

# NMS Air Filter Data Dictionary

## Air Volume (m3)

The total volume of air that is drawn through the air sampler during the total collection time, in units of cubic metres.

## Becquerel (Bq)

The International System of units (SI) for radioactivity, used to measure the rate of radioactive decay. One becquerel is defined as one decay per second.

## Beryllium (<sup>7</sup>Be)

Beryllium (<sup>7</sup>Be) is a naturally occurring radionuclide that is produced in the earth's upper atmosphere when cosmic rays bombard oxygen and nitrogen.

## Cesium (<sup>134</sup>Cs)

Cesium (<sup>134</sup>Cs) is a fission product with a half-life of 2.06 years. <sup>134</sup>Cs decay is accompanied by beta particle and gamma ray emission. <sup>134</sup>Cs can be present in the environment as a nuclear fission product.

## Cesium (<sup>137</sup>Cs)

Cesium (<sup>137</sup>Cs) is a fission product with a half-life of 30.17 years. <sup>137</sup>Cs decay is accompanied by strong gamma ray emission. <sup>137</sup>Cs can be present in the environment as a nuclear fission product.

## Collection Start (UTC)

The date the air filter was installed in the air sampler for collection, in Coordinated Universal Time. The format is in yyyy-mm-dd.

## Collection Time (s)

The total time of sampling when air is being drawn through the air sampler, in units of seconds.

## Iodine (<sup>131</sup>I)

Iodine (<sup>131</sup>I) has a half-life of eight days and can be present in the environment as a nuclear fission product.

## Lead (<sup>210</sup>Pb)

Lead (<sup>210</sup>Pb) is a naturally occurring radioisotope that results from the decay of uranium found in the earth's crust.

**Location**

The air particulate monitoring stations are located across Canada. There are 28 stations, past and current, in the data spreadsheet.

**mBq/m<sup>3</sup>**

Milli-becquerel per cubic metre. The units used to report radioactivity concentration in air.

**MDC**

Minimum detectable concentration. The smallest concentration of radioactivity that can be reliably detected in a sample, for a given time of measure.

**Uncertainty**

The amount the calculated value may vary from the true value.

## References

*Environmental Radioactivity in Canada 1997-2009*. 2013, Radiation Surveillance Division, Health Canada: Ottawa, Ontario

Health Canada. *Canadian Radiological Monitoring Network*. [Cited 2014-01-08]. Available from: <http://www.hc-sc.gc.ca/ewh-semt/contaminants/radiation/crmn-rcsr/index-eng.php>

United States Environmental Protection Agency. *Cesium*. [Cited 2014-01-08]. Available from: <http://www.epa.gov/radiation/radionuclides/cesium.html>