

## CASE STUDY



## Working together works – improving health and environment in Trail, BC

### The Issue

The Teck smelter site at Trail, British Columbia situated on the banks of the Columbia River, began life as a copper/gold smelter in 1896. It has been used as a zinc/lead smelter since the early 20th century and, as the world's largest, processes 600,000 tonnes of concentrates annually. It is the major employer for the town's current population of 7,800 people and of significant importance to the local economy.

Around 200 children aged 6 months to 5 yrs live in Trail. The known harmful effects of lead exposure on young children were a major driver for the Company in initiating a programme to address key community environmental issues. Other concerns were human exposure to other metals, ecological impacts and risks and the aesthetics of the site in terms of appearance, noise and odour.

### Interested Parties

There are a number of stakeholders in addition to the local community members and Teck, each of whom had a part to play in tackling the issues. They included the BC Ministry of Environment, the Ministry of Health, the City of Trail, the United Steelworkers of America, The Regional District of Kootenay/Boundary, Trail and District Environmental Network and School District No. 11. Together they formed the Trail Community Lead Task Force.

Funding over a 10 year period to 2000 was \$5 million – 40% from Teck, 27% from the Ministry of Health, 23% from the Ministry of Environment and 10% from the City of Trail.

### The Approach

An inclusive, voluntary and collaborative approach was adopted using the underpinning principles of reliance on sound science plus open, honest and constructive communication and encouragement to secure the full participation of all stakeholders. Particular attention was paid to motivating the sceptics in the community through building and maintaining trust. Significant effort was made to retain everyone's interest and participation over the timeframe involved.

The Trail Community Lead Task Force set up and staffed an office independent of Teck and with the full participation of community representatives. This Lead Task Force worked through the programme between 1990 and 2000 and then from 2001, the Trail Health & Environment Committee was set up. Chaired by the Mayor of Trail, this committee's role was, and remains, to oversee implementation of agreed actions and ensure progress goals. The key goal set by the Task Force in 2000 was to have at least 90% of pre-school aged children in Trail with a blood lead level of less than 10  $\mu\text{g}/\text{dl}$ .



Trail Smelter

## CASE STUDY continued...

### Actions

A number of direct hands-on actions to educate the community on simple measures to reduce exposure were instigated. Home environmental assessments were carried out with specific counseling on exposure reduction and practical assistance provided to achieve it.

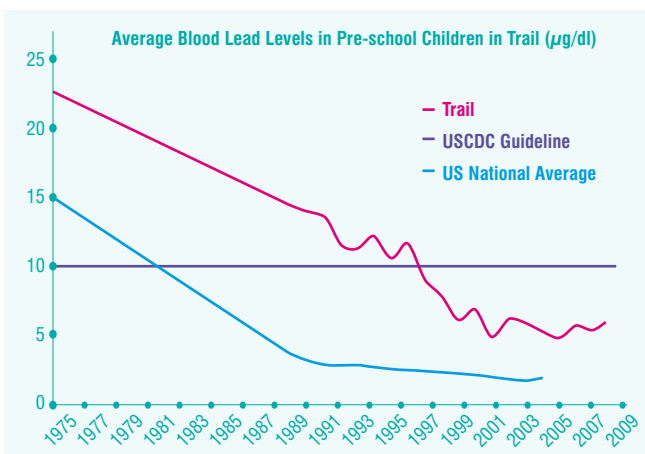
Steps were taken to suppress dust in the local environment through green planting and a programme of annual blood testing was introduced amongst young children to monitor effectiveness of the new measures and progress towards the goal.

Capital projects included the introduction of a new KIVCET flash lead smelter in 1997 following the construction of new baghouses at the silver refinery in 1996.

### Results

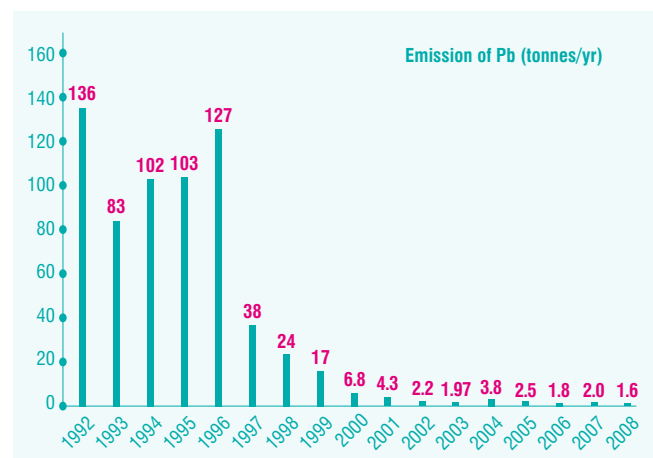
The collective measures taken have resulted in a greater than 50% reduction in average blood levels in young children. By 2004, the Task Force goal of 90% less than 10 µg/dl had been achieved. The committee are now proposing that the next goal for Trail will be to have 95% of children with blood lead levels less than 10 µg/dl by 2015.

#### Geo.Mean Level in blood 1975 – 2008 Trail Children Age 6 - 60 months



With regards to lead in the environment, the improvement has been quite dramatic since the new smelter came on line with emissions of less than 1.8 tonnes/yr, a reduction of some 134 tonnes/yr since 1992.

### Environmental improvements



The results are testament to the inclusive approach adopted from the outset and the ongoing commitment of all the stakeholders. Awareness of exposure reduction and subsequent behavioural change has become the norm in Trail. The clear improvements that good practice can achieve have and will continue to benefit this community.



Good practice at the smelter benefits local children