



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DISTRICT OIL AND GAS OPERATIONS

January 14, 2013

CERTIFIED MAIL # [REDACTED]

Re: 58 Pa.C.S. § 3218 Determination
Complaint No. 290475
Jessup Township, Susquehanna County

Dear [REDACTED]

The Department has investigated the possible degradation of your water supply well located at [REDACTED] in response to a 7/5/2012 complaint that recent gas well drilling activities may have affected your water supply well. On 7/9/2012, 7/23/2012, 8/23/2012, 10/4/2012, and 12/5/2012, 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, as well as documents that will assist you with interpreting the sample results.

The sample results showed barium elevated above Department standards. Barium was present at 2.541 mg/L on 7/9/12, 2.495 mg/L on 7/23/12, 2.242 mg/L on 8/23/12, 2.280 mg/L on 10/4/12 (Barium was detected at 0.014 mg/L in the post filtration sample on 10/4/12), which exceeds the primary maximum contaminate level (MCL) of 2 mg/L, and Manganese exceeded the secondary MCL of 0.05 mg/L. Manganese was detected at 0.09 mg/L on 7/9/12, 0.09 mg/L on 7/23/12, 0.08 mg/L on 8/23/12, and 0.08 mg/L on 10/4/12 (Manganese was reported at <0.01 mg/L in the post filtration sample on 10/4/12). Primary MCLs are intended to reflect potential dangers to human health, while secondary MCLs reflect the aesthetics of the water (i.e. taste, smell, etc.). Additionally, the sample results showed methane is present at 10.8 mg/L on 7/9/12, 14.6 mg/L on 7/23/12, 14.2 mg/L on 8/23/12, 10.9 mg/L on 10/4/12 (Methane was detected at 1.721 mg/L on 10/4/12 in your post methane separator sample), and 12.6 mg/L on 12/5/2012 in your water supply.


The Department investigation indicates that gas well drilling has impacted your water supply. Based on the Department's investigation your water well has been impacted by gas drilling activity. Because drilling activities occurred at a gas well within two thousand five hundred feet of the 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 is presumed to be responsible for the degradation of your water supply.

When the Department is made aware of methane levels greater than 7 mg/l, we notify 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 concentration.

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

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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.

-----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 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"

cc:
Jennifer Means
Marc B. Cooley
Mike O'Donnell
William Kosmer P.G.
Briana Cunningham
Eric Rooney P.G.
Complaint File # 290425
Carrizo Marcellus, LLC