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pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DISTRICT OIL AND GAS OPERATIONS

8/28/2013

[redacted]

CERTIFIED MAIL NO. [redacted]

Re: 58 Pa.C.S § 3218 Determination
Complaint No. 295774
Washington Township, Wyoming County

Dear [redacted]

The Department has investigated the possible degradation of your water supply well located at [redacted] in response to a report of an increase in dissolved methane in your water supply. On 3/18/2013, 5/7/2013, 5/21/2013 and 6/19/2013 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 methane was present at 0.964 milligrams per Liter (mg/L) on 3/18/2013, 1.4 mg/L on 5/7/2013, 13.4 mg/L on 5/21/2013 and 6.2 mg/L on 6/19/2013 in your water supply. Ethane was also present at 0.308 mg/L on 5/21/2013 and 0.165 mg/L on 6/19/2013. Carrizo Marcellus, LLC also collected several water samples during the same timeframe that exhibited similar elevated methane and ethane results, the highest being 23 mg/L collected on 5/23/2013.

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.

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 concentrate in the air space of your home or building. There is a physical danger of fire or explosion due to the migration of natural gas into water 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, 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 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, 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"

cc:
Jennifer Means
Marc Cooley
Eric Rooney, P.G.
Sharon Steinbacher
Complaint File # 295774