



October 25, 2017

**CERTIFIED MAIL NO.** [REDACTED]

[REDACTED]

Re: 58 Pa. C.S. § 3218 Determination  
Water Supply Request for Investigation No. 287445  
Delmar Township, Tioga County

Dear [REDACTED]

The Department has completed its investigation of your water supply located at the above address ("Water Supply"). Based on the sample results reviewed and supplementary information obtained to date, the Department has determined that the Water Supply was temporarily affected by oil and gas activities but has returned to background conditions. Nevertheless, please note that in the absence of any treatment, that your water quality does not meet (*i.e.*, is worse than) the following health and/or aesthetic statewide standards unrelated to oil and gas activities:

Parameters	Unit	Statewide Standards or Recommended Levels	Your Sample Results that Are Above Statewide Standards/Levels
Iron	mg/L	0.3	0.414
Turbidity	NTU	1	2.38

Based on current post-treatment system sampling, the treatment system that was previously installed, and is currently operating, on the Water Supply appears to be effectively reducing the levels of the above contaminants to below detection limits. The Department's investigation into your complaint is set forth below.

**Summary of Investigation**

On March 2, 2012, the Department was notified by a nearby oil and gas operator of elevated methane levels in the Water Supply. During inspections conducted by the Department and others during the course of the investigation, methane gas was observed in the water and the headspace of the Water Supply. Samples from the Water Supply were collected as shown in the attached tables, and submitted to a Pennsylvania-accredited laboratory or the Department's laboratory in Harrisburg for analysis.

Initial results of samples from the Water Supply showed that the Water Supply had levels of methane above expected background conditions. However, additional sampling results revealed

that those levels have returned to levels which are below the Department's unofficial action level for methane and that these concentrations are at or near expected background conditions. The enclosed tables compare those results.

As detailed in the table above, two of the tested parameters remain above their respective health and/or aesthetic statewide standards. The most recent turbidity level detected was 2.38 nephelometric turbidity units (NTU). Turbidity is caused by the presence of suspended matter such as sediment, nonliving organic particulates, plankton, or other microscopic organisms. In the case of your Water Supply, it appears the turbidity detected is mainly related to sediment and is also partially responsible for the detected concentrations of iron.

Iron, a common metal associated with groundwater in the region, remains above its secondary maximum contaminant level (SMCL) in water samples collected from the Water Supply. The most likely source of the iron detected in the Water Supply is from the bedrock from which the Water Supply derives its water.

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 is now at or near background conditions. In addition, as noted above, the treatment system installed on the Water Supply is addressing the slightly elevated iron and turbidity. As a result, the Department does not plan to require further action regarding the Water Supply.

Please contact William J. Kosmer, P.G. at 570-974-2613 should you have any questions concerning this matter.



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

Enclosures:  
Laboratory Analytical Tables  
"How to Interpret A Water Analysis Report"

cc:  
William J. Kosmer, P.G.  
Stephanie Wharton  
Matt Nuss  
Sharon Steinbacher  
Complaint File # 287445