



June 13, 2025

CERTIFIED MAIL NO. [REDACTED]

Re: Water Supply Request for Investigation #310273
58 Pa. C.S. § 3218 Determination
Gibson Township, Susquehanna County

Dear [REDACTED]

The Commonwealth of Pennsylvania, Department of Environmental Protection (“Department”) has been investigating the possible degradation of your water supply located at the above referenced address (“Water Supply”) from oil and gas activities. The Department has determined that your Water Supply was adversely affected by oil and gas activities, including but not limited to the drilling, alteration, or operation of an oil or gas well. The information upon which this determination is based is summarized below.

Please note that without any treatment, water quality sampling indicates that on occasion your water quality does not meet (i.e., is worse than) the following health and/or aesthetic statewide standards. Note that Primary Maximum Contaminant Levels (“MCLs”) are intended to reflect potential dangers to human health, while Secondary Maximum Contaminant Levels (“SMCLs”) reflect the aesthetics of the water (i.e., taste, smell, etc.). None of the parameters in the Water Supply were above a MCL; however, certain samples were above a SMCL and DEP Action Level, as set forth in the table below.

Parameters	Unit	Statewide Standards or Recommended Levels	Your Highest Sample Results that Were Detected Above Statewide Standards/Levels
Manganese	mg/L	0.05	0.654
Methane	mg/L	7 (DEP Action Level)	15

Summary of Investigation

On February 9, 2015, your water supply was sampled by Coterra Energy Inc. (“Coterra”), formerly known as Cabot Oil and Gas Corporation, as part of a pre-drill survey being conducted prior to the drilling of gas wells on the neighboring Coterra Merritt, M. Pad 1. Sample results showed increased dissolved methane and ethane concentrations when compared to pre-drill values in the Water Supply from samples taken between 2010 and 2012 prior to the development of Coterra’s Manzer Pad. Following these observed increases, the Department requested that Coterra investigate the apparent groundwater degradation.

Following the initiation of the investigation, Coterra collected samples from your Water Supply on an approximately monthly basis until October of 2018, when the sampling frequency was reduced to a quarterly timeframe. The Department also collected samples from your Water Supply which were submitted to the Department's laboratory in Harrisburg or to an accredited third-party laboratory for analysis. The analytical reports for the samples collected by the Department were previously provided to you but are summarized for your convenience, along with Coterra's sampling results, in the enclosed tables. An additional document is enclosed to assist you with interpreting the sample results.

During the February 9, 2015, sampling event, dissolved methane in your Water Supply was detected at a concentration of 15 mg/L, exceeding the Department's action level of 7 mg/L. Before February 2015, the pre-drill values for dissolved methane concentrations ranged from undetected (<0.0050 mg/L) to 0.6 mg/L. Between February 9, 2015, and January 9, 2019, dissolved methane values steadily decreased from 15 mg/L to 0.27 mg/L, stabilizing at near pre-drill values. Since the January 9, 2019, sampling event, dissolved methane concentrations have fluctuated, with an average value of 3.7 mg/L.

Samples of methane from your Water Supply were collected and sent to a specialized laboratory for isotope and compositional analysis. These analyses allowed for a more detailed characterization of the gas present in your Water Supply. The isotope and compositional analyses indicate that the dissolved methane in your Water Supply is a type of gas not commonly associated with the Catskill Formation, the bedrock formation in which your well is drilled.

The samples collected to date indicate that a limited quantity of non-native methane entered the aquifer that feeds your Water Supply during the drilling of nearby gas wells prior to 2015 and has since been working its way through the aquifer.

Methane is the predominant component of natural gas. Federal water standard limitations have not been established for methane gas. The level of concern begins above 28 mg/L methane, which is referred to as the saturation level. At this level, under normal atmospheric pressure, the water cannot hold additional methane in solution. This may allow the gas to come out of the water and concentration in the air space of your home. There is a physical danger of fire or explosion due to the migration of natural gas into wells or through soils into dwellings where it could be ignited by sources that are present in most homes/buildings. Natural gas can also cause a threat of asphyxiation, although this is extremely rare.

When the Department is made aware of methane levels greater than 7 mg/L, it notifies the water supply owner of the hazards associated with methane in their water supply. Please be aware however, that the methane levels can fluctuate. This means that even with a relatively low level of methane, you should be vigilant of changes in your water that could indicate an increase in methane concentrations.

It is the Department's recommendation that all water wells should be equipped with a working vent. This will help alleviate the possibility of concentrating these gases in areas where ignition would pose a threat to life or property. Please note that it is not possible to completely eliminate the hazards of having natural gas in your Water Supply by simply venting your well. An additional document is enclosed to assist you with further understanding the dissolved methane present in your Water Supply.

In addition to the onset of methane in your Water Supply, manganese concentrations have been consistently elevated throughout the monitored period. This is typically a secondary consequence of gas intrusion into the water well. The introduction of gas in a water well can create conditions that are favorable for the mobilization of manganese, which was detected below its groundwater standard during the earlier pre-drill sampling.

The Department is continuing to work to permanently resolve this issue. Please contact John Salinkas, P.G. at (570) 346-5532 if you have any questions about the Department's determination regarding your Water Supply.

Any person aggrieved by this action may appeal the action to the Environmental Hearing Board (Board) pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa. C.S. Chapter 5A. The Board's address is:

Environmental Hearing Board
Rachel Carson State Office Building, Second Floor
400 Market Street
P.O. Box 8457
Harrisburg, PA 17105-8457

TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984.

Appeals must be filed with the Board within 30 days of receipt of notice of this action unless the appropriate statute provides a different time. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

A Notice of Appeal form and the Board's rules of practice and procedure may be obtained online at www.ehb.pa.gov or by contacting the Secretary to the Board at 717-787-3483. The Notice of Appeal form and the Board's rules are also available in braille and on audiotape from the Secretary to the Board.

IMPORTANT LEGAL RIGHTS ARE AT STAKE. YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD AT 717-787-3483 FOR MORE INFORMATION. YOU DO NOT NEED A LAWYER TO FILE A NOTICE OF APPEAL WITH THE BOARD.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN 30 DAYS OF RECEIPT OF NOTICE OF THIS ACTION.

Sincerely,

A handwritten signature in cursive script that reads "Jennifer W. Means".

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

Enclosures:

Results Table
Fact Sheet – Interpreting Water Supply Results

cc: Michael O'Donnell (email)
Briana Cunningham (email)
John R. Salinkas, P.G (email)
Complaint File #: 310273