

## CASE STUDY



## Committed to community health in a unique environment

### The Issue

Mount Isa is a unique situation with mining and smelting operations situated close to town amid a region with naturally-occurring lead mineralisation. Historic mining practices during the 1940's and 1950's have also contributed to low-level residual mine sediment occurring in some areas. In 2006, Queensland Health (with the support of Xstrata) launched a lead screening program to test 400 Mount Isa children between the ages of one and four.

In May 2008, Queensland Health presented the report detailing the results of the lead screening program at a public forum in Mount Isa. Results of the program indicated that the average blood lead level (geometric mean) for the group of children sampled was 5.0 micrograms per decilitre (mcg/dL). The report also showed that 11 per cent had blood lead levels above the World Health Organisation (WHO) recommended level of less than 10 mcg/dL. For this sample the report found:

*“. . . there are no distinct spatial patterns of blood lead levels within the Mount Isa township. This is consistent with the literature that indicates that individual behaviours and household factors are the most important influences on blood lead levels in children.” (Queensland Health (2008) Mount Isa Community Lead Screening Program 2006 – 2007: A report into the results of a blood-lead screening program of 1- 4 year old children in Mount Isa, Queensland (p.31), available at: [http://www.health.qld.gov.au/ph/documents/tphn/mtisa\\_leadprt.pdf](http://www.health.qld.gov.au/ph/documents/tphn/mtisa_leadprt.pdf))*

Since this report was released, Queensland Health has been achieving positive results by intervening to assist parents to keep children's blood lead levels low.

On 20 February 2010, Queensland Health launched a follow-up study of children's blood lead levels in Mount Isa. Xstrata fully supports this initiative and will continue to support initiatives that aim to assess and, where necessary, improve the health and well-being of the Mount Isa community.

### Interested Parties

Xstrata is continuing to work actively with local and State Government to improve community awareness of living safely with lead in Mount Isa.

In December 2007, Xstrata joined with Queensland Health, the Queensland Department of Environment and Resource Management, the State Member of Parliament and the Mount Isa City Council to form the Living with Lead Alliance.

The aim of the Alliance is to provide people in Mount Isa with the information they need, so they can put in place simple measures to help them stay healthy in an environment where lead is present naturally and from industrial activities.



Mount Isa is a unique situation with mining and smelting operations situated close to town amid a region with naturally-occurring lead mineralisation.

## CASE STUDY continued...

### The Approach

Xstrata Mount Isa Mines is doing everything possible to ensure the sustainable management and ongoing safety of its operations by delivering a range of continuous, pro-active environmental initiatives. Since taking ownership of the Mount Isa operations in mid-2003, Xstrata has invested in excess of A\$250 million on over 150 environmental initiatives.

A key focus for Xstrata Mount Isa Mines is delivering initiatives that prevent the risk of lead leaving the operational site. Xstrata Mount Isa Mines has a strict “clean-in/clean-out” policy for all employees and contractors working in lead exposure areas. Showering is mandatory for employees and contractors in these areas on completion of shift, and work clothes are left on-site and laundered by the company.

The site also has an on-site fuelling station and servicing facility to limit the need for light vehicles to leave the mine site. For light vehicles that need to leave site, car wash bays are available to clean vehicles before leaving to further reduce the risk of lead being taken into the community.

Xstrata Mount Isa Mines’ Air Quality Control Centre (AQCC), monitors Mount Isa’s ambient air quality levels via a comprehensive network of wind/weather stations in and around Mount Isa. Information from these monitoring stations is analysed and used to direct, or shutdown, operations at Xstrata Mount Isa Mines’ copper and lead smelters and Incitec Pivot’s acid plant.

As the industry representative on the Living with Lead Alliance Committee, Xstrata Mount Isa Mines is also working with key community leaders to drive long-term actions that address the issue of lead in the community.



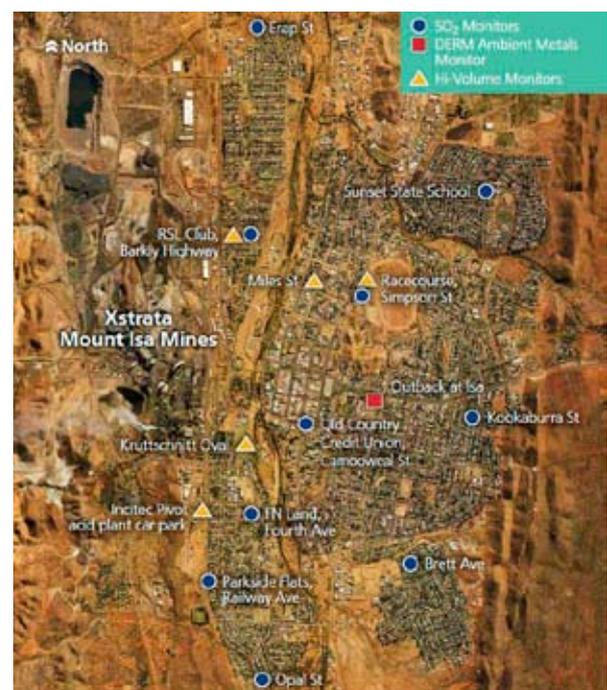
Installing an exhaust hood over the lead smelter sinter oven

For example, the Queensland State government with support from the Alliance has delivered a Greening Mount Isa funding program to improve the recreational and environmental facilities for children in Mount Isa. To date, this funding program has distributed around A\$670,000 in funding grants to local schools, kindergartens, day care centres, sporting organizations and community groups in the local area.

Other initiatives undertaken by the Alliance include:

- a LEADSmart education program in local schools;
- an ongoing public information campaign, including print, radio and television advertisements, educational material;
- meeting with local schools, kindergartens and community groups to discuss the Alliance and living safely with lead;
- the establishment of an Indigenous Health Working Group, and an Alliance local support group;
- showcasing information at community events.

In addition to the actions of the Alliance, Xstrata Mount Isa Mines continues to offer free, independent and confidential blood lead testing for Mount Isa residents through Queensland Medical Laboratory. This testing has been made available since 1993.



Xstrata Mount Isa Mines manages the most intensive air quality monitoring system of any city in Australia

## CASE STUDY continued...

### Challenges

The fact that lead is present naturally as well as from industrial sources in the area surrounding Xstrata Mount Isa Mines presents a particular challenge. Concern for the health and well-being of the Mount Isa community is therefore something that Xstrata takes very seriously.

In recent years, Xstrata has approved important new initiatives to help understand and limit potential impacts from its Mount Isa Mines operations with projects such as the Lead Pathways Study and Smelter Emissions Project.

### Actions

#### Lead Pathways Study

In late 2006, Xstrata Mount Isa Mines commissioned the Lead Pathways Study to better understand the potential pathways of lead in the Mount Isa community.

The Lead Pathways Study is an independent research program being undertaken by the University of Queensland's Centre for Mined Land Rehabilitation in collaboration with the National Research Centre for Environmental Toxicology.

The Study is assessing potential pathways of lead in the Mount Isa community through land, water and air from both natural and non-natural sources.

#### Smelter Emissions Project

In July 2007, Xstrata Mount Isa Mines established the Smelter Emissions Project to reduce emissions from its lead and copper smelters.

The Smelter Emissions Project team is characterising smelter emissions, identifying opportunities to reduce emissions, and designing and implementing operational and engineering controls to realise those opportunities.

As part of the Smelter Emissions Project, Xstrata is assessing the feasibility of over 120 initiatives to reduce emissions and limit the potential environmental impacts to its employees and the local community.

### Results

In July 2009, the Lead Pathways Study released its Phase One (Land) report; finding that the risk to human health from historical mine sediment is low.

Despite this finding, Xstrata invested around A\$2.7 million to remove over 160,000 tonnes of soil containing historical mine sediment from the Leichhardt River. Xstrata believes that any actions taken that support a sense of confidence in the safety of the Mount Isa community is a step in the right direction.

At the end of 2009, Xstrata Mount Isa Mines had invested in excess of A\$21 million on a range of initiatives to limit emissions as part of its Smelter Emissions Project.

One example of a recent Smelter Emissions Project initiative involved an A\$11 million upgrade to the zinc-lead concentrator, providing a further 8% reduction in sulphur dioxide emissions from the lead smelter. This is just one of a range of initiatives that support Xstrata's commitment to a process of continuous proactive improvement.

As the Lead Pathways Study and Smelter Emission Project progress, Xstrata Mount Isa Mines will continue to develop and implement ongoing environmental initiatives that limit environmental impacts from its operations.



Soil sampling being undertaken in the Leichhardt River as part of the Lead Pathways Study