



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

April 10, 2024

CERTIFIED MAIL NO. [REDACTED]

[REDACTED]

Re: Water Supply Request for Investigation #359877
58 Pa. C.S § 3218 Determination
Auburn Township, Susquehanna County

Dear [REDACTED]

The Department of Environmental Protection (“Department”) has completed its investigation of your water supply located at the above referenced address (“Water Supply”) in response to a complaint received on October 7, 2021 regarding the recent development of iron, slime, and discoloration issues noted in the Water Supply. Based on the sample results and other information obtained to date, the Department has determined that your Water Supply was temporarily affected by oil and gas activities but has returned to expected pre-drilling conditions. Nevertheless, please note that on occasion, your water quality does not meet (i.e., is worse than) the following health and/or aesthetic statewide standards:

Analyte	Unit	Statewide Standards or Recommended Levels	Sample Results Above Statewide Standards/Levels
Manganese	mg/L	0.05	0.0598-0.0978

The information upon which this determination is based is summarized below.

Summary of Investigation

You complained that the water from your Water Supply had iron, slime, and discoloration issues that were not previously present. Samples were collected and sent to the Department’s laboratory in Harrisburg for analysis. The analytical reports for the samples collected by the Department were previously provided to you but have been summarized in the enclosed table with comparison to applicable standards for your convenience. An additional document is provided to assist you with interpreting the results. The Department also conducted screening of the headspace of your water well.

Initial screening of the headspace of your Water Supply revealed the presence of combustible gas at 23-32% methane by volume. Additionally, dissolved methane was detected in your Water Supply at levels ranging from <1-2.25 milligrams per liter ("mg/L") over the course of the investigation.

Samples of the methane from your Water Supply were collected and sent to a specialized laboratory for isotopic and compositional analysis. These analyses allowed for a more detailed characterization of the gas present in the Water Supply. The isotope and compositional analyses indicate that the stray gas that was present in your Water Supply appears to be associated with oil and gas activities. However, additional screening and sampling of your Water Supply after remedial work was conducted on nearby gas wells revealed that the dissolved and headspace levels of methane in your Water Supply returned to expected background conditions. Since June 2022, combustible gas has only been detected in the headspace of your Water Supply on a few occasions and at very low concentrations. The levels of dissolved methane and/or headspace gas remaining in the Water Supply are insufficient to allow for further isotopic analysis.

The Department recommends that all water wells should be equipped with a working vent. It is the Department's understanding that a vent has been installed on your Water Supply. This will help alleviate hazards associated with the presence of methane in a water supply.

The results of samples from the Water Supply also revealed manganese was present at a concentration above the associated secondary Maximum Contaminant Level ("MCL") of 0.05 mg/L at various points during the investigation. Secondary MCLs are intended to reflect cosmetic or aesthetic effects of the water (i.e. taste, smell, etc.). The levels of manganese detected are comparable to expected background conditions. Manganese has not been detected over its secondary MCL since November 2022. All other tested analytes met applicable MCLs for compounds for which an MCL exists. However, please note that total coliform bacteria, iron bacteria, sulfur bacteria, and slime forming bacteria were detected in the Water Supply when analyzed for during the October 12, 2021 sampling event at concentrations noted in the enclosed table. These contaminants are unrelated to oil and gas activity but may be contributing to the issues described in your original complaint.

Based on the Department's investigation, the Department has determined that the impacts to the Water Supply were temporary and that the quality of the Water Supply has returned to expected background conditions. As a result, the Department does not plan to require further action regarding the Water Supply. However, please note that additional plugging and/or remedial work is planned on nearby gas wells. This work may cause some of the above analytes to fluctuate so the Department plans to continue to monitor the situation.

Please contact Eric Rooney, P.G. at 570-346-5543 if you have any questions about the Department's determination regarding your Water Supply.

Sincerely,



Jennifer W. Means
Environmental Program Manager
Eastern Oil and Gas District

Enclosures:

Fact Sheet – Interpreting Water Supply Results
Results Table

cc: Eric Rooney (email)
Michael O'Donnell (email)
Complaint File #: 359877