

## Heartland 101: Monitoring Volatile Organic Compounds in the Heartland

December 2013

Monitoring air quality is an important part of sustainable industrial development. For this reason, the airshed in and around Alberta's Industrial Heartland is one of the most monitored areas in Alberta.

Fort Air Partnership (FAP), the local airshed monitoring organization, collects air quality data throughout the 4,500 square kilometre airshed. FAP's collection and reporting on substances that affect air quality is rigorously controlled, monitored and guided by objectives set by government. This work is transparent, guided by an expert scientific advisory group, and driven by national and provincial standards. Continuous one-minute data is collected 24 hours a day, 7 days a week by FAP and is available to anyone.

A specific group of substances that are monitored for in the Heartland area are referred to as *hydrocarbons*. Total hydrocarbons are made up of *non-reactive* and *reactive* hydrocarbons.

A major *non-reactive* hydrocarbon that most people are familiar with is methane. Methane comes from wetlands, ruminants such as cows, energy use, landfills, and wood burning. Methane is also the main component of natural gas.

*Reactive* hydrocarbons are made up of many volatile organic compounds (VOCs). The Government of Alberta has developed air quality objectives for specific VOCs such as benzene, toluene, ethylbenzene, xylene, styrene and ethylene.

The Fort Air Partnership monitors for these compounds, as well as methane and non-methane hydrocarbons. FAP's long history of testing shows the air quality in the area to be well within accepted guidelines most of the time. For example, benzene exceeded the Alberta Ambient Air Quality Objective during a one hour period once in 2009; not at all in 2010; twice in 2011; and once in 2012.

As a public service, FAP provides a daily current and forecast [air quality health index](#) that is continuously updated in real time. To view the air quality health index or learn more about air quality monitoring in the Heartland, visit [www.fortair.org](http://www.fortair.org).

*Heartland 101 is brought to you by **Life in the Heartland**, a partnership improving access to information, resources, and contacts for communities in and around Alberta's Industrial Heartland. For more information, visit [www.lifeintheheartland.com](http://www.lifeintheheartland.com), email [info@lifeintheheartland.com](mailto:info@lifeintheheartland.com) or follow us on Facebook and Twitter.*