



February 26, 2018

CERTIFIED MAIL NO. [REDACTED]

Re: Water Supply Request for Investigation ID: 331963
58 Pa. C.S. § 3218 Determination
Eldred Township, Lycoming County

Dear [REDACTED]

The Department is investigating the possible degradation of your water supply well located at the above referenced address ("Water Supply"), in response to a complaint received on January 22, 2018 that recent gas well drilling activities may have affected your Water Supply well. The Department's investigation to this point, prompted by information you provided, indicates that oil and gas activities are presumed to be the cause of the pollution of your water supply.

Summary of Investigation

On January 22, 2018, Inflection Energy reported to the Department that you claimed your Water Supply had a metallic taste and odor. Inflection specifically reported that you noticed the change in taste and odor approximately one week before Christmas of 2017. On January 23, 2018, the Department initiated its investigation of your Water Supply and collected samples. Samples were collected as shown in the enclosed table, and submitted to the Department's laboratory in Harrisburg for analysis. The analytical results are enclosed as well.

The January 23, 2018 sample results from the Water Supply showed that the Water Supply had levels of turbidity, sodium, and chloride above pre-drill levels. Specifically, the Department's January 23, 2018 sample results revealed turbidity was detected at 1.04 nephelometric turbidity units (NTU) with a pre-drill analysis detection of <0.200 NTU. Sodium was detected at 20.14 milligrams per liter (mg/L) with a pre-drill analysis detection of 6.97 mg/L. Lastly, chloride was detected at 37.1 mg/L with a pre-drill analysis detection of 11.5 mg/L.

Because drilling activities occurred at a gas well within two thousand five hundred feet of your Water Supply, and the pollution occurred and was reported within one year after completion of those activities, under Section 3218 of the Oil & Gas Act (58 Pa C.S. § 3218), the gas well operator is presumed to be responsible for the degradation of your Water Supply.

Additionally, the sample results collected by the Department on January 23, 2018 showed microbiological contaminants. Total Coliform was detected at >200 MPN/100 mL, which exceeded the Department's standard. Iron-related bacteria was detected at 9,000 CFU/mL,

sulfate-reducing bacteria was detected at 1,400 CFU/mL, and slime-forming bacteria was detected at 440,000 CFU/mL. Enclosed are documents that may assist in understanding disinfection and associated information regarding private water wells.

The Department is continuing to investigate and work to permanently resolve this issue. Should you have any questions concerning this matter, please feel free to contact P. Ben Bahner, Water Quality Specialist, at 570-321-6522.

Sincerely,



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

Enclosures:

Fact Sheet – Interpreting Water Supply Results
Fact Sheet – Disinfection of Home Wells and Springs
Results Table
Sample Results

cc: Stephanie Wharton (email)
Sasha Minium (email)
Ben Bahner (email)
William Kosmer, PG (email)
Sharon Steinbacher (email)
Complaint File #: 331963