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pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION
NORTHCENTRAL REGIONAL OFFICE

September 21, 2011

CERTIFIED MAIL NO. [REDACTED]

[REDACTED]

Re: Act 223, Section 208 Determination
Dimock Township, Susquehanna County
Complaint ID#: 289029

Dear [REDACTED]

The Department has investigated the possible degradation of your water supply well located at your property located [REDACTED]. On 11/18/2010, 2/7/2011, 3/2/2011, 4/19/2011 and 6/29/2011 the Department collected samples from your 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 show iron in your water ranging from 0.309 milligrams per liter (mg/L) to 0.530 mg/L. These concentrations exceed the secondary maximum contaminant level (SMCL) of 0.3 mg/L for iron. The sample results show total dissolved solids (TDS) ranging from 508 mg/L to 642 mg/L, which exceeds the SMCL of 500 mg/L. In addition, sample results show chloride in your water at 266 mg/L, which exceeds the SMCL of 250 mg/L. SMCLs are guidelines regulating compounds that may cause aesthetic effects (taste, odor, color) in drinking water. The sample results showed methane is present ranging from 53.600 mg/L to 83.700 mg/L. Additionally, the sample results show propane is present ranging from 0.0617 mg/L to 3.630 mg/L.

Because drilling activities occurred at a gas well within one thousand feet of your water supply, and the pollution occurred and was reported within six months after completion of those activities, under section 208(c) of the Oil and Gas Act 58 P.S. §601.208(c), 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

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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 at 570-346-5543.

Sincerely,



Jennifer W. 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
William J. Kosmer, P.G.
Briana Betress
Eric Rooney
Complaint File