pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

October 24, 2017

CERTIFIED MAIL NO. [redacted]

[redacted]

[redacted]

Re: Water Supply Request for Investigation ID: 329222
58 Pa.C.S. § 3218 Determination
Brooklyn Township, Susquehanna County

[redacted]

The Department is investigating the possible degradation of your water supply well located [redacted] The investigation is in response to elevated levels of methane detected in your Water Supply which was reported to the Department on August 25, 2017. The investigation was conducted to determine if recent gas well drilling activities may have affected your Water Supply well. The Department's investigation, prompted by information provided, indicates that oil and gas activites are presumed to be the cause of the pollution of your water supply.

Summary of Investigation

On August 25, 2017, a nearby oil and gas operator provided information that elevated methane had been detected in your water supply. Specifically, on August 30, 2017 your Water Supply well had a free headspace reading of 70 percent methane. On that date, the Department initiated its investigation of your Water Supply. Water samples were collected as shown in the enclosed table, and submitted to the Department's laboratory in Harrisburg for analysis. The analytical results are enclosed as well.

Water samples collected on August 30, 2017 from the Water Supply showed that the Water Supply had levels of methane and ethane above pre-drill levels. Specifically, on August 30, 2017, methane was detected at 56.6 milligrams per liter (mg/L), and ethane at 1.2 mg/L. These levels are elevated above predrill samples collected on July 22, 2011, August 10, 2011, January 4, 2012, February 20, 2012, July 26, 2013, August 25, 2015 and January 11, 2017.

Because drilling and completion 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 those activites, 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.

In addition to elevated levels of methane, note that your Water Supply has also contained manganese, barium, total dissolved solids (TDS), chlorides, and aluminum above their respective standards at various times over the course of the investigation thus far.

It is the Department's understanding that the responsible operator is currently in the process of replacing your Water Supply, and that you are currently being provided alternate water. 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 W. Means
Environmental Program Manager
Eastern Oil and Gas District

[redacted]

cc:
Eric Rooney, P.G.
Mike O'Donnell (email)
Gene Rickard (email)
Complaint File #329222