

Reaching Out

TRAIL
HEALTH &
ENVIRONMENT
COMMITTEE



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Lowest Lead Levels Seen In Trail!

Thank you to all the families who participated in the fall 2001 blood lead testing program. Results are in, and the average lead level was 4.7 µg/dL (micrograms per decilitre), as compared to 6.7 µg/dL in 2000. This is the lowest average blood lead level seen in Trail!

This year, the Lead Program focused its testing on children less than 3 years of age, in all areas of Trail. Children younger than 3 years are most at risk for lead exposure due to their habit of putting their fingers and other objects in their mouths. In previous years, testing was focussed on children less than 5 years of age.

Participation remained similar to last year, with 76% of invited children attending the clinic.

Ninety-six percent of children had blood lead levels under 15 µg/dL (individual concern level) in 2001, as compared to 91% in 2000.

So, why the substantial decrease in blood lead levels this year? Most of the answer probably lies with Teck Cominco's shutdown in July, August and September.

Record low levels of lead in community air and dustfall were also found in August and we have seen that when air lead levels in August are down, blood lead levels in September also tend to be down. However, community air lead levels during the first 6 months of 2001 were the lowest ever seen with the plants operating and this may also have contributed to the decline in blood lead levels.

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Early in 2001, the Task Force established blood lead goals for 2005. They are:

- At least 90% of children should have blood lead levels less than 10 µg/dL.
- At least 99% of children should have blood lead levels less than 15 µg/dL.

Parents can help reduce lead exposure by:

- **washing children's hands frequently during the day**
- **having everyone remove shoes at the door**
- **keeping floor surfaces clean by vacuuming or damp mopping**
- **keeping bare soil areas in the yard to a minimum.**

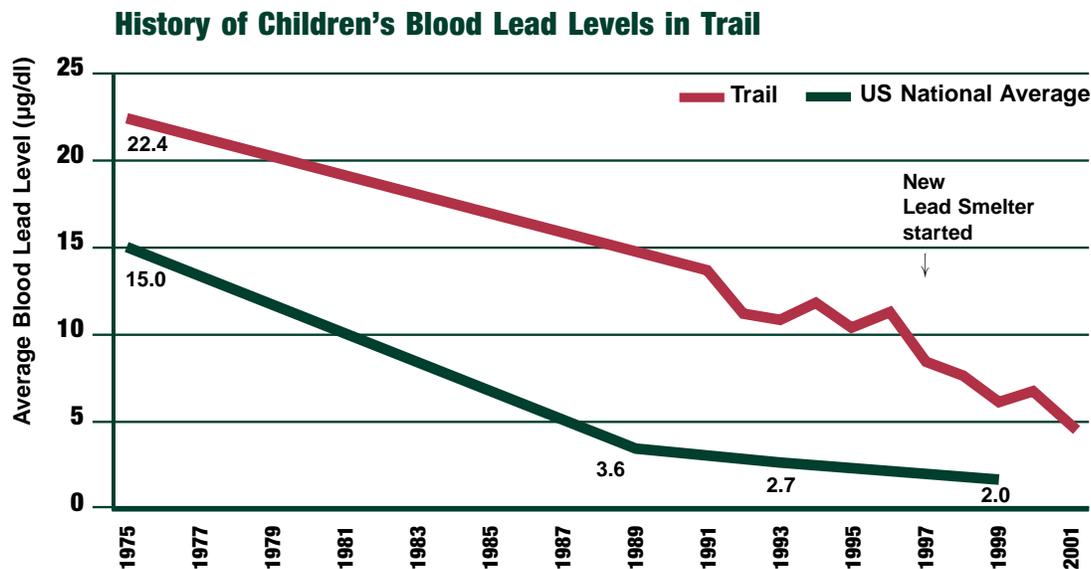
For more information contact Cheryl Yates at 368-5323

The graph below shows how children's blood lead levels in Trail have dropped since 1975 and how "background" lead levels in the U.S. have also fallen. The age groups tested vary slightly between years, and between Trail and the U.S. figures, but this graph gives a general idea of the progress made. Note that in 1989, the average blood lead level in Trail children was about 10 µg/dL higher than the U.S.

Ninety-six percent of children had blood lead levels under 15 µg/dL (individual concern level) in 2001, as compared to 91% in 2000.

average, whereas in recent years it has only been about 3-4 µg/dL higher.

So, what does this mean for families of young children in Trail? As environmental conditions continue to improve, children's exposures to lead will continue to decline. However, since we're still seeing a few children with lead levels above 15 µg/dL, we must continue to be diligent in preventing lead exposure. ●



Air Quality—the Drive for Continued Improvement

Anyone who's lived in the Trail area for a while knows that the air quality has improved very noticeably, especially since the new Teck Cominco lead smelter started up in 1997. Not only has the air become visibly cleaner, but reports by Teck Cominco and the BC Ministry of Water, Land and Air Protection confirmed that the levels of lead, arsenic and cadmium in community air dropped by 70-80%

from 1995 to 1999. Levels of these metals in local air are now well below provincial objectives. Still, the work done by the Trail Community Lead Task Force in the 1990s found that the most effective way to further reduce potential health risks from metals in the environment would be to keep improving air quality. Even though young children receive most of their lead exposure through hand-to-mouth

activity rather than breathing, much of the lead in dust in their environments comes from recent smelter emissions.

The connection between early fall blood lead levels and summer air lead levels can be seen in the graph on page 3. The year-to-year variation in blood lead levels tends to be most strongly related to summer time air lead levels, but air lead levels throughout the year are important.

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As mentioned in the story on blood lead levels, the biggest impact on air emissions in 2001 was obviously the July-September shutdown. However, community air lead levels during the first 6 months of 2001 were the lowest ever seen with the plants operating. Teck Cominco took new steps in 2001 in support of its commitment to ongoing reductions in smelter emissions. A new \$4 million baghouse was constructed to capture dust from the lead smelter feed preparation plant. The new baghouse was phased into use in starting May 8 and it was in full use once the lead smelter restarted in early November.

Teck Cominco has also appointed a new environmental technician whose main responsibility is identifying and correcting problems with current emission control systems and finding the top priorities for further improvement. He is looking for opportunities to further reduce Teck Cominco's air emissions of arsenic, cadmium and lead, according to the approximate schedule shown in table below.

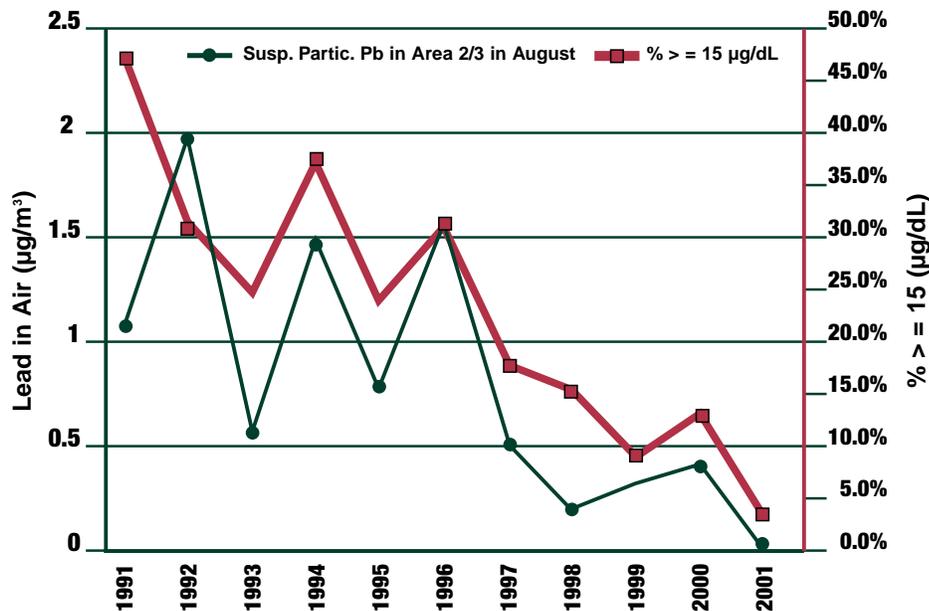
The biggest impact on air emissions in 2001 was obviously the July-September shutdown. However, Teck Cominco also took new steps in 2001 in support of its commitment to ongoing reductions in smelter emissions.

The last two tasks will be completed in parallel. That is, as priority sources are found, opportunities for improvement will be investigated.

Routine plant operating procedures are also being constantly refined. Environmental monitoring results are reported daily to the plants to provide feedback on performance.

The community of Trail can expect to see continued improvements in air quality and to receive ongoing reports on Teck Cominco's emission reduction plans and progress. ●

Trends in Percentage of Children With Elevated Blood Lead Levels and August Air Lead (Children aged 6 – 36 months)



Question/Task	Time Frame
What are the key emission sources?	November 2001 – January 2002
How well do current controls work?	February 2002 – March 2003
How can we reduce emissions?	March 2002 – August 2003

Trail Health & Environment Committee

From 1990 to 2000, the Trail Community Lead Task Force worked to address concerns about lead in the Trail environment. The Task Force became a successful model of community/industry/government cooperation that achieved international recognition.

In 2000, the Task Force consulted the community extensively in developing its final recommendations. Many people told the Task Force that although they were pleased with the improvements that had occurred through the 1990s, they were concerned that a working

group would still be needed to ensure that the Task Force's recommendations would be followed and progress made toward long-term goals.

The Task Force therefore recommended that a committee of the City of Trail be formed to monitor and advise on implementation of the Task Force's recommendations and assist with public communication on progress made. The new Trail Health & Environment Committee was formed in July 2001 and expects to meet about 4 times per year. ●



Committee Members left to right:

Steve Hilts, *Teck Cominco Metals Ltd.*, **Dieter Bogs** *Mayor, City of Trail*,
Dr. Barss Dimock *Community Rep*, **Cheryl Yates** *Trail Lead Program*,
Marylynn Rakuson *Community Rep/Trail & District Chamber of Commerce*,
Dr. Nelson Ames *Kootenay Boundary Health/Interior Health Authority*,
Kim Colquhoun, *Community Rep*, **Barry Wood** *BC Ministry of Water, Land and Air Protection*,
Ron Joseph, *Community Rep.*, *missing from photo*: **Graham Kenyon** *Community Rep*,
Jim Nelson *Mayor, Village of Warfield*, **Tom Wynn** *USWA Local 480*.

***For more information about the Trail Health & Environment Committee, contact
Trail City Hall, 1394 Pine Avenue. Phone 364-1262***

Medical Health Officer Comments on Local Health Risks

Dr. Nelson Ames, medical health officer for Kootenay Boundary Health/Interior Health Authority, has completed a review of health risks posed by metals in the Trail Environment. The Trail Health and Environment Committee was recently asked by the Province of BC to review Dr. Ames' report and help communicate its contents to the public.

Background

In 1989, a study by the University of BC found that children's blood lead levels in Trail were high enough that some children's development might be affected in subtle ways. Studies involving large numbers of children elsewhere had found that elevated lead levels were tied to slightly lower IQs and reduced growth in some children. The researchers also reported that lead, arsenic and cadmium levels in local soil were above normal. In 1990, the Trail Community Lead Task Force was formed to study the lead problem in more detail, take immediate actions to reduce children's lead levels and make recommendations to the Province of BC for long-term action.

In 1997, the Task Force mandate was expanded to include an assessment of health risks posed by other substances emitted by the smelter. After reviewing all possible substances of concern, this study focussed on arsenic and cadmium. Arsenic and cadmium have both been found to increase the risk of lung cancer among workers who have inhaled these substances over extended periods at metal refineries. Ingested arsenic has been tied to increased risk of skin and bladder cancers among people consuming groundwater naturally contaminated with arsenic. Long-term ingestion of cadmium can result in disruption of normal kidney function. This information on health effects is based on studies done in settings where arsenic and cadmium levels are higher than those in Trail.

(A summary of progress made and recommendations submitted by the Task Force was mailed to all residents earlier this year and copies are available at Kootenay Boundary Health, City Hall and the Teck Cominco Interpretive Centre.)

Reason For Dr. Ames' Report

In 1997, the BC Contaminated Sites Regulation (CSR) came into effect. Concentrations of lead, arsenic and cadmium in soil in some parts of Trail exceed the environmental quality standards set out in the CSR. The CSR requires that either all soil which exceeds standards be removed or the risks of managing at least some of it in place must be assessed.

Removing all soil that exceeds the standards was estimated to cost over \$50 million and to entail 15+ years of disturbance in the community. The Trail Community Lead Task Force decided to continue with assessing the risks posed by all sources of contaminants in the community, including dust and soil, and determining what actions would be appropriate to address those risks.

Under the CSR, the local Medical Health Officer (MHO) can be asked to provide an opinion to the Ministry of Water, Land and Air Protection on acceptable human health risk levels. In forming his opinion, the MHO is required to consider community input. In addition to reviewing community input gathered by the Task Force, Dr. Ames also reviewed the scientific information on health risks compiled by the Task Force and its consultants, and consulted with outside experts in preparing his report.



Dr. Nelson Ames, medical health officer for Kootenay Boundary Health/Interior Health Authority.

Summary of Dr. Ames' Report

Dr. Ames reached the following conclusions:

- Blood lead levels in Trail children have improved greatly since 1989 and the Task Force has set an appropriate goal to be achieved by 2005.
- The worst-case estimate of the number of extra cases of cancer due to arsenic and cadmium is so small that no increase in disease rates would be detectable in the Trail population over a lifetime.
- Studies of the local population to date have not found any measurable increase in disease rates due to metals in the environment.
- An overwhelming majority of the community was heard to say that current risks are acceptable in the context of ongoing efforts to reduce exposures
- Risks from long-term exposure to metals will continue to be reduced as the Lead Task Force's recommendations are followed.
- The Lead Task Force's recommendations are all appropriate and necessary, with continued reductions in smelter emissions being the single most important recommendation.
- Regular monitoring of children's blood lead levels and the environment must continue so that remedial actions can be adjusted if necessary.

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Next Steps

Over the next several years, Teck Cominco will complete an ecological risk assessment, which may recommend actions that can be taken to protect animals and plants from risks posed by past, present and future smelter emissions. Any recommendations from the ecological assessment will be combined with the Task Force's recommendations for human health protection to develop an overall remediation/risk management plan for the area.

Dr. Ames' report, together with the Lead Task Force's studies and recommendations and Teck Cominco's overall remediation plan, will be formally reviewed by the BC Ministry of Water, Land and Air Protection to ensure that provincial regulations are met.

In the meantime, Teck Cominco, Kootenay Boundary Health and the City of Trail are implementing the Task Force's recommendations without delay. The Trail Health and Environment Committee (see list of members in this newsletter) is overseeing this work. ●