

## To the Residents of Bottle Lake and Kasshabog Lake:

Since March of this year, there have been episodes that may last several hours with exceptionally high levels of dust from the Unimin Mine tailings. Preliminary air monitoring results from the Ministry of Environment (MOE) have demonstrated that levels of dust have periodically exceeded jurisdictional standards. This level of air pollution can be associated with eye, nose and throat irritation as well as other respiratory symptoms and may aggravate pre-existing lung conditions such as asthma. Residents of Kasshabog and Bottle Lake who are experiencing symptoms should take steps to reduce their exposures to the dust during these events until this problem is resolved.

### Why is there more dust in the air this year?

Because of dry conditions and a growing pile of tailings, it appears that since March of this year there has been noticeably more dust than usual downwind from the tailing ponds. Residents of Kasshabog Lake and Bottle Lake have documented dust events that appear as dust storms, and result in deposited dust. Extensive air monitoring and testing of this dust by the Ministry of Environment (MOE) confirm that it comes from the Unimin mine.

### Is dust harmful to health?

Particles suspended in the air can be harmful to health. Typically, particles that are ten micrometers (a micrometer is one thousandth of a millimeter) or larger in size are effectively filtered by the nose and do not reach the lungs. However, particles five micrometers or smaller can reach the air spaces within the lungs and can cause damage, depending on their components. While most of the dust from the mine is too large to be inhaled some of it is small enough to be inhaled more deeply in the lung.

### What is in the dust around Kasshabog and Bottle Lakes?

Analysis of the dust from the tailings at Unimin mine shows nepheline syenite, a mineral used in a variety of industrial manufacturing processes including paint fillers, powder coatings and plastics. Nepheline syenite is refined through mechanical processes.

### Is Nepheline syenite harmful to health?

Nepheline syenite is a product of the earth's crust. It is inert and does not contain silica, which is associated with silicosis.

### Are there impacts of the dust on human health?

Exposure to this dust has the potential to cause adverse health effects, especially for individuals with underlying respiratory or cardiovascular conditions. At the Health Unit's request, Public Health Ontario has conducted a literature review on particulate matter exposures originating from mines and other sources of dust from rocks and soils and their impact on human health. There is limited research available; however, the studies do show an association between exposure to dust and acute respiratory symptoms such as cough, wheeze and nasal irritation. A few studies show an association with asthma, chronic obstructive lung disease (COPD) and admission to hospital for respiratory symptoms.

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**Message from the Medical Officer of Health  
Peterborough County-City Health Unit  
Friday, August 31, 2012**

Individuals with chronic respiratory and cardiovascular conditions, including asthma, may find that their conditions are exacerbated by dust in the air.

A number of residents have reported health concerns. The Health Unit has received 26 witness statements in which a variety of health concerns have been identified, mainly associated with eye and upper-airway irritation including coughing, irritation of nose and throat and difficulty breathing. Residents with pre-existing respiratory and cardiovascular conditions have reported that their symptoms are worsened during times of high dust exposure.

**Is the situation improving?**

Unimin Mine has been working to reduce the dust coming from the plant and tailings. A number of measures have been implemented including the installation of more sprinklers to keep the tailings wet, seeding with buckwheat, using other materials to cover the tailings, and dust suppression on roads on site have been implemented. Measures to date have not been successful. The MOE and Unimin have identified other steps that can be taken to fix this problem. PCCHU has been advised that additional measures will be implemented within the next few weeks to reduce the levels of dust coming from the mine.

**What you can do:**

Anyone experiencing symptoms related to periods of high dust levels can reduce their exposure by staying indoors and using a HEPA type air cleaner that removes dust particles. Use of an air conditioner may also be helpful. Persons with persistent symptoms should see their personal physician.

**What the Peterborough County-City Health Unit is doing:**

Health Unit staff are monitoring progress in resolving this situation. We are working with the MOE and other public health authorities to identify additional measures to bring down dust emissions from the mine.

**For more information please contact:**

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