only metal detected above the MCL was arsenic. Arsenic was elevated, or above 10 ppb, in 10 instances or 26% of the samples taken. The arsenic results ranged from 2.1 ppb to 21.8 ppb, with the average being 11.5 ppb. Fact sheets on arsenic in drinking water were distributed to those residences.

Conclusions

In conclusion, the two contaminants found during this groundwater survey were bacteria and arsenic. However, the presence of bacteria and elevated arsenic levels are consistent with other groundwater sampling results throughout Marion County. No other heavy metals or volatile organic compounds were detected above the drinking water standard. At this time, there does not appear to be any influence from past landfill activities on the groundwater in this neighborhood.

Julietta Neighborhood Groundwater Survey