



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

April 5, 2022

CERTIFIED MAIL NO. [REDACTED]

[REDACTED]

Re: 78a.51 Determination
Water Supply Request for Investigation No. 359719
Troy Township, Bradford County

[REDACTED]

Dear [REDACTED]

The Department of Environmental Protection (Department) has been investigating the possible degradation of your water supply located at the above subject address ("Water Supply"), in response to a October 1, 2021 complaint that gas well activities may have affected your Water Supply. The Department's investigation, prompted by information you provided, has determined that your Water Supply was adversely affected by oil and gas operations, including well site construction activities.

Please note that without any treatment, water quality sampling indicates that on occasion your water quality has not met (*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.)):

Parameters	Unit	Statewide Standards or Recommended Levels	Your <u>Highest</u> Sample Results that were Detected Above Statewide Standards/Levels
Turbidity	NTU	<1	49
Iron	mg/L	0.3	0.87
Aluminum	mg/L	0.2	0.77
Total Coliform	/100mL	0	>200.5
E. coli	/100mL	0	4.2

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

Summary of Investigation

On October 1, 2021, you informed Repsol Oil and Gas (Repsol) that your Water Supply had become turbid. On October 4, 2021, the Department initiated its investigation of your Water Supply and collected samples. Water quality samples were collected from the Water Supply on several occasions by the Department and a private consultant and were submitted to the Department's laboratory or an accredited third-party laboratory for analysis. Please see the attached documents, which include analytical tables regarding the quality of the Water Supply, as well as information regarding interpreting those results.

Samples from the Water Supply showed that the Water Supply had a level of turbidity above pre-drill levels. Specifically, turbidity concentrations ranged from 17 NTU (Nephelometric Turbidity Units) to 49 NTU in pre-treatment samples. Additionally, iron was detected between 0.191 mg/L and 0.869 mg/L, in exceedance of its Secondary Maximum Contaminant Level (SMCL) of 0.3 mg/L. Aluminum was detected above its SMCL of 0.2 mg/L at concentrations ranging from 0.30 mg/L to 0.77 mg/L. Bacteria was also detected at elevated concentrations. All other parameters tested during the monitoring period met their respective MCLs/SMCLs for compounds for which an MCL/SMCL exists and were consistent with pre-drill concentrations.

The Department is continuing to work to permanently resolve this issue. Should you have any questions regarding the investigation, please contact William J. Kosmer, P.G. at 570.974.2613.

Sincerely,



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

Enclosures:

Laboratory Analytical Table
"How to Interpret A Water Analysis Report"

cc:

William J. Kosmer, P.G.
Stephanie Wharton
Korey Starkey
Matthew Nuss
Carrie Knapp
Chad Miller, SDW
Complaint File # 359719