

HOWARD AND NIELLE HAWKWOOD
PRESENTATION TO THE YUKON SELECT COMMITTEE - JANUARY 8, 2014

HOWARD HAWKWOOD

Location - Lochend District, Northwest of Calgary, Alberta.
Occupation - Farmer and Rancher for the past 33 years

Experiences and Observations:

High pressure horizontal hydraulic fracturing began in this area in late 2009. We farm and ranch on a ridge several kilometers from oil and gas facilities, but downwind of the constant flaring of gas which has accompanied this development.

Since "fracking" began here, we have noticed:

A decline in fertility of our cattle and of the local wildlife, including deer, moose and waterfowl.

Illness and death rates increased in our cattle herd with no explanation provided on autopsy or by veterinary study or feed analysis.

Cattle consume unusually high amounts of mineral when drinking groundwater.

Water has changed in taste; horses refuse to drink from troughs.

The algae which were formerly ever-present in stock waterers have died.

Spots have appeared in our fields where cattle have urinated; nothing will grow in this soil, and analysis shows a vast difference in chemical constituents of the "dead" soil compared to soil samples taken nearby. Increases in chlorine along with increases in strontium and uranium are among the changes in this soil.

Repeated incidences of earth tremors, some strong enough to do structural damage. Tremors also compressed animal feed in bins to the extent that it was difficult to retrieve the feed for livestock use.

Crops downwind of "fracking" operations yield poorly, compared to those upwind.

Other ranchers in the neighborhood have experienced similar effects, including illness and death of fish in ponds, dogs, horses and cattle.

NIELLE HAWKWOOD

Location - Lochend District

Occupation - Speech-Language Pathologist (retired), Rancher

Experiences and Observations

At the time when high pressure multi-stage horizontal hydraulic fracturing began in our district, I noticed my hair thinning. This became extreme, along with severe scalp irritation. A dermatologist stated that "something" had affected my immune system. Under treatment, some hair returned; however, coloring it resulted in even more severe loss. Treatment is ongoing.

At least ten other women in the Lochend district, including young women, have experienced similar significant hair loss.

I began continuously sneezing at the same time, and experiencing frequent nosebleeds.

Eye irritation and muscle weakness have occurred in Howard and myself.

These health effects mirror those seen in other jurisdictions where this type of "fracking" has been done.

I no longer drink our well water.

Water testing has shown increased amounts of chlorine and chlorides in our water and a rising ph. We are unable to find a laboratory which has the protocols to test for the many chemicals injected into horizontally fractured wells. We know that hydrochloric acid is one of the many biocides used in these wells.

Neighbors have had similar experiences. Water has become undrinkable in some cases. Those living near the "fracked" wells have had to leave home while fracking and flaring activities go on, due to dizziness and difficulty breathing. Children have suddenly developed asthma and children and adults have developed skin rashes. Unexplained cancers have arisen, sometimes leading to death. Families have abandoned their homes, hoping to sell but leaving in the meantime.

HEALTH EFFECTS OF SOME "FRACKING" CHEMICALS

These are substances which have been identified in some fracking fluids and which have been subjected to animal testing. Where human effects have been confirmed, it will be noted.

(Health data and sources for 560 fracking chemicals is available for download at <http://www.endocrinedisruption.com/chemicals.multistate.php>)

Tetrakis (hydroxymethyl) phosphonium sulfate (THPS) acts as a biocide.

Effects - Severe skin reaction on contact

Possible carcinogen

Sodium Persulfate

Effects - Skin contact or inhalation can cause skin rashes, eczema, irritation to eyes and respiratory system. Long-term exposure can cause changes in lung function.

Ethylene glycol

Effects - Humans exposed via inhalation or skin contact showed irritation of eyes, nose and throat. Females showed effects on fertility and increased risk of spontaneous abortion. Animal tests showed effects on the developing fetus and cancer potential.

2-Butoxyethanol is highly mobile in soil and water

Effects - Destruction of red blood cells. Reproductive problems/ birth defects in animals

Exothylated 4-nonylphenol - a persistent bioaccumulative endocrine disruptor

Effects - very toxic to aquatic organisms. Increases the incidence of breast cancer in animal testing. Endocrine disruptors are considered very dangerous to children, and have been investigated for possibly causing developmental disabilities such as autism.

Naphthalene

Effects - oral or inhalation exposure - Possible human carcinogen. Causes cataracts in humans and animals. Causes haemolytic anemia (damage to or destruction of red blood cells)

Isopropanol

Effects - A reproductive toxin and irritant. Prolonged inhalation exposure can produce degenerative changes in the brain of animals.

Formamide can be absorbed in to the body by inhalation, through the skin and by ingestion.

Effects - A teratogen with the potential to affect the unborn child. Irritating to the eyes and skin. May cause effects on the central nervous system. Harmful by all exposure routes.

HEALTH EFFECTS IN THE LOCHEND

The following health effects have been noted by residents since “fracking” moved into the Lochend district:

Frequent sneezing, nasal irritation and nosebleeds

Skin rashes in children and adults

Asthma in children

Memory loss and mental confusion

Eye irritation and heightened sensitivity to light

Scalp irritation and significant hair loss, most notable in women but affecting both genders and all ages

Muscle pain and weakness

Gastrointestinal upset, including swollen and painful abdomen requiring hospitalization in some cases

Coughing and throat irritation which disappears after leaving the area for a period of a few days

Breathing difficulties

Extreme fatigue