



Northeast British Columbia Air Quality Monitoring Project

Article 4: ODOUR AND HEALTH IMPACTS

Recently in this space the Ministry of Environment announced the government-industry air quality monitoring project in northeastern B.C. We then gave an overview of the pollutants being monitored and described the advisory groups and their roles. This article focuses on pollutant odour and its relationship with health impacts.

You may wonder, “If I smell something, is it bad for my health?” The most common complaints received by the Oil and Gas Commission are related to offensive “rotten egg” odours associated with “total reduced sulfur” compounds. However, for most people the detection of an odour does not pose a risk for long-term health impacts.

A major component of total reduced sulphur released from oil and gas operations is hydrogen sulfide. It can originate from industrial treatment ponds, from accidental emissions from oil and gas operations in “sour” gas fields, or even from swamps. Total reduced sulfur is monitored at the four new monitoring stations in northeastern B.C. Other annoying odours from things such as gasoline, glue or paint may be due to a large group of pollutants called volatile organic compounds.

Exposure to offensive odours can lead to temporary symptoms such as irritation, lack of sleep, or nausea. Total reduced sulfur compounds can be detected by the human nose at very low concentrations of about 5 parts per billion, which is the BC 1-hour objective. Some people—including those with pre-existing conditions such as asthma—may be more sensitive to lower levels of odorous pollutants than others. However, total reduced sulfur compound levels would need to be hundreds of times higher than this to impact human health. In contrast, some volatile organic compounds, such as benzene, can be toxic even at low concentrations.

Exceedances of the 5 parts per billion odour-based threshold for total reduced sulphur are frequently observed at some monitoring sites in the Peace—for instance, the Taylor Townsite and the Pine River Gas Plant. But odour can also be useful, since it may alert people to larger problem, such as a leak or emergency event.

So, the detection of an odour does not always translate to a long-term health impact. If you are experiencing adverse health symptoms, see your family doctor.

Keep your eye on this section for future articles, including more information about the project and results to date. A regular article will keep you updated on the status of your community’s air quality. For real-time readings of air quality in your community go to:

<http://www.bcairquality.ca/readings/northeast/>

Prepared by: Judi Krzyzanowski BSc, MSc, PhD

- More information on Northeast BC air quality, including current readings, is at <http://www.bcairquality.ca/readings/northeast.html>
 - For concerns related to oil and gas, please contact the OGC at 250-794-5200
-