

GROUND WATER CONTAMINATION INFORMATION

Presence of Gas

Natural gas consists primarily of methane and also contains other hydrocarbons including ethanes, propanes, butanes, pentanes, and hexanes. Oxygen, hydrogen, nitrogen, carbon dioxide, hydrogen sulfide and helium may also occur in natural gas in detectable quantities.

Methane is a colorless, odorless and relatively inert gas with an explosive limit between 5 and 15 percent by volume in air. Odor associated with natural gas is due to the presence of gases other than methane. For example, hydrogen sulfide usually has a distinct “rotten egg” odor.

Oil and gas wells may cause natural gas contamination of an aquifer in several ways. Gas may occur naturally in the surface casing annulus or may enter the annulus if there is a leak in the production casing. Once in the surface casing annulus, gas may leak from damaged or inadequately sealed surface casing of an oil and gas well into fresh water aquifers. Natural gas can also enter aquifers from unplugged or poorly plugged and abandoned oil and gas wells.

Gas may enter ground-water aquifers even where oil and gas wells are not present. Gas can occur naturally at shallow depths, entering water wells which penetrate gas rich organic shales or coal seams. Buried organic deposits in swamps or landfills may also release natural gas into overlying fresh water aquifers.

Many potential sources of gas in water wells make the identification of source difficult. Answers to the attached questionnaire will help the Division determine the source of your water well contamination problem.

GROUND WATER CONTAMINATION QUESTIONNAIRE

Natural Gas

1. When did you first notice gas in your water supply?

2. What indicates that you may have gas in your water supply?

3. Check the places you have detected the presence of gas.

water well

faucet

water dependent appliance (i.e. dishwasher, washing machine, etc.)

sewer or drain

building foundation or wall

open window or door

other, please list _____

4. If you have contacted the local fire department, briefly describe their findings.

5. Please list the fire department's name, address, and phone number.

Who was your contact person?

6. Do you notice gas all the time or only occasionally? Yes No

If you notice gas occasionally, when do you notice it?

7. Are you using gas from an oil and gas well near your residence? Yes No
If yes, when was the gas line installed to your home?

8. Are you aware of any old oil and gas wells near your residence? Yes No
If yes, where are these wells in relation to your water supply (distance and direction)?

9. Are there any natural gas pipelines on or near your property? Yes No
If yes, where are they located on your property?

Signature

Date