



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHCENTRAL REGIONAL OFFICE

9/2/2010

[REDACTED]
[REDACTED]
[REDACTED]
CERTIFIED MAIL NO. [REDACTED]

Re: Act 223, Section 208 Determination
Complaint No. 272604
Granville Twp., Bradford County

Dear [REDACTED]

The Department has investigated the possible degradation of your water supply in response to your 7/8/2010 complaint that recent gas well drilling activities may have affected your water well. On 7/14/2010, I collected samples from your home water supply. The sample was submitted to the Department's laboratory in Harrisburg for analysis. The analytical report for the sample is included, as well as documents that will assist you with interpreting the sample results. The investigation of your water well indicates methane is present at 56.3 mg/l in your water supply. Pre-drill sample analysis of your water supply did not find the presence of the methane gas. The sample results indicate that gas well drilling has impacted your home water supply.

Methane is the predominant component of natural gas. Drinking water standard limitations have not been established for methane gas and we do not know of any associated health risks. The true level of concern begins above 28 mg/l methane, which is what we call the saturation level. At this level, under normal atmospheric pressure, the water cannot hold additional methane. The potential hazard occurs when the water is used for extended periods of time. 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 3 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 somewhat. 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.

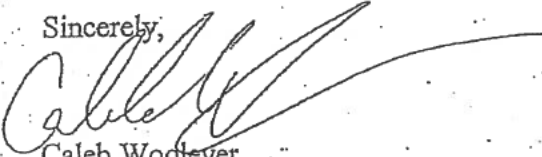
It is the Department's recommendation that all water wells should be equipped with a working vent. This will help alleviate the possibility of concentrating these gases in areas where ignition

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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 will be in contact with Chesapeake in order to help resolve this issue. Should you have any questions concerning this matter, please feel free to contact me at 570-327-0546.

Sincerely,



Caleb Woolever
Geologic Specialist
Oil and Gas Management

Enclosures

cc:

Jennifer Means
Randy Farmerie
Chesapeake Energy
Complaint File