

Environmental Initiatives: Lead Pathways Study – Overview

March 2010



Soil sampling in the Leichhardt River



House dust sampling being undertaken

Xstrata Mount Isa Mines is committed to the health and safety of its employees and the Mount Isa community.

In late 2006, Xstrata Mount Isa Mines commissioned world renowned toxicologist, Associate Professor Barry Noller from the University of Queensland's Centre for Mine Land Rehabilitation (CMLR) in collaboration with the National Research Centre for Environmental Toxicology to conduct the *Lead Pathways Study*.

The *Lead Pathways Study* is an independent research program which aims to provide a better understanding of potential pathways of lead in the Mount Isa community from both naturally occurring minerals and those from mining operations.

The study is assessing potential pathways of lead through land (Phase One), air (Phase Two) and water (Phase Three) to identify any potential risk to human and ecological health.

All three phases of the study will involve comprehensive reports which will be independently peer reviewed.

Phase One: Land

The Phase One (Land) report was completed and released in July 2009 following a comprehensive peer review process.

Phase One of the study investigated the extent of potential risk to human and ecological health from historical mine sediments within the Leichhardt River and its surrounds.

The study confirmed that the risk to human health from historical mine sediments is low.

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

For more information on the Phase One (Land) report, both the scientific report and summary report are available online at www.xstrata.com/operation/mountisa/publications/

Phase Two: Air

Phase two of the study is investigating potential sources of dust in Mount Isa, the chemical form of the lead and the potential risk to human health.

The CMLR has now collected dust samples from floors, window sills, roofs and carpets from a representative sample of Mount Isa houses.

These dust samples are being analysed using X-ray absorption synchrotron technology, to enable their signatures to be determined based on the chemical form of the lead in the samples.

The signatures of the dust samples will be compared to the signatures of naturally

occurring minerals and mine processed materials to help identify the sources of lead potentially contributing to lead in air and dust in the community.

As with Phase One (Land), the bioavailability of lead in the soil, dust and mine samples will also be assessed and the report will be the subject of an independent peer review process.

Phase Three: Water

Phase Three of the study is investigating the water quality of the Leichhardt River catchment area. The study includes testing for aquatic toxicity as well as investigating the bioavailability of lead and other metals to humans and to aquatic flora and fauna.

The CMLR has undertaken water sampling in the Leichhardt River, upstream and downstream of Xstrata Mount Isa Mines, Lake Moondarra and Clearwater Lagoon. This sampling was repeated during and after the wet seasons to assess any changes in water quality with changed flow.

Once the results from this sampling program undergo a comprehensive analysis, the CMLR will compile the findings into a draft Phase Three (Water) report, which will then be the subject of an independent peer review process.

Xstrata Mount Isa Mines will continue to keep the Mount Isa community and other stakeholders informed on the progress of the study and its findings. Should the results show a need for corrective action, we will take immediate steps to address any recommendations.