TRAIL AREA
Health & Environment Program

2

F.A.Q. INTERVIEW
WITH DR. NELSON AMES
MEDICAL HEALTH OFFICER, KOOTENAYS (RETIRED)

Revised November 2010

INTERVIEW with Dr. Nelson Ames

Medical Health Officer, Kootenays (retired)

1. How long have you been involved with the lead health issues in Trail? What has your role been? **A:** I have been involved for over 20 years, since 1988. Initially I was part of the UBC research team asked by the Ministry of Health to investigate child lead exposure concerns that had been identified by the local Medical Health Officer. Subsequent to the initial 'Lead Study' I was pleased to be offered the Kootenay Boundary Medical Health Officer position that I occupied until June 2009. I was a founding member of the Trail Community Lead Task Force and, subsequently, the Trail Health and Environment Committee (THEC).

2. What role does Interior Health play? What about the BC Ministry of Health? Health Canada? **A:** Public Health has been an active participant and funding partner since the inception of Task Force in 1990. Initially, the BC Ministry of Health provided public health services. In 1997, this role transferred to the Kootenay Boundary Community Health Services Society and, in 2001, to Interior Health. In 1988, the BC Ministry of Health allocated an annual amount of funding to Public Health to provide lead health services in Trail on an ongoing basis. This has covered core staffing and program expenses for the public health nurse responsible for lead health services. The regional Medical Health Officer has provided service as part of regular medical health officer duties. The Provincial Health Officer has maintained an active interest and professional supervisory role to the Medical Health Officer. The Federal Government, through its health and environment departments, provides guidance documents on acceptable exposures and measurable levels of contaminants.

3. What are the health risks from metals in the environment in Trail? Who is most at risk from a community health standpoint? Children? Elderly? **A:** In Trail, the most important health risks come from exposure to lead, arsenic and cadmium. Children are most at risk from lead exposure and the population at large is at risk from life long exposure to arsenic and cadmium.

Each of the three metals of concern can have theoretical health impacts on an exposed population. These health impacts have been actively looked for in the Trail population and have not been detected. Lead is a neurotoxin for developing brains and nervous systems. Arsenic and cadmium can cause lung cancer and arsenic can also cause skin cancer. Cadmium can also cause chronic kidney disease. *For more information, please refer to the Family Health Fact Sheet and General FAQ questions on health risks from metals.*

4. New scientific knowledge shows that low levels of lead may pose health risks. How confident are you that low levels of lead won't affect children's health in Trail? **A:** The Trail Health and Environment Committee continues to monitor the world literature on lead exposure. THEC accepts the scientific evidence that, at current levels of exposure, lead is having a health impact on the population of children living in Trail. However, the current exposure is so low that the impact is not detectable in individual children. We have never been able to attribute the health issues of a particular child to lead exposure. The main objective of the Trail Area Health & Environment Program is to lower lead exposure as much as possible. *For more information, please refer to the Family Health Fact Sheet and General FAQ questions on health risks from lead.*

5. Is it safe to raise children in the Trail area? Would you raise your children in Trail if your employment brought you here? **A:** Knowing what I know about the Trail community I would not hesitate to live and raise my children in Trail. Acceptability of a health risk is a personal or family assessment and decision. Families assess and make decisions about potential health risks every day.

6. Has the Trail Area Health & Environment Program been effective? What has been done well and what improvements should be made? **A:** The Trail Health and Environment Committee is a unique partnership of key players. I am impressed that, after 20 years, it still collaborates diligently on the common purpose to reduce the exposure of the Trail population to heavy metals. I hope the citizens of Trail continue to volunteer to participate in this important work. As long as there is an operating smelter this issue will remain an important focus.

7. How has community health improved over the past 20 years? Are people generally healthy or are there still smelter-related health issues? If people are generally healthy, why do we need the health & environment program?
A: The general measures of community health have not really changed relative to provincial measurements in the last 20 years. Without getting into specific measures, overall community health status in Trail is comparable to the BC average. Using current measures of the health of a population, BC is one of the healthiest places in the world. No smelter related health issues have been detected in the general population in Trail. Exposures to the contaminants of concern have dramatically reduced in the last 20 years.

8. What order of priority do you place on components of the health & environment program? Blood lead monitoring for children? Dust control? New initiatives? A: For me, reducing the source of exposure to heavy metals is the most important component. However, I think all the components are important. They work together like the strands of a web to create a strong response to the known health risks. The whole program is stronger than the sum of its parts.

9. Do blood lead levels continue to be an issue? What was the situation 20 years ago compared to today? A: Yes, blood lead levels continue to be a concern. There have been significant reductions in environmental exposures mostly as a result of improvements at the smelter. Blood lead levels have fallen dramatically. In 1989, fewer than 20% of Trail area pre-school children had blood lead levels below the 'level of concern' of 10 µg/dL (micrograms per deciliter). Now around 90% of Trail pre-school children have blood leads below the 'level of concern'. The accumulating scientific evidence for health effects at lower levels of exposure is constantly being updated. I predict that as long as there is an operating smelter in Trail, people will be addressing this concern.

10. Why do children under the age of three still have to be tested and monitored for blood lead levels if these levels have generally gone down over the past years? A: Even though the blood levels in Trail children have fallen dramatically, they are still higher than the average for Canadian children. Internationally, the blood lead levels of concern are predicted to go even lower so we can't be complacent. Measuring blood lead levels is the best way of measuring our progress and success.

11. What do you think about the new health goal of having an average blood lead level of 4 µg/dL, bringing 95% of young children under the 'level of concern' of 10 (µg/dL)? **A:** Given the likelihood that the blood lead 'level of concern' will be lowered, I think the new goal is ambitious but necessary. The community should expect the Trail Health and Environment Committee to do everything it can to reduce child lead exposure in Trail. Even though the health impact of environmental lead exposure is not detectable in individual children living in Trail, we need to address the health impacts on the population at large. This means further reducing lead exposure. The main way that people are exposed to lead is from fine dust in the emissions that settle on surfaces indoors and outdoors. The main way children are exposed to lead is from putting dirty 'contaminated' hands in their mouths.

12. What are the other health risks from smelter emissions? How has air quality improved? **A:** In the last 15 years, along with the reduction in lead emissions, smelter emissions of other heavy metals have also been dramatically reduced. Even at these lower levels there are still theoretical, or statistical, health risks. Inhaling arsenic and cadmium for a lifetime at the levels found in Trail results in a small increase in calculated risks for lung cancer. A lifetime of inadvertently ingesting arsenic found in surface dust slightly increases the risk of a non-life-threatening skin cancer. A lifetime of ingesting cadmium surface dust is associated with chronic renal disease. No detected increases in any of these cancers or kidney diseases have been observed in Trail.

13. Recently, arsenic levels in air increased. Since arsenic is a known carcinogen, shouldn't THE Program be doing more about it? **A:** Yes. This is a technical challenge for Teck to apply the best available technology to minimize arsenic emissions. Ongoing air quality monitoring and reporting is key to evaluating success.

14. How do you rate the health and environment performance of Teck Metals?
A: Very good. Despite changes in personnel and ownership they have been concerned and active participants since the beginning.

15. You have indicated some concern that not all contractors or homeowners doing renovations use the Home Renovation Support Program. Why is this program important? What can be done to make all contractors use it?
A: I am very concerned that not all contractors or homeowners are aware of and/or using this service. We have evidence that the release of historically accumulated contaminated

dust during construction and renovation has been a significant route of exposure for some children. I don't have the whole answer for better awareness and participation but suggest the home building and renovation community must be engaged to make sure this happens.

16. What are the health risks from soil? Why does THE Program offer soil replacement? Who should get their soil replaced? Does soil replacement make a difference? **A:** The health risks from exposure to contaminated soil depend on exposure. If the contaminated soil is covered with vegetation or pavement, the risk is minimal. Soil exposure can be a concern for certain cases where there is uncovered soil. THE Program offers clean sand for sand boxes and new soil or sod coverage for barren areas that are frequented by young children. Replacing all the soil in Trail is unlikely to significantly reduce the population impact of heavy metals. *For more information about health risks from soil, please refer to the Home & Garden Fact Sheet and General FAQ questions on soil.*

17. What outcome do you hope for from the 2010 consultation process?
A: I hope residents in Trail have real opportunities to increase their understanding of the environmental health issues in Trail and will continue to express their opinions on those issues and also on the program.