TRAIL AREA
Health & Environment Program

1 FREQUENTLY ASKED QUESTIONS
GENERAL

Revised November 2010

Frequently Asked Questions - General

1. What is THE Program?

THE Program is a collaborative effort by the community, Teck, Interior Health, and the Ministry of Environment to protect people's health and the environment related to smelter metals in the Trail area. THE Program began in 1989 and is run by the Trail Health & Environment Committee (THEC). Over the last 21 years, THEC has set *and achieved* goals for improved air quality and lower exposure to lead in children (measured by blood lead levels). THEC consulted the public in 2000 and 2010 to make sure its goals are acceptable to residents and that its activities meet the community's needs.

THE Program has five main areas of activity: Family Health, Home & Garden, Air Quality, Parks & Wildlands, and Property Development. Reduced smelter emissions make the largest contribution to achieving the health and environment goals, but all of the activities make a difference. THE Program takes a comprehensive and integrated approach, meaning that all the activities work together to get the best results – lower exposure, lower health risks, and a healthier environment.

2. What's new with THE Program?

After holding a successful public consultation in May 2010, The Trail Health & Environment Committee (THEC) is developing a new 5 Year Plan. The plan will present the new air quality and blood lead goals and describe the activities to take place in the next 5 years to achieve those goals. Here's a quick summary of what will be in the plan.

New health goals to reduce the average blood lead for Trail preschoolers from 5 to 4 µg/dL (micrograms per deciliter) by 2015. This would result in 95% of children's blood leads being under the international 'level of concern' of 10 µg/dL.

New goal for participation in the blood lead clinics - at least 75% of young children in Trail and Rivervale should be tested **each year** from 6 month to 3 years of age.

New air quality goals - to meet the tightest standards in Canada for lead and arsenic in air by 2018.

New goal for participation in the home renovation support program - all home renovators in Trail and renovators of pre-1976 homes in Greater Trail should use the program to be sure their home renovations are “lead-safe”.

Current program activities will continue and we’ll increase public awareness of programs for family health, home renovation support, and garden & yard soil.

Expanded services: Yard support services for families with young children are increasing and we’re looking at ways to increase dust suppression in rural areas near the smelter.

Teck’s emission control activities are updated each year based on plans approved by the Ministry of Environment. Teck is committed to reducing emissions as fast as possible and addressing issues if they arise.

Please let us know what you like about THE Program and what we could improve.

3. Where can I get more info on THE Program?

You will find fact sheets, program brochures, and answers to frequently asked questions on the website, www.thep.ca. Program information is also available at the Community Program Office at 1319 Bay Avenue or (250) 368-3256.

4. What should I do if…?

I want to get my child’s blood lead level tested	Please contact Jacquie Johnson, Interior Health at (250) 364-6223.
I want my garden soil tested	Please contact the Community Program Office at 1319 Bay Avenue or (250) 368-3256.
I want to reduce dust in my home and garden	Please read the Family Health and Home & Garden Fact Sheets, at www.thep.ca, or contact the Community Program Office (250) 368-3256 or Jacquie Johnson, Interior Health at (250) 364-6223.

I want to landscape my yard	Please contact the Community Program Office at 1319 Bay Avenue or (250) 368-3256 for advice on good ground cover.
I want to renovate my home	Please contact the Community Program Office at 1319 Bay Ave. or (250) 368-3256 for information on the Home Renovation Support Program & tips to minimize exposure to dust.
I am a building contractor or home renovator	Please contact the Community Program Office at 1319 Bay Ave. or (250) 368-3256 for information on the Home Renovation Support Program & tips to minimize exposure to dust.

5. Why does the program target certain groups and geographic areas?

THE Program focuses on having the biggest impact on reducing health risks. For example, the Family Health Program targets families with pre-school children in Trail and Rivervale. These are the areas where we can still find children with blood lead levels of possible concern. The blood lead goal is based on results for this “target area”. Another example is yard soil testing and possible soil replacement. This is available, as needed, for families where children’s blood leads have tested high. There is also a pilot program of yard soil testing targeting specific neighbourhoods with higher metal levels in soil.

You may note that THE Program extends some services to other people who might want them. For instance, parents living outside Trail and Rivervale can request blood lead testing for their young children. In addition, the Home Renovation Support Program extends service to renovators of pre-1976 homes throughout Greater Trail to promote safety in dealing with lead-based paint.

6. What is the Committee, THEC?

The Trail Health & Environment Committee (THEC) is in charge of developing and overseeing the Trail Area Health & Environment (THE) Program. THEC is a partnership between the community, Teck, the Ministry of Environment, and Interior Health. THEC is a committee of Trail City Council and the Mayor of Trail is the Chair. Representatives participate from Trail, Warfield, and the community at large. Representatives of other local governments participate as needed. All local governments are invited to meetings of the Trail Health & Environment Committee.

7. How can I get more involved?

You can attend meetings of the Trail Health & Environment Committee, which are open to the public. Meeting dates & times are listed on the THEC website, www.thec.ca. For more information, please contact Steve Hilts at (250) 364-4385.

Family Health

8. What can I do to keep my family healthy?

It is important to follow good hygiene practices like washing hands, damp-mopping and vacuuming floors often, damp-dusting, controlling and reducing outside dust, keeping dust and dirt out of the house, and covering bare soil areas in your yard. Young children living in areas close to the smelter (Trail and Rivervale) should have their blood lead levels tested each year, from the time they start crawling until 3 years of age. Interior Health's Lead Health Program is staffed by experts who can provide information and supports to families with young children. Please read the Family Health Fact Sheet and, for more information, contact Jacquie Johnson, Lead Health Program Coordinator, at (250) 364-6223.

9. Is Trail safe for children?

Trail is a great place to raise a family – a great place to live, play, and go to school. Retired Medical Health Officer, Dr. Nelson Ames worked for over 20 years on lead issues in Trail. Dr. Ames states, "I would have no hesitation to live in Trail and I would have no hesitation to live there if I had young children."

The community has set and achieved its health goals over the past 20 years. Air quality and children's blood lead levels have improved significantly. Around 90% of Trail & Rivervale preschoolers have blood lead levels below the "level of concern" compared with less than 20% in 1989.

Please read the Family Health and Home & Garden Fact Sheets for tips on how to minimize your family's exposure to metals at home and in your yard. If you live in Trail or Rivervale and have children under 3 years of age, please make sure they have their blood lead levels tested each year until they reach age 3. If you have any questions or concerns, please contact Jacquie Johnson, Interior Health at (250) 364-6223 or the Community Program Office at 1319 Bay Avenue or (250) 368-3256.

10. Why does THE Program focus on children under 3? What about older children and adults?

The blood lead testing program focuses on children under 3 for three main reasons:

1. Young children absorb lead up to 5 times more easily than older children or adults.
2. Children are most likely to put dirty things in their mouths. Most lead enters the body through the mouth on dirty fingers, food and toys with lead dust on them.
3. The early years of life are most important for brain development.

Testing focuses on Trail and Rivervale as these areas have higher levels of lead in the environment. Parents of older children or those living outside Trail or Rivervale may request testing for their children. Families new to the area or completing home renovations are encouraged to request testing for their children.

Families with older children and adults can stay healthy by following good hygiene practices like washing hands, keeping dust and dirt out of the house, keeping dust down outside, and covering bare soil areas in the yard. Please note that testing has shown that blood lead levels of older children and adults are relatively unaffected by typical exposure to lead in the community. For more information, please contact Jacquie Johnson, Interior Health at (250) 364-6223.

11. What are the benefits of blood lead testing?

The benefit of testing is to find out as early in a child's life as possible if they are being exposed to lead and, if so, what changes may need to take place at home to reduce exposure. It may be important to vacuum, dust and wash floors more often, or cover bare areas of soil in the yard. The sources of lead exposure aren't the same for each child. Some children are exposed to lead through peeling paint and home renovations, even renovations of a neighbour's house. Most lead enters the body through the mouth on dirty hands, food, toys or objects with lead dust on them. For more information about blood lead testing, please contact Jacquie Johnson at (250) 364-6223.

12. How is blood lead testing done?

Blood lead testing is coordinated by Jacquie Johnson, the public health nurse with Interior Health's Lead Health Program. Testing is done by Interior Health's local public health specialist in taking blood samples. These nurses make the experience very child-friendly. There are toys in the room and children's music playing. Typically, the process is the same as getting a blood test at the hospital. It's very quick. It helps if the parent is calm and able to hold their child in a calm manner. The children get popsicles, balloons and foaming soap when the test is over. Their names are entered in a draw for other prizes as an additional way of thanking families.

13. What are the concerns about lead?

Lead and its compounds are very useful, but they can be harmful as well, especially to young children. Current blood lead levels in Trail children are such that we would likely never detect health effects in an individual. However, there is growing scientific evidence that low levels of lead exposure are harmful to children. Early childhood is a crucial time for children's brain development, just when they're at the greatest risk for the effects of lead exposure. Exposure to lead may cause behavioural problems, learning disabilities or reduced intelligence.

There have been significant improvements in children's blood lead levels in Trail over the past 20 years. In 1989, fewer than 20% of pre-school children had blood leads below the "level of concern" of 10µg/dL. Now around 90% of children are below the

“level of concern”. In the next 5 years, the Trail Health & Environment Committee aims to make that 95%.

The main health risks from lead come from dust, and the main risks are to young children. Most lead enters the body through the mouth on dirty fingers, food, toys and other things that have lead dust on them. Young children are most likely to put dirty objects in their mouths and they absorb lead more easily than older children or adults.

THE Program is designed to keep children and families healthy and safe. Young children in Trail and Rivervale should have their blood lead levels tested each year from the time they start crawling until 3 years of age. Interior Health’s Lead Health Coordinator, Jacquie Johnson has expertise, information and supports for families with young children. Please read the Family Health Fact Sheet and contact Jacquie Johnson at (250) 364-6223.

14. What are the concerns about other metals?

Lead is not the only metal emitted from the smelter. Two other metals of potential concern are arsenic and cadmium. Emissions of these metals have dropped dramatically over the past decades, but they are still present in the Trail environment at higher than normal levels.

Long-term exposure to low levels of arsenic can increase the risk for several types of cancers. Long-term exposure to low levels of cadmium can increase the risk of kidney disease and several other conditions including high blood pressure and cancers. Trail area health statistics have been reviewed by the BC Cancer Agency and Ministry of Health. These agencies haven’t found any increased disease in Trail due to metals in the environment.

The aim of THE Program is to minimize exposure to these other metals, the same as with lead. Arsenic and cadmium are considered when setting air quality goals and developing programs for soil testing and remediation, particularly for vegetable gardens.

15. What are the risks from dust seen on decks, cars, roads, and other places?

Dust that you see on cars and other outdoor surfaces is part of the lead issue. It is important to prevent exposure by young children who may contact it directly with their hands or, indirectly, after it gets tracked indoors. Reduced smelter emissions play the most important role in reducing dust. Also, if children play in your yard, take measures to control dust by covering areas of bare soil, covering sand boxes when not in use, and hosing decks and driveways regularly (with just enough water to wash away the dust).

Teck monitors and measures dust regularly using dustfall jars located throughout the community. Teck controls dust by covering materials stockpiles with thick tarps, keeping materials wet with sprinklers, and using approved chemical “binding agents” on some piles of materials.

Occasionally white spots are noticed on cars. This may be unsightly but it poses no risks to health. The spots are from gypsum coming from the cooling tower.

16. What do the official blood lead guidelines mean?

The internationally recognized “level of concern” for children’s blood leads is 10 µg/dL (micrograms per deciliter). This guideline was determined by the Centre for Disease Control in Atlanta in the early 1990s, and is still widely used by experts and health agencies including the World Health Organization. The guideline was set up to prompt health interventions in communities where a significant percentage of children test over that level. In Trail, this guideline is being used more stringently as an “action level” for follow-up and monitoring of individual children. In terms of health risks, this is well below the level at which we might see health effects in an individual.

In Trail, 10 µg/dL is the action level for children aged 13 to 36 months. If a child tests over that level, the Lead Health Program Coordinator will work with the family to identify and deal with suspected lead sources to bring the child’s lead level down. For children up to 1 year of age, the action level is 7µg/dL. Follow-up support is also provided if a child‘s blood lead level increases by more than 3 µg/dL between two tests.

Currently, around 90% of Trail children 6-36 months old have blood lead levels below 10 µg/dL. We'd like to see all children below this level. The new blood lead goal is to have 95% of pre-schoolers blood leads below 10 µg/dL by 2015. This means a community average of 4 µg/dL, down from about 5 currently. As a reference, the Canadian "background" average blood level is less than 2 µg/dL.

There is no official Canadian guideline but Health Canada is in the process of setting blood lead guidelines. When the guidelines are announced, THEC will take them into account in making program changes and reviewing its blood lead goals.

17. What are the benefits of reaching the new blood lead goal of 4 (µg/dL)?

One benefit of reducing the average blood lead level from 5 to 4 µg/dL is that it will reduce the number of children testing above the level of concern. In 2010, with our average blood lead level of 5 µg/dL, around 90% of Trail pre-schoolers have blood leads below the "level of concern" of 10 µg/dL. The proposed blood lead goal is to have 95% of pre-schoolers blood leads below 10 µg/dL by 2015. This means reducing the average blood level from 5 to 4. So, we'll be closer to having all children below the level of concern.

Second, it's best to have as little lead in the body as possible, so lower is better. The "background" average in North America is less than 2 µg/dL, and we'd like to get all of our children's blood lead levels as low as possible.

Home & Garden

18. What are the risks from lead in home renovations?

Many people are unaware that the dust stirred up in home renovations, demolitions and excavations can contain lead and other metals. It's important to protect everyone from exposure to metals in dust. It is particularly important for children, pregnant women and people working in the construction area.

Lead-based paint and varnish are also issues, particularly for older homes. Pre-1976 homes may have paint with small amounts of lead. Pre-1960 homes may have paint

and/or varnish with significant lead content. If paint is peeling or disturbed by sanding, scraping or heating, lead can be released into the environment. By following safe practices for home renovation and disposal of waste materials, you can prevent dust and paint chips from creating health hazards.

19. How does the Home Renovation Support Program help? Why would I want to participate?

The Home Renovation Support Program offers free health and safety information and advice for anyone doing home renovations, excavations, or demolitions. This can help you set up a safe work project in a home or yard, prevent dust from being blown or tracked outside the work area into your home or neighbourhood; protect children, pregnant women and workers from exposure to metals; and transport and dispose of waste materials safely. Homeowners and professional construction contractors are encouraged to use the program's health and safety guidelines.

Homeowners and tenants renovating homes in Trail or Rivervale, or pre-1976 homes anywhere in Greater Trail, can get free health & safety supplies and use of equipment. This includes personal protective gear such as P-100 respirators and cartridges, work gloves, disposable coveralls, plastic sheeting, garbage bags, duct tape, use of HEPA and shop vacuums, and safety fencing for excavation projects.

20. What are the risks from soil?

The same advice applies to any situation where there are metals in soil and dust. If the soil is kept well covered, such as with grass, bark mulch or gravel, the risk is negligible. It is important to prevent young children's exposure to bare soil, as this is one of the "pathways" through which they can be exposed to lead. Most lead enters the body through the mouth. Young children tend to put dirty hands in their mouths, and they absorb lead more easily than older children and adults.

Asphalt, crushed rock, and concrete are good permanent ground covers. Grass, bark mulch and gravel are better than bare soil but they need to be well maintained. Sandboxes or grass make good play areas. In yards where lead levels in soil are particularly high (over 5000 ppm), and especially where there are young children, soil replacement may be offered to provide more reliable protection. It is also important to follow good hygiene practices, like washing hands, keeping dust and dirt out of the house, keeping dust down outside, and covering bare soil areas in your yard.

Many people ask about the safety of eating fruits and vegetables grown in the Trail area. For information on this, please see the detailed answer to the next question. If you are planning yard excavations, please contact the Community Program Office at (250) 368-3256. For more information on reducing exposure to metals in your home and yard, please read the Family Health and Home & Garden Fact Sheets. Please note that the main health risks from metals in the environment come from dust, and the main risks are to young children.

21. Is it safe to eat vegetables grown in my garden?

Studies have been done in Trail comparing the levels of metals in homegrown and store-bought produce. Overall, the levels of metals are higher in some types of homegrown produce but the health risks they pose are low. Trail area health statistics have been reviewed by the BC Cancer Agency and Ministry of Health. These agencies haven't found any increased disease in Trail due to metals in the environment.

There are important benefits to growing and eating homegrown food and steps you can take to minimize exposure to metals. Always wash fruits and vegetables before eating them. You can also choose what to grow. The fruit parts of plants (e.g. tomatoes, cucumbers, berries, beans etc.) absorb very little metal from soil. Root vegetables also absorb very little, but you need to peel them before eating. Leafy greens tend to absorb more metal; washing them gets rid of some, but not all of it. If you are concerned, please call the Community Program Office and request soil testing for your vegetable garden.

22. Who qualifies for soil testing & replacement?

Families[1] **with children under 5 and pregnant women in Trail and Rivervale** can request soil testing for their **vegetable gardens or whole yards**. If the lead levels in the soil are over 1000 ppm (parts per million), the family is offered vegetable garden soil replacement and, if they need better ground cover, they may qualify for yard support. For each qualifying family, the yard support program provides up to $2,000 for sod, topsoil or other landscaping materials and/or labour for installation. If the lead level is over 5000 ppm, the family is offered soil replacement.

[1] Daycares, grandparents and other care-givers with children under 5 living with them, or in their regular care, can also request testing.

Anyone in Trail or Rivervale can request soil testing for their vegetable garden. If the lead level in the soil is over 1000 ppm (parts per million), they are offered soil replacement, in order of priority. Families with young children are the top priority. Requests for soil testing from **other parts of Greater Trail** are considered on a **case-by-case basis**. Soil testing is done **by priority** and the levels of smelter metals in soil are likely to be lower outside Trail or Rivervale.

23. What are the benefits of soil replacement? Is it effective?

The benefit of soil replacement is that it eliminates exposure to metals in the soil. However, the main health risks come from lead in surface dust, not soil. In terms of reducing health risks from metals in the environment, the most effective strategies are reducing smelter emissions and reducing exposure to dust, particularly for young children. THE Program offers soil replacement for yards where young children are present in order to prevent children's lead exposure. It is important to reduce children's exposure to bare soil as they tend to put dirty hands in their mouths and most lead enters the body through the mouth.

THE Program also has a pilot project that tests soil and offers soil replacement on properties with higher lead levels. This is being done to help us study the benefits of soil replacement, starting in areas with higher metals.

Many people want to know if metals will re-contaminate in the replaced soil. In 2010 we started a study to determine whether the new soil will continue to have low metal levels as years go by. We're returning to properties where soil has been replaced and monitoring metal levels. We expect to have preliminary results to share by 2015.

24. How long does it take to get soil replaced?

Garden and yard soil replacement is offered and scheduled in priority order where soil samples show lead concentrations above certain levels. Top priority goes to families where young children have elevated blood levels. For these families, if soil replacement is indicated, it takes a couple of months from the time of testing until soil replacement. For all other properties, the program aims to complete scheduled soil replacement within one to two years. Depending on circumstances, it may take longer for lower priority cases.

For families with young children who qualify for yard support, the landscape supplies and/or labour are usually provided within a couple of months of the request.
For more information, please refer to the questions about soil in this FAQ or read the Home & Garden Fact Sheet for detailed information on soil testing, metal levels and how soil replacement is offered.

Air Quality

25. Why will it take 8 years to reach the air quality goals?

In 2010, THEC set air quality goals for lead and arsenic to meet the tightest guidelines in Canada by 2018. These are ambitious goals. Ontario has the tightest standard for lead in air of 0.20 µg/m3 (micrograms per cubic metre of air), set in 2008. Alberta has the most stringent objective for arsenic in air of 0.01 µg/m3, set in 2005.
Also, emissions reduction projects are big; they take time and they need to be done right. 2018 is the best estimate of when the goals could be achieved given the time it takes to identify potential options and study, design, build, install, test, and get new emissions reduction measures “up and running”. Teck is committed to lowering emissions as quickly as possible, and would be pleased to achieve the goals sooner.