

2022 Ritter-Troy Neighborhood Groundwater Assessment Summary

Background

A salt storage facility is located southwest of this neighborhood, which has impacted the groundwater. Groundwater wells at the facility monitor levels of Sodium, Calcium, and Chloride. Due to limited sampling data for this area, an assessment was conducted to determine if these parameters are elevated in the surrounding private wells. The Ritter-Troy neighborhood is in Franklin Township, northeast of Beech Grove. Letters requesting well samples were sent to 61 properties with a door-to-door survey following. Samples were taken in August and September 2022.

Survey Results

A total of 61 properties were surveyed. Only ten properties responded to the survey resulting in a 16% response rate.

Sampling Results

Bacteria

No *E.coli* bacteria were found in any of the samples. Coliform bacteria were present in 5 wells, or 50% of samples. This rate is consistent with past well surveys. Chlorination instructions were sent out with the lab reports and follow-up inspections were scheduled.

<u>VOCs</u>

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

<u>Anions</u>

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

<u>Metals</u>

Samples were analyzed for the following metals: Arsenic, Barium, Cadmium, Chromium, Mercury, and Lead. Arsenic was detected in three of the samples, or 33% of residences. Two of these levels were above the MCL of 10 parts per billion (ppb). All other metals were below the MCLs.

Calcium

The geometric mean for Calcium in unsoftened water samples was 78 parts per million (ppm). Compared to levels found in the monitoring wells (mean of 405 ppm), the neighborhood wells do not appear to be influenced by the salt storage facility.

Chloride

The geometric mean for Chloride in samples taken was 3.6 ppm. This level was well below the mean for the monitoring wells, which is 984.6 ppm. Similarly, Chloride from the salt storage does not seem to be impacting these wells.

Conclusions

Comparing samples results with monitoring well results indicates that private wells in this neighborhood are not being impacted by the salt storage facility. Calcium and Chloride were both able to be assessed; however, Sodium is not tested by the MCPHD Lab and was not included. The main limitation is the number of samples taken after the water is treated by a water softener. 40% of samples taken were softened water and not representative of groundwater quality. Attempts were made to take samples from unsoftened water, but that was not always possible due to scheduling and access. Other water quality concerns are consistent with samples taken in other parts of the county. This includes the unsatisfactory rate for coliform bacteria and Arsenic contamination.

Map of Surveyed Area





Sampled properties