Optional Workshop: Guidelines for Investigating Potential Ground Water Impacts from Oil and Gas Production

DRAFT Agenda

Overview of hydraulic fracturing techniques

Overview of sources of stray gas

Introduction to isotope geochemistry

Pre- and Post-drill sampling of water wells for gases and naturally occurring parameters.

a) Analytical suite: What to sample for
b) Sampling methodology
    a. Different methodologies (purging, sample collection point and technique)
    b. Consistency/reproducibility
c) Natural temporal variability (short-term vs. long-term variability)
    a. Factors that may affect natural variability
d) Result interpretation
    a. Nature and origin of changes: natural vs. anthropogenic
    b. Action levels for hydrocarbon gases and other parameters
    c. When is there a need for additional testing/investigation
    d. Application of isotope and molecular analyses

Lines-of-evidence approach to investigation of potential stray gas impacts

a) Historical context
b) Geology / hydrogeology
c) Regional water quality (including natural variability)
d) Well construction details

Geochemical data