

February 21, 2018

CERTIFIED MAIL NO.



Re: 58 Pa.C.S. § 3218 Determination Complaint No. 303704 Springville Township, Susquehanna County

The Department has completed its investigation of your water supply ("Water Supply") located at the above referenced address in response to a complaint received on April 7, 2014 regarding foaming water with a brown color and an unusual odor. On April 8, 2014, the Department collected samples from your home Water Supply. The sample was submitted to the Department's laboratory in Harrisburg for analysis. The analytical results have been provided to you under a separate cover.

The Department determined on May 14, 2014, that your water supply was presumed to have been impacted by oil and gas activity pursuant to Section 3218 of the 2012 Oil and Gas Act. 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 the well, under Section 3218 of the Oil and Gas Act (58 Pa C.S. §3218), the gas well operator was presumed to be responsible for the degradation of your water supply. The Department's review of the Chief Oil and Gas (Chief) Alternative Remediation Completion Report leads the Department to conclude at this time that the Water Supply has since returned to background conditions. The information upon which this determination is based is summarized below.

The impact to your Water Supply was found to coincide with the drilling of the Chief Oil and Gas Kupscznk B gas wells. The detections of 2-butoxyethanol and ethyl glycol in your Water Supply and the consistency of these detections with the chemical composition of a drilling additive was indicative of an impact related to the use of the surfactant during the drilling at the Chief Kupscznk B pad. The information contained in the Chief Alternative Remediation Completion Report shows that the compounds of concern were not detected above the applicable standards for groundwater during the three years of quarterly sampling since the initial detections of the compounds of concern in 2014.

Water testing also indicated the presence of E.coli and total coliform in your Water Supply. Bacterial contamination is generally not associated with drilling, but can occur when surface water or other material enters the well. Bacterial contamination may also be introduced when new plumbing is installed without the system being sanitized. Among other recommended practices, the Water Supply should be equipped with a vented sanitary cap free of holes or other openings through which water or other material can enter the Water Supply. A Fact Sheet on best management practices for private water wells and well disinfection procedures is included.

Based on the Department's investigation and information contained in the Chief Alternative Remediation Completion Report, the Department has determined that the impacts on the Water Supply were temporary and that your Water Supply has returned to background conditions. The Department does not plan to require further action regarding this matter.

Should you have any questions concerning this matter, please feel free to contact Eric Rooney, P.G. at <a href="mailto:erooney@pa.gov">erooney@pa.gov</a> or 570-346-5543.

Sincerely OMcons

Jennifer W. Means

Environmental Program Manager Eastern Oil and Gas District

Enclosures:

Fact Sheet - Disinfection of Wells and Springs

cc:

Mike O'Donnell (email) Matthew Shope (email) Eric Rooney, P.G. (email) Complaint File # 303704



May 14, 2014

CERTIFIED MAIL NO.



Re: 58 Pa.C.S § 3218 Determination Complaint No. 303704

Springville Township, Susquehanna County

Dear

The Department has investigated the possible degradation of your water supply well located at the address above in Springville Township, Susquehanna County in response to a report of foaming and odors in your water supply. On 4/8/2014, the Department collected samples from your home water supply. The samples were submitted to the Department's laboratory in Harrisburg for analysis. The analytical reports for the samples are included.

The sample results showed methylene chloride was present at 1.66 micrograms per Liter (ug/L) and tetrachloroethene (PCE) was present at 2.28 ug/L. Acetone and t-Butyl alcohol (TBA) were present at 4.31 ug/L and 16.7 ug/L, respectively. Acetone and TBA were also detected in the field blank submitted to the laboratory. The sample results showed ethylene glycol was present at 320 ug/L and 2-butoxyethanol was present at 200 ug/L. The detections of VOCs, 2-Butoxyenthanol and ethyl glycol in your water supply and the consistency of these detections with the chemical composition of Air Foam is indicative of an impact related to the use of the surfactant (Air Foam) during the drilling of the Chief Kupscznk B pad.

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

The Department is continuing to work to permanently resolve this issue. Should you have any questions concerning this matter, please feel free to contact Eric Rooney, P.G. at 570-346-5543.

Sincerely,

Jennifer Means

Environmental Program Manager

Oil and Gas Management

Enclosures:

Laboratory Analytical Results

"How to Interpret A Water Analysis Report"

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