



3 FACT SHEET

AIR QUALITY



Air Quality Program

We are always looking for new technology control equipment that we can use. Even our old equipment - just to make it better, and what else might be out there just to take it to the next level.

– Darin Cooper, Teck's Manager of Production

What is the Air Quality Program?

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 best way to reduce exposure to lead and other metals in our environments is to lower smelter emissions and improve air quality.

The Air Quality Program includes smelter emissions reduction and control of dust on the industrial site and in the community. The program also includes the continuous monitoring of air quality and reporting on air conditions.

How is the air quality in the Trail area?

People who've lived in the Trail area for a while know that the air quality has improved a lot, especially since the new Teck smelter started up in 1997. Currently, the air quality meets all applicable standards, for air pollutants such as lead, sulphur dioxide, particulate matter (smoke or dust) and arsenic. Air quality fluctuates with weather conditions, so you may occasionally notice sulphur odours for short periods of time, particularly on calm, cool and foggy mornings.



What are the proposed air quality goals?

Although children's lead exposure is the main issue, and the risks posed by other smelter-related metals are low, our program must keep aiming for lower targets for smelter metals in our environments. Arsenic in community air is the second issue of importance – an issue with current smelter emissions.

Since 2006, there have been times when levels of lead or arsenic in community air increased. While the BC air quality objectives have always been met during these periods, Teck's immediate goal, for 2010, is to get back to its 'best performance levels' (best air quality achieved to date).

When setting new air quality goals, THEC wants to meet relevant standards. BC's air quality objectives have not been revised since 1979, while other provinces have recently set lower standards based on new scientific knowledge. For lead, Ontario set a new standard of $0.20 \mu\text{g}/\text{m}^3$ (micrograms per cubic metre of air) in 2008. For arsenic, Alberta set a new objective of $0.01 \mu\text{g}/\text{m}^3$ in 2005. The Trail Health & Environment Committee is considering adopting these provincial standards as goals for Trail air quality over next 8 years.

Draft goals for Lead in the Air:

- In 2010, return to previous best performance level of $0.30 \mu\text{g}/\text{m}^3$
- By 2018, the level of lead in the air will be improved to $0.20 \mu\text{g}/\text{m}^3$

Draft goals for Arsenic in the Air:

- In 2010, return to previous best performance level of $0.015 \mu\text{g}/\text{m}^3$
- By 2018, the level of arsenic in the air will be improved to $0.01 \mu\text{g}/\text{m}^3$

What is Smelter Emissions Reduction?

Proposed activities include identifying the top sources of lead and arsenic emissions from Teck, and controlling emissions through upgrades to equipment, changing plant processes, and improving maintenance and operations in key areas. Emissions reduction plans are developed with input and approval from the Ministry of Environment.



The priorities for **emission control** that are currently being worked on are:

- Improving the performance of air emission control equipment on site. This includes assessing the equipment's current condition and operating procedures, making recommended upgrades, and training people to monitor, operate and maintain the equipment to best performance standards. In 2009, the baghouses on two furnaces in the lead smelter area were upgraded with new membrane bags and these actions have reduced emissions from those sources.
- Finding and implementing technically feasible solutions for reducing emissions from the silver refinery.
- Getting a better understanding of the relative importance of emissions that come from other sources than the stacks (e.g. dust escaping from plant buildings or dust blown off the property by winds). Where a source of dust is suspected or shown to be significantly impacting community air quality, dust control best practices will be carried out.



What is Air Quality Monitoring?

Air quality monitoring measures lead, arsenic and other particles in the air at two testing locations in Greater Trail - Butler Park and Birchbank. Readings are taken over 24-hr and 10 minute periods. This information is collected and analyzed by Teck's environment staff. Then it gets factored into Teck's environmental plans, and reported



to the Ministry of Environment and the Trail Health and Environment Committee. Regular monitoring helps identify the top emissions sources, track the effectiveness of emissions reductions and dust control efforts, and track progress on air quality goals. Sulphur dioxide (SO₂) gas is monitored at four stations up and down the valley. These stations operate continuously, with “real-time” data transmitted back to the operation’s process control systems. If the output from these instruments shows that community SO₂ levels are beginning to climb (such as during cold, calm mornings), the plants are automatically notified so that actions can be taken to reduce SO₂ emissions. Teck recently added a “real-time” monitor for metal levels in air. It is being used in the search for the most important emission sources and also to alert Teck staff quickly to any issues that they should investigate.

The **proposed program** is a continuation of current actions.

What is Community Dust Control?

While most towns clean their streets in the spring and fall, the City of Trail performs at least two extra street sweepings over the summer, in order to control dust. The downtown core is swept and flushed weekly. The City pre-wets the roads prior to sweeping so that dust is not stirred up in the process. During the spring sweepings, it is difficult not to stir up dust but the sand applied in the winter does not contain lead, so lead levels on the street are relatively low.

Proposed dust control services include:

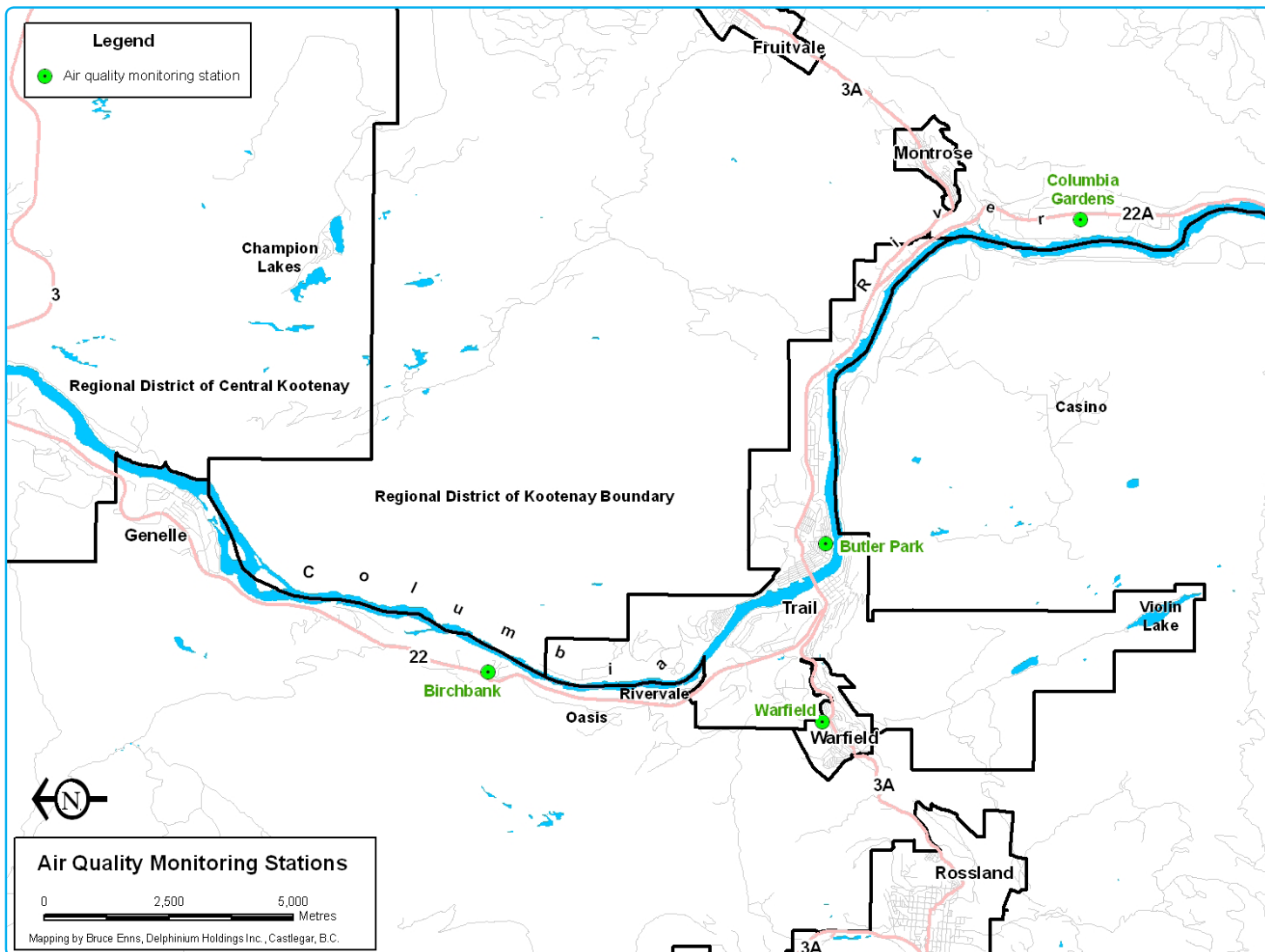
- Continued summer street washing in the City of Trail
- Continued application of dust suppressant to unpaved alleys each June in Trail
- Continued collaboration between Teck and the City of Trail to provide grass cover on bare ground areas
- Continued attention to materials stockpiles, either covering, enclosing them or spraying them with dust suppressant
- Enhanced services to rural areas by informing road maintenance officials about the importance of wetting the streets when sweeping, and potentially expanding dust suppression services in the rural areas



How can I get more information?

For information on Air Quality Initiatives, contact Steve Hilts, at 250-364-4385.
For general information on THE Program, visit the website at <http://thep.ca/>.

Where do program activities take place?



Fact Sheets available:

Family Health

Home & Garden

Air Quality

