

# Reaching Out

TRAIL  
HEALTH &  
ENVIRONMENT  
COMMITTEE



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## The “Dirt” on Soil in Trail

We’ve known for over 30 years that Trail’s soil contains higher than normal concentrations of several metals, including lead. These contaminants accumulated in the soil during the earlier years of smelter operation in Trail.

In recent years, Teck Cominco and the community of Trail have worked together to reduce the exposure of pre-school age children to lead dust – with great success. Blood lead levels in Trail children have dropped dramatically, from an average of 14 ug/dL in 1991 to 5 ug/dL today. This huge improvement was achieved by making smelter emission reductions the top priority. In addition, comprehensive programs have been developed to assist and monitor families with pre-school aged children, helping them to minimize their children’s exposure to lead dust. Interior Health and Teck Cominco are continuing to deliver the programs and to make further progress in emissions reductions.

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*Eben Sirges attended the Teddy Bear Picnic at Gyro Park this summer where he and his family were reminded that handwashing is one important way to keep lead from getting into your body.*

The lead contained within soil has been a lower priority, except where it may have been accessible to children. Along with frequent hand washing and reducing the amount of soil tracked into the house, an important strategy has been to keep outside soil areas covered so that kids don't come in

contact with the dust. Residents have used barriers such as grass, gravel, landscape fabric, patio blocks, concrete, and asphalt to cover up the soil. Such measures have proven effective; however, we are now evaluating whether targeted soil remediation can make additional worthwhile contributions to reducing exposures.

### **What's in your garden?**

It's great to get your hands into the soil to grow a bountiful harvest of veggies. But for Trail residents, especially parents of young children, there's a catch. The home garden is one area of the yard where the soil is not kept covered. And that makes it a potential source of exposure to lead dust.

For adults, working in the vegetable garden poses virtually no risk. However pre-schoolers need to be protected from coming into contact with soil containing lead. They are more likely to put dirty fingers, toys and food into their mouths. Their developing brains are most vulnerable to the harmful effects of lead. And compared to adults, they also absorb much more of the lead that gets into their bodies.

What to do about the uncovered soil in the garden plot? A simple solution would be to put a fence around the garden to keep children from coming into contact with the soil.

### **Eating your home-grown vegetables – is it safe?**

Testing in Trail has shown that the levels of several metals are typically higher in homegrown crops compared to supermarket produce; however, even a lifetime of eating homegrown produce would only result in a very low risk of exposure. There are virtually no risks associated with eating your garden produce over the short-term (several years). There is also no evidence of ill-effects to Trail residents from eating produce grown in their gardens.

Just the same, concerned gardeners may wish to reduce their exposure to metals by liming their soil if it is acidic, washing

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**Digging up your yard? If you're excavating, be sure to contact the Work Project Assistance Program for guidance on avoiding lead exposure. It's also a source of free safety supplies and equipment loans. 250-364-6223.**

all garden produce well, peeling root crops, and choosing to grow more root and fruit types of vegetables rather than leafy ones.

### **Going forward: Vegetable Garden Testing and Remediation:**

For several years, Interior Health has offered replacement of vegetable garden soil with over 1000 ppm lead under its “case management” program for families that have young children with elevated or rising blood lead levels. In consultation with the Trail Health and Environment Committee, Teck Cominco has decided to extend this offer to others with vegetable garden soil above the 1000 ppm lead level. If you are interested in finding out more about vegetable garden testing, contact Steve at 250-364-4385 or [steven.hilts@teckcominco.com](mailto:steven.hilts@teckcominco.com).

### **Going forward: “Whole Yard” Testing and Remediation:**

Soil barriers are effective in preventing children from contacting lead in soil, as long as they are maintained. But barriers such as grass, bark mulch, fences or gravel do not ensure permanent protection. Where lead concentrations in soil are particularly high, further measures, such as soil removal and replacement may be needed to provide reliable protection.

An ‘upper cap standard’ for lead in soil is being introduced in B.C. this year under the new “Site Risk Classification System”. The draft standard is 5000 ppm, which will be defined as a level that requires remediation. Teck Cominco is developing and piloting a sampling plan for determining which properties are over the new proposed standard. Based on past soil testing, it is expected that a fairly small number of properties in Trail, in neighbourhoods close to the smelter, might be over the new ‘upper cap standard’.

Teck Cominco is also testing methods for conducting remediation on entire yards this summer/fall. The information learned from this test program will help in developing future plans for addressing the properties that exceed the 5000 ppm lead level. As you can imagine, replacing the soil throughout the entire yard is no simple task, so these pilot cases will be important for developing methods and evaluating the effectiveness of such actions. ♥

# Children's Blood Lead Testing

Our community is in bloom with all the flowers and trees looking so beautiful this time of year. Trail doesn't look like the smelter town of the past and residents with young children may ask the question – "Is blood lead testing still important?"

We have made great progress in Trail and are pleased to report that we have met our goal of 90% of children with a blood lead level below 10 ug/dL.<sup>1</sup> The average blood lead level in Trail children has fallen from 14 ug/dL in 1991 to 5 ug/dL at present. It is, however, important to remember that small amounts of lead are present in the emissions and dust from the smelter complex. The lead particles fall to the ground and contaminate yards and roads. This soil and dust also gets tracked into our homes on shoes and clothes, and blows in through windows and doors. Research has shown us that children under 5 years of age are most at risk for elevated blood lead levels. Typical childhood behaviors of putting dirty toys, fingers, and other objects in their mouths cause children of this age group to be more at risk. In addition, children absorb up to 50% of the lead which enters their bodies (a much higher percentage than adults who only absorb 8-10%). The developing brain of a child before birth and in infancy is most at risk from the effects of lead exposure. A blood test for lead is the best way to detect a current exposure.

Children up to 5 years old who live in the neighbourhoods around the smelter are encouraged to have a blood lead test every year. This summer we will be actively seeking children who live in West Trail, East Trail, Tadanac, Rivervale, Sunningdale, Glenmerry, and Shaver's Bench. Children who live in other neighbourhoods (Warfield, Oasis, Waneta, and Casino) will not be called about a blood lead test, but they may participate if their family wishes. Families who have not been contacted and would like an appointment can call the Trail Lead Health Services at 250-364-6223. Blood lead testing will take place in September. ♥

<sup>1</sup> Blood lead levels are measured in micrograms per deciliter (ug/dL). The current level of concern for blood lead levels in children is 10 µg/dL.

## Remember

A blood lead test is the best way to detect a child's current exposure. For an appointment at our annual fall clinic call the Trail Lead Health Services at 250-364-6223.



*Children who attended the Ready, Set, Learn at Glenmerry School in May practiced handwashing and learned about the importance of clean hands.*

## Human Health Risk Assessment Update Project

In the 1990's, the Trail Community Lead Task Force, as well as the BC Cancer Agency and the BC Center for Disease Control, looked at possible health risks related to other metals that are found in the mineral ores processed at Teck Cominco. The Task Force used metal concentrations in soil, dust, water, air and locally-grown food to estimate people's exposures to arsenic and cadmium. This assessment found a small calculated risk of adverse effects due to longterm exposures, but no short-term concerns. The Cancer Agency and CDC looked at rates of diseases in the local population (cancers and kidney disease) and found no measureable increases in rates of disease in this area.

In 2004, the BC Ministry of Environment reviewed the work done in the 1990s and recommended some additional sampling and analysis. This additional sampling and updated risk analysis are now complete, with results to be available for public presentation in several months time.

## How Can I Keep My Child's Blood Lead Level Low?

- Good hygiene is the key. Wash children's hands frequently and always before snacks and meals. Keep nails short and clean. Discourage children from putting non-food items in their mouths.
- Encourage your child to eat a well-balanced diet high in calcium and iron. Garden produce should be washed before it is eaten. Feed young children snacks and meals in a high chair.
- Keep your floors clean by vacuuming and damp mopping. Leave your shoes at the door. Control dust by wet-wiping windowsills, ledges, and flat surfaces.
- Keep bare dirt areas in the yard to a minimum. Sandboxes are great, especially if they are covered when not in use. Wash children's hands after playing outside.
- When renovating older homes, take special precautions to avoid exposure to lead-bearing dust and paint chips. Ask about the Work Project Assistance Program by calling 250-364-6223. Free safety supplies and information about renovations are available for Greater Trail residents renovating older homes.



*Kid's hands just get dirty. Get your family into the habit of washing before eating, after playing outside, and whenever those hands just say it's time to "WASH ME".*

### For more information contact:

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