



Pennsylvania Department of Environmental Protection

321 North State Street
North Warren, PA 16365
December 11, 2009

Warren District Office

814-723-3273
Fax: 814-723-0964

CERTIFIED MAIL NO. [REDACTED]

[REDACTED]

Re: CID NO. 267519

[REDACTED]
Act 223 Section 208 Determination
Bradford Township, McKean County

Dear [REDACTED]

The Department has investigated, in response to your November 03, 2009 complaint, the possible contamination of your water supply by nearby oil and gas activities.

After reviewing the results of your spring water analysis, combined with visual evidence observed on November 4, 2009 by Department staff, the Department has concluded that your water supply was influenced by recent oil & gas well development conducted by U.S. Energy Development Corporation upslope of your spring. The lab analysis of samples collected by the Department on November 4, 2009 and November 9, 2009 indicated levels of Aluminum and Specific Conductivity that were in excess of EPA's drinking water standards. Concentrations of chlorides, calcium, total dissolved solids and sodium were also appreciably higher in samples obtained by the Department than what was documented by a pre-drill sample collected by U.S. Energy on May 11, 2009.

Elevated levels of these parameters along with the grayish appearance to your spring water are indicative of an infiltration of drill cuttings and/or cement into the shallow ground water that supplies your spring. Sampling conducted on November 23, 2009 revealed that the quality of your drinking water was considerably improved and approaching the quality that was documented in the pre-drill sample and that all parameters met the standards established by EPA. During the course of the Department's samplings, there was no detection of Total Petroleum Hydrocarbons in your spring's water.

It is recommended that your spring and water system be disinfected prior to resuming use of the spring as a potable water supply.

December 11, 2009

Enclosed are the complete water sample analysis results and a fact sheet to help you interpret the report. If you have any questions, or if any future issues arise, please contact me at 814-723-3273.

Sincerely,



Brian B. Ayers
Water Quality Specialist
Oil & Gas Management

Enclosures

cc: NWRO
WDO

BBA:br



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION
WARREN DISTRICT OFFICE

May 27, 2010

CERTIFIED MAIL NO. [REDACTED]

Re: CID NO. 268448
[REDACTED]

Act 223 Section 208 Determination
Bradford Township, McKean County

Dear [REDACTED]

The Department has investigated, in response to your December 29, 2009 complaint, the possible contamination of your water supply by nearby oil and gas activities.

After reviewing the results of your spring water analysis, the Department has concluded that your water supply was influenced by recent oil & gas well development conducted by US Energy Development Corporation upslope of your spring. The lab analysis of the sample collected on December 30, 2009 indicated levels of Chlorides, Total Dissolved Solids, Iron and Manganese that were in excess of EPA's drinking water standards. Concentrations of Sodium, Specific Conductivity, Magnesium and Calcium were also well in excess of suggested levels. Elevated levels of these parameters are indicative of a dilute brine solution and suggest a surface discharge of frac water into the shallow ground water that supplies your spring. Subsequent sampling conducted by the Department between January 4, 2010 and February 2, 2010 showed a gradual improvement in the quality of your spring water. Samples collected from your spring on March 11, 2010 and April 13, 2010 revealed that the quality of your drinking water met the standards established by EPA and was approaching that of a pre drill sample taken by US Energy on May 11, 2009. During the course of the Department's samplings, there was no detection of Total Petroleum Hydrocarbons in your spring's water.

It is recommended that your spring and water system be disinfected prior to resuming use of the spring as a potable water supply.

Enclosed are the most recent water sample analysis results from our samplings. If you have any questions, or if any future issues arise, please contact me at 814-723-3273.

Sincerely,

Brian B. Ayers
Water Quality Specialist
Oil & Gas Management

Enclosures

cc: NWRO
WDO

BBA:br