MOUNT ISA MINES

Mount Isa Mines
Sustainability Report 2006

xstrata

SCOPE OF THIS REPORT

This report details the health, safety, environment and community performance of Xstrata's copper and zinc-lead operations in Mount Isa from 1 January 2006 to 31 December 2006.

CONTENTS

For a comprehensive review of Xstrata's HSEC performance at its north Queensland operations, please refer to the following reports:

- Xstrata Copper North Queensland Division Sustainability Report 2006;
- Xstrata Zinc North Queensland Sustainability Report 2006;
- Xstrata Copper Ernest Henry Mining Sustainability Report 2006; and
- Xstrata Townsville Sustainability Report 2006.

Chief Operating Officer's message

At Mount Isa Mines we understand that our long-term business viability is closely linked to our sustainability performance. This sustainability report describes our performance across the key sustainability criteria – financial, health, safety, environment and community.

The statistics in this report reinforce the significant role that Mount Isa Mines has on the north Queensland economy and community.

We were very successful in improving our performance in 2006 and our sustainability and operational highlights include:

- 61% improvement in the lost time injury frequency rate, 59% improvement in the disabling injury frequency rate and 10% improvement in the total recordable injury frequency rate which we will continue to build on in 2007 to reach our goal of zero harm;
- Excellence in Training Award for our transportable maintenance training program and Metalliferous Mine Trainer of the Year Award;
- Department of Mines and Energy's award for most improved safety and health performance for all mines and quarries in Queensland;
- total sulphur dioxide emissions continued to fall culminating in a 75% decrease in sulphur dioxide emissions from the copper smelter since 2000;
- a series of stormwater improvements implemented including extension of pond capacities and increased pump-back capacity;
- Itron Enterprise Edition (IEE) energy management system purchased to monitor real-time resource consumption and encourage proactive approach to resource management;
- new zinc filter plant and adjacent zinc concentrate loadout and storage facility commissioned to provide a more environmentally-friendly system;
- expansion and upgrade of the zinc-lead concentrator increased throughput capacity by more than 30%;
- record tonnages mined, hoisted and processed from the Mount Isa Copper Operation team, including stage 1 completion of the North 3500 orebody development;
- successful completion of the ISASMELT rebrick by our smelter team which will allow a further three years of continuous operation;
- significant progress on the smelter expansion projects including the successful second rotary holding furnace commissioning;
- Xstrata Community Partnership Program North Queensland extended to a total value of $5.87 million over more than 60 community initiatives.

It is easy to focus on the frontline production teams, but without the tireless efforts of all our support teams we would not have realised our achievements. I am very proud of the value that each team – Finance and Commercial; Engineering; Exploration; Human Resources; Supply; Administration and Services; Port and Logistics; Contracts; Community Relations; Safety; Environment; and Strategic Mine Planning has added to the overall business outcome.

Our goals have come to fruition not only through successful partnerships with our employees, but also through partnerships with our local communities and other stakeholders. I am very grateful that they too share our passion.

I look forward to presenting future results of our commitment to sustainability in the coming years as we continually progress towards industry leadership in health, safety, environment and community initiatives and partnerships.

Our sustainability report is designed to share our progress with you and we welcome your feedback. Please email your comments to nqsustainability@xstratacopper.com.au or write to me at Xstrata Copper, PMB 6, Mount Isa, QLD, 4825.

Steve de Kruijff
Chief Operating Officer
Xstrata Copper North Queensland

General Managers' message

Xstrata Zinc's strategy for sustainability in north Queensland resulted in a successful year for our operations at Mount Isa and we are very pleased to share these results with you.

In 2006, our business improved its long-term viability by increasing ore reserves at George Fisher Mine from 39.1 million tonnes to 44.8 million tonnes and at Black Star Open Cut from 26.9 million tonnes to 32.3 million tonnes. Our concentrator throughput increased from five million tonnes per annum to 6.5 million tonnes per annum and fully utilised our newly commissioned zinc filter plant and the existing lead smelter.

In expanding the business we created an additional 350 onsite, full-time jobs during the year, with many more positions created within the local community to support our operation.

Our sustainability and operational highlights for 2006 include:

- a strong improvement in the disabling injury severity rate due to emphasis on risk management and our commitment to effective rehabilitation;
- drilling conducted to investigate the open pit mining potential at George Fisher Mine for the Handle Bar Hill Project, with feasibility work to continue in 2007;
- commissioning of the new crushing facility, conveyor system, milling circuit and flotation circuit in the zinc lead concentrator and subsequent improved throughput from more efficient processes;
- installation and commissioning of a new furnace cooling water system in the lead smelter which has significantly reduced emissions, and commencement of a feasibility project for the lead ISASMELT;
- programs to ensure a skilled workforce including an AUD$2.1 million five-year partnership established with Ballarat University, and an ongoing graduate scheme, vacation program, skills centre apprenticeships, adult apprenticeships and local scholarships;
- jointly awarded the Queensland Metalliferous Training Company of the Year award with Xstrata Copper;
- completion of the new zinc filter plant and the subsequent substantial dust and noise emission reduction;
- improvements to contractor health, safety, environment and community (HSEC) systems with our service and supply partners which will enhance our HSEC performance.

Xstrata Zinc is well positioned to continue its leadership role in sustainable development. We have an exciting future ahead of us, and we look forward to presenting future results on our continuing improvements in the key areas of health, safety, environment and community.

Our sustainability reports are designed to share our progress with you and we welcome any feedback. Please email your comments to nqsustainability@xstratazinc.com.au or write to us at Xstrata Zinc, PMB 6, Mount Isa, Queensland, 4825.

Kevin Hendry
General Manager Zinc–lead Operations
Xstrata Zinc North Queensland
(above left)

Fred White
General Manager Lead Smelting Operations
Xstrata Zinc North Queensland
(above right)



Our approach to sustainable development

For Xstrata, sustainability is about caring for the environment in all stages of mining and metal production; efficient and responsible use of resources, including energy, water and land; keeping our employees safe and healthy; improving services and facilities in communities where our employees and their families live; helping these communities to build the capacity to sustain themselves as vibrant, self-reliant centres; and providing our shareholders with a highly profitable return on their investment in our business over the long term.

OUR GLOBAL PERSPECTIVE

Xstrata is a global diversified mining group, listed on the London and Zürich Stock Exchanges, with its headquarters in Zug, Switzerland. Xstrata's businesses maintain a meaningful position in seven major international commodity markets: copper, coking coal, thermal coal, ferrochrome, nickel, vanadium and zinc, with recycling facilities, additional exposures to gold, cobalt, lead and silver and a suite of global technology products, many of which are industry leaders. The Group's operations and projects span 18 countries: Argentina, Australia, Brazil, Canada, Chile, Colombia, the Dominican Republic, Germany, New Caledonia, Norway, Papua New Guinea, Peru, the Philippines, South Africa, Spain, Tanzania, the USA and the UK. Xstrata employs approximately 43,000 people, including contractors.

ENDURING VALUE – A FRAMEWORK FOR SUSTAINABLE DEVELOPMENT

Xstrata Copper and Xstrata Zinc are signatories to *Enduring Value – the Australian Mineral Industry Framework for Sustainable Development*. This framework was developed and launched by the Minerals Council of Australia (MCA) in October 2004 to give practical effect to the International Council on Mining and Metals' (ICMM) sustainable development principles.

The key role of *Enduring Value* is to translate the principles of sustainable development into practices that ensure industry operates in a way that meets community expectations and maximises the long-term benefits to society by effectively managing Australia's natural resources.

As a signatory to *Enduring Value*, Xstrata Copper and Xstrata Zinc have obligations to include progressive implementation of the ICMM Principles, public reporting of site level performance at least annually and assessment of the systems used to manage key operational risks (using either internal or external assessment as appropriate).

XSTRATA SUSTAINABILITY POLICIES

Xstrata is committed to achieving sustainable growth and shareholder value across all its operations. At Xstrata, our HSEC policies provide a framework for our operations to address health, safety, environment and community initiatives in a sustainable way. Our Safety and Health Policy includes 10 principles that we apply as we strive to prevent injuries and achieve excellence in our safety performance. Our Environment Policy guides us in effectively implementing our environmental management systems which are aligned to Xstrata's business principles and management standards. Our Community Policy includes 12 principles that guide us to strive to achieve a reputation for social responsibility by contributing to the social, economic and institutional development of our local communities with the participation of stakeholders to improve the quality of life for all.

Our HSEC management systems enable us to work constructively with governments, local authorities, academia, community representatives, non-government organisations and other stakeholders. In doing so, Xstrata's policies are characterised by open and honest engagement with stakeholders through effective, transparent consultation and communication.

Contributing to our economy

We continue to generate employment opportunities, support local businesses, fund community projects and contribute to government taxes and charges and, in doing so, clearly bring substantial benefits to the Mount Isa community.

Xstrata contributes to the north Queensland economy through:

- employment of over 4,600 people, including contractors;
- an annual wages bill in excess of $339 million, including $287 million for Mount Isa Mines, most of which is spent in north Queensland;
- apprenticeship and youth training opportunities of almost $7 million;
- $256 million spent on purchasing regional goods and services;
- $455 million spent purchasing goods and services within Queensland;
- $4.1 million paid in annual rates to local councils;
- annual contributions of more than $1.8 million, including almost $900,000 in Mount Isa, directed to community partnerships, donations, sponsorships and community programs;
- $145 million in rail, power and water charges; and
- $67.2 million paid to governments in taxes and charges.

OUR PRODUCTION

Mount Isa Mines' uses state-of-the-art mining and processing technology to produce 6.5 million tonnes of zinc-lead and 6.2 million tonnes of copper ore from its world-class underground and open-cut ore bodies.

Copper ore is sourced from two underground mines, Enterprise and X41, at Mount Isa. Once crushed and hauled to the surface, the copper undergoes a concentration process before being smelted at Mount Isa Mines' copper smelter. Copper anodes containing 99.7% pure copper are then railed to Xstrata's Townsville Copper Refinery for further refinement into copper cathodes.

Zinc-lead-silver ore is sourced from the George Fisher mine complex, located 20 km from the city and the Black Star open-cut mine at Mount Isa. The ore is crushed and concentrated before being processed at Mount Isa. Zinc concentrate, containing about 51% zinc, is railed to Townsville for delivery to the Sun Metals Zinc Refinery, and for shipment to overseas customers.

Lead concentrate contains between 50% and 60% lead and about one kilogram of silver per tonne. After processing, the metal is cast into four-tonne blocks, each containing about 3,984 kilograms of lead and about 10 kilogram of silver. These blocks are railed to Townsville for shipment to Xstrata Zinc's lead-silver refinery in the United Kingdom.

Xstrata continued to invest in the future of Mount Isa during 2006 with diamond drilling programs investigating the expansion of Black Star mine, as well as the open pit mining potential of George Fisher mine. Pre-feasibility investigations, design and drilling will continue in 2007.

Through its acquisition of Falconbridge Ltd in August 2006, Xstrata now holds a 75% interest in the Lady Loretta zinc-lead-silver mineralisation deposit about 140 kilometres north-west of Mount Isa. It has measured and indicated resources of 12.6 million tonnes grading 17.0% zinc and 5.9% lead.

Significant projects in the copper business during 2006 included the rebrick shutdown where refractory linings within the ISASMELT vessel, rotary holding furnace number one and anode furnaces were replaced and modifications were made to allow completion of the second rotary holding furnace which was commissioned and came on line in September.

Expansion of the copper smelter continued including the design and construction of a slag and revert crushing and screening plant, two additional oxygen plants and a slag cleaning furnace. These projects will be completed in 2007 and will allow the operation to achieve an annualised production rate of 300 kilotonnes per annum of anode.

Other significant projects at Mount Isa Mines during 2006 included the expansion and upgrade of the zinc-lead concentrator involving the innovative use of second-hand equipment sourced from the George Fisher mine and overseas. These works have increased existing throughput capacity of the concentrator by more than 30%.

The new zinc filter plant and adjacent zinc concentrate loadout and storage facility were also commissioned, providing a more environmentally friendly method of loading concentrate into rail wagons than previously used.

Production Facts

Copper Stream	
2006 production	194,100 tonnes of copper in concentrate from the underground mines 213,000 tonnes of copper in anode from the smelter
Mines	6.2 million tonnes per annum of ore mined at two underground copper mines: Enterprise and X41 mines
Plants	1 concentrator – 7.2 million tonnes per annum capacity; 1 copper smelter
Zinc-lead-silver Stream	
2006 production	209,900 tonnes of zinc in concentrate 118,300 tonnes of lead in lead bullion 6,270 ounces of silver in crude lead
Mines	4.7 million tonnes of ore per annum mined from George Fisher underground mine and Black Star open-cut
Plants	1 concentrator – 6.5 million tonnes per annum capacity; 1 lead smelter; 1 zinc filter plant

Caring for our people

The health and safety of our employees is critical to the business success of Xstrata Copper and Xstrata Zinc. We believe that all work-related incidents, illnesses and injuries are preventable.

OUR CHALLENGES

Training continued to be a key challenge in 2006 with safe production being our key message – ensuring the task is undertaken by competent people, using fit-for-purpose equipment and safe systems of work. In recent years many new workers have entered the mining industry with little or no industry experience, making our emphasis on effective and efficient training critical. Our training management system – developed and implemented across Xstrata North Queensland in 2005 to ensure our people were provided with the skills to work safely and productively – underwent a successful series of external audits during 2006.

Our Positive Attitude Safety System (PASS), a communication tool to improve the flow of safety information and encourage safety improvement, was fully implemented throughout our copper and zinc operations, producing positive results throughout the business. Weekly PASS improvement meetings for the senior management team were introduced to address issues that could not be resolved through departmental PASS meetings. Training of Pass champions also commenced to provide our people with skills to facilitate PASS training sessions and maintain momentum, while becoming self-sufficient in the process.

The Mining Industry Skills Centre Training Awards recognised Xstrata with the overall 'Excellence in Training Award' and 'Metalliferous Mine Trainer of the Year' category award for the second successive year.

The submission was a combined entry from Mine Maintenance Services (copper operations) and Mine Maintenance Support (zinc operations). We were also recognised for our contribution to skills development and training with the 'Best Metalliferous Company for Training Initiatives Award' by Australian Mining.

Our occupational health and safety management system (OHSMS) was subjected to several external audits in 2006, with favourable audit results identifying good practices in OSHMS across the Mount Isa Mines site and positive improvement opportunities.

Performing safely

Safety performance is tracked using the following measures – total recordable injury frequency rate (TRIFR), lost time injury frequency rate (LTIFR) and disabling injury frequency rate (DIFR), which record the number of injuries per million hours worked. TRIFR includes all injuries except first aid treatments. In 2006, the zinc-lead operations adopted use of the total recordable injury frequency rate (TRIFR) rather than the DIFR. This change occurred to align the Mount Isa Zinc reporting to the Xstrata reporting requirement.

Xstrata's zinc-lead operations did not achieve their LTIFR and TRIFR targets in 2006. However, in achieving their 2006 disabling injury severity rate (DISR) target we were successful in reducing the average time that a person is restricted or unable to attend work.

Caring for our people

« (Previous page) Paul Howarth pauses for a break during the Zinc concentrator expansion project.

HEALTH AND SAFETY PERFORMANCE

2006 Targets	Performance	2007 Targets
Mount Isa copper operations (including mining, metallurgical, administration and services)		
Zero fatalities	✔ (0)	Zero fatalities
LTIFR < 2	✔ (0.8)	< 1
DIFR < 8	✔ (7.2)	< 4
TRIFR < 16	✘ (19.0)	< 13
Mount Isa zinc-lead operations (including Bowen coke works)		
Zero fatalities	✔ (0)	Zero fatalities
LTIFR of < 3 combined mining and metallurgical operations	✘ (3.3)	LTIFR zinc/lead operations < 2
TRIFR of < 15 combined mining and metallurgical operations	✘ (22.0)	TRIFR zinc/lead operations < 12
DISR < 160 combined mining and metallurgical operations	✔ (123.0)	DISR zinc/lead operations < 150

✔ Achieved ✘ Not achieved → Action continues into 2007

This was due to our efforts in risk management and rehabilitation. Medical treatment injuries were the focus of reporting in 2006 as the operations adopted the TRIFR as the lower injury severity indicator. By fully implementing the TRIFR indicator through the measurement of medical treatments and the decrease in restricted work injuries, we achieved a total recordable injury frequency rate of 22. This represents a 30% improvement from 2005.

Twenty-seven medical treatments were included in the TRIFR which significantly added to the total number of injuries recorded, as opposed to the restricted work injuries and lost time injuries which were used in 2005.

The Mount Isa copper operations achieved significant improvements in safety performance in 2006, achieving most of their safety targets. The operations achieved a 65% improvement in LTIFR and a 61% improvement in DIFR, however, they did not achieve their target TRIFR.

Overall, since 2003 significant improvements against all these measures have been achieved and in 2006 the Mount Isa Copper Operations Mining Division was recognised with the Department of Natural Resources and Water's High Achievement Award for Improving Mine Safety and Health Performance.

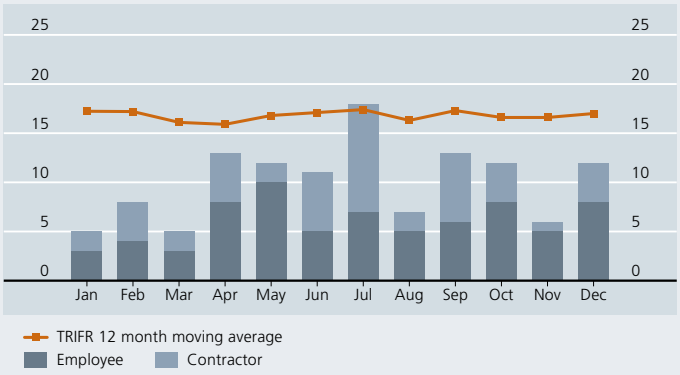
The Xstrata plc health, safety, environment and community audit in mid-2005 identified several areas in our zinc-lead operations that required improvement:

- audit, risk and change management;
- contractor management;
- document control; and
- communication and engagement.

The following initiatives illustrate how we addressed these issues during 2006.

Total recordable injury performance

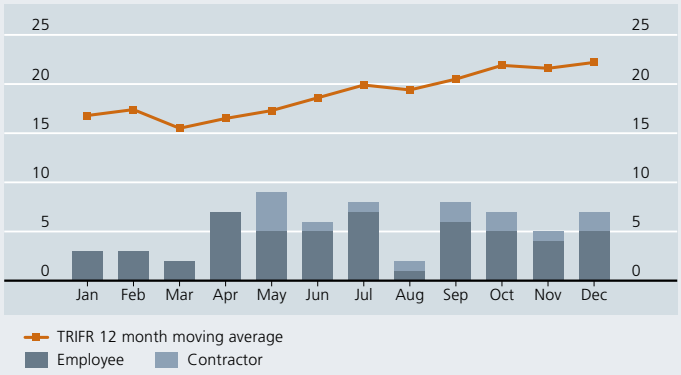
Xstrata north Queensland Copper Operations – 2006



Xstrata North Queensland Copper Operations achieved significant improvements in safety performance in 2006, achieving all of their safety targets. Significant effort was spent on reducing the severity of our injuries in Mount Isa, which is reflected in achieving our LTIFR and DIFR targets. However, improvement in Total Recordable Injuries will continue to be our focus in 2007, with particular attention on behavioural based safety systems.

Total recordable injury performance

Xstrata north Queensland Zinc Operations – 2006



One of Mount Isa Mines' mine rescue teams performs a patient packaging exercise during the 2006 Mine Rescue Challenge.

Occupational Hygiene Sampler, Amanda McHugh, places personal dust and noise monitoring equipment on George Crabbe at the regent mixing plant.

Several high level risk studies were undertaken to identify HSEC and business risks that would be associated with capital works and changes to Xstrata zinc-lead operating practices. Key personnel within the organisation received higher level risk training through the University of Queensland Minerals Industry Safety and Health Centre. Audits during 2006 included the property conservation audit and the operators' safety and health audit to assess compliance to the *Queensland Mining and Quarrying Safety and Health Act (1999)*.

With the recent introduction of the Xstrata plc HSEC audits across the business, the safety team at Mount Isa Xstrata Zinc introduced the contractors' HSEC audit program to complement the Xstrata audit strategy. A series of introductory workshops were held for contractors involved in high risk work with Xstrata Zinc Mount Isa departments.

Document control and archival systems for the Xstrata Zinc operations were developed in 2006 to ensure retention of the information primarily relating to health, safety, environment and community. These will be placed on the intranet in 2007.

Occupational health and wellbeing

We value the health and wellbeing of our workers and we encourage our employees and their families to maintain a healthy lifestyle. Our health promotion campaigns are conducted across copper and zinc-lead operations and are coordinated by our health and medical services team, in conjunction with Gemini Medical Services. They include programs on obesity, smoking, alcohol abuse, fatigue, nutrition, sleep apnoea, mental health and shift work. In 2006, the Gemini Medical Centre's hours of operation were extended to 24 hours a day, seven days a week, and this facility also has been made available to the immediate families of our employees.

Emergency preparation

To ensure we are prepared to respond to a range of operational challenges, we implemented the North Queensland Response and Recovery Plan and its supporting documents across the business. A comprehensive training framework was established to provide the mines rescue team – made up of employees from the underground and surface operations – with fire fighting, search and rescue techniques, vertical height rescue, hydraulic tools, air bag recovery and advanced first aid. We completed mapping the assessment packages used by the mines rescue team to the National Competency Standards and team members will achieve a Certificate III in Response and Rescue competencies on completion of their training.

Mount Isa Mines hosted the Queensland Mine Rescue Challenge at the Hard Times Mine in 2006. Seven teams from mining companies across north-west Queensland took part in the competition. We provided equipment to help create difficult and realistic scenarios and our team achieved a commendable second place in the competition.

Monitoring programs

Exposure to occupational hygiene hazards is a key occupational safety and heath challenge for us and in 2006 comprehensive reviews of monitoring programs for dust, noise, asbestos fibre, arsenic in urine, radiation, lead and potable water were undertaken. Procedures on lead management were reviewed and released, ensuring the strict protocols for occupational exposure to lead were documented and communicated. A detailed potable water management procedure was developed which defines drawings, testing loops and schedules, exposure standards, internal controls and trigger levels for potable water where Mount Isa Mines exercises control over water quality.

Mount Isa Mines invested more than $350,000 on occupational hygiene sampling and analysis in 2006.

Occupational hygiene sampling and analysis (Mount Isa Mines)

Type of sample collected and analysed	Number
Potable water (microbiological and metals)	1,003
Noise	760
Airborne dust (inspirable, respirable, asbestos and static)	1,366
Arsenic in urine	280
Lead in blood	10,737

Monitoring programs (continued)

Potable Water

Water samples are taken of the potable (drinking) water lines across the lease to ensure water provided to workers adheres to the Australian Drinking Water Guidelines. A range of chemical, physical and biological tests are performed on the samples including metals, chlorine, bacteria, pH and turbidity. Sampling is scheduled at regular intervals for all areas of the lease to maintain this water quality.

Noise

Employees participate in personal sampling in each of the operating areas to provide representative samples of exposure to noise. In conjunction with this, static sampling is also performed to identify problem areas. All results are used to help in the review/implementation of noise reduction strategies which include, hearing protection requirements, maintenance schedules, sound proofing options and influencing plant/equipment selection and design meeting 'buy quiet' principles.

Airborne Dust

Employees participate in routine personal inspirable and respirable dust in each of the operating areas to provide representative samples of exposure. Inspirable dust samples measure dust particles and the level of other contaminants in the dust, such as lead, arsenic, copper, thallium and cadmium. Personal respirable dust monitoring, which includes monitoring for respirable quartz (silica), measures a sub-set of the overall inspirable dust, these are the smaller particles which can be inhaled deeper in the respiratory tract. Static dust sampling is provided on request in conjunction with inspirable and respirable personal sampling to assist in the determination of dust hazards.

Arsenic-in-Urine

All workers in the Copper Smelter are required to provide a urine sample every four months for the determination of exposure to arsenic. The Arsenic-in-Urine test is used to measure arsenic and metabolites of arsenic giving a broader indication of both recent and preceding exposure.

Lead in blood

All workers on the Mount Isa Mines lease are required to have venous lead in blood tests at frequencies which are determined by the area they work in, their previous result, gender and reproductive capacity. This form of biological sampling provides an accurate measure of a worker's exposure to lead. In 2006 there were four instances of people exceeding the national medical removal limit. In the five-year period from 1998–2002, there were 32 reported instances of National Occupational Health and Safety Commission (NOHSC) elevations. At the end of 2006, we have achieved a 66% improvement with only 11 reported instances of NOHSC elevations in the current five-year period from 2003–2007.

Job role criteria

The Xstrata Mount Isa Mines job role criteria (JRC) document was finalised in 2006 and was a finalist in the Mining Industry Safety Conference Innovations Awards. The JRC document provides functional analysis of 96 roles across surface and underground copper and zinc-lead mining operations at Mount Isa Mines. The JRC provides a site-specific evidence base to assist health and rehabilitation staff during assessments, observations, and treatment of current and potential employees during rehabilitation and return to work processes.

Over-a-Period-of-Time Injury Study

The Over-a-Period-of-Time (OPT) Study continued during the year, providing insight into the characteristics and management of latent onset soft tissue injuries at Mount Isa Mines. The study involved the review of 100 medical records, 69 semi-structured, one-on-one interviews and direct workplace observation of the identified higher risk roles. It has provided qualitative and quantitative evidence bases for future practice. The results of the OPT initiative provide an opportunity to combine proactive and ergonomic intervention strategies with current injury management approaches.

Managing lead

Elevated lead levels in blood is a matter that Xstrata takes seriously. This is evident in the strict protocols in place to reduce workers' exposure to lead in the workplace. At Mount Isa Mines, biological and workplace monitoring is conducted in accordance with the National Occupational Health and Safety Commission (NOHSC) standard and recognised international occupational hygiene monitoring standards. Xstrata sets its medical removal limit below this standard of 50 micrograms per decilitre (µg/dL).

Employees with blood-lead concentration levels of 40 µg/dL or greater must be removed from the workplace until concentrations are below 30 µg/dL. In the lead smelter, the limit is 45 µg/dL or greater. Pregnant employees should not have a blood-lead concentration that exceeds the national standard of 10 µg/dL. During 2006, improvements were made to ventilation in the lead smelter, as well as process changes in the zinc-lead concentrator to reduce the handling of dry material. Also in 2006, the revised lead management system was implemented with ongoing monitoring to reduce blood lead levels of employees.

We also continued our free venipuncture program to take blood samples from Mount Isa residents to test for lead levels in the blood. The test is available on request from the Queensland Medical Laboratories located in the town centre and funded by Xstrata. The results of the blood-lead test are confidential and forwarded to a general practitioner nominated by the community member being tested.

In 2006, Queensland Health commenced a study of the lead in blood levels of Mount Isa children aged between one and four years in response to concerns raised in the media. To ensure a representative review is conducted, Queensland Health has a target of 400 children, which represents one quarter of the children of this age group in Mount Isa. The testing is free and Mount Isa Mines is fully supportive of this survey. We will continue to work with Queensland Health and the Environmental Protection Agency following the release of the study results in 2007 to ensure the good health and wellbeing of the local community.

Indigenous children from the Yallambee Community participate in Queensland Health's Lead in Blood testing program in Mount Isa.

TRANSPORTABLE, AWARD-WINNING TRAINING SYSTEM

Mount Isa Mines copper and zinc maintenance departments worked collaboratively to develop a training package for mobile maintenance crews that won an Excellence in Training Award at the 2006 Queensland Mining Industry Skills Centre Training Awards. Crew members, trainers, assessors, supervisors, superintendents, safety advisors and training personnel all played a role in developing the training package which is transportable across both copper and zinc businesses and complies with the Xstrata North Queensland Operations Training Management System and the National Competency Standards, promoting use of our refresher matrix to determine the frequency of re-assessment.

Copper Mine Training Coordinator, Roslyn Budd, said development of the system was initially prompted by the need to review the process for maintenance personnel gaining and refreshing unit tickets for operating mobile equipment.

"Maintenance personnel are generally required only to tram mobile equipment to and from the workshop, and conduct testing of functions during and on completion of their maintenance tasks," she said. "They are not required to operate mobile units in a production capacity. In addition, the process for gaining unit tickets needed updating to comply with National Metalliferous Mining Competency Standards.

Roslyn said the team developed a core package for surface operations and an additional component for underground-specific activities and hazards, which will be kept continually updated.

"We also developed an assessment package which provides two options – one is a written and practical assessment for group training situations and the other is a verbal assessment for one-on-one training," she said. "Completion of one unit familiarisation checklist is included as part of the initial assessment, but subsequent tickets simply require assessment via a unit familiarisation checklist."

A safety observation checklist was also developed for use by supervisors and assessors to practically observe the fundamental safety principles of mobile equipment tramming and this is incorporated into the training plan for each individual.

One of the benefits of the training package is that it has formalised information which was generally passed on by word-of-mouth regarding general safety and operating practices during tramming and maintenance activities.

Innovation awards

The Mount Isa copper operations received a wide array of entries in the 2006 Innovations Awards. These awards aim to encourage innovation and develop practical workplace solutions to safety, health and operational issues throughout the business. This year's entries included:

- **Ore bin live tonnage calculator:** Geoff Gray, a production electrical supervisor, had found it difficult to measure the contents of the underground bins. He tried ultrasonic level sensors and radar but was unable to obtain useful readings. Working closely with one of our electrical engineering vacation students, Geoff developed an innovative solution that measures the amount of ore flowing into and out of the bin, and calculates the difference – the amount of ore remaining in the bin. The system self-calibrates, resetting itself automatically to zero. This innovation will lead to better control of the ore flow by the operators, which will mean safer and more consistent hoisting.
- **N3500 database:** Eamonn and Tammy Dare from Mine Coordination developed the N3500 photographic database as a more effective and efficient way of storing and retrieving geological information from core and underground mapping data. The database has been invaluable in auditing ground conditions over time and provides a visual record of rocktype and structure encountered during development of the new N3500 mining block. This has led to a better understanding of geological structure and direct application in the design of new mine openings, resulting in an overall safer and more robust development plan.
- **Emergency refuge bay battery box:** Employees from Xstrata's fans and refrigeration department designed, built and installed a battery box to house emergency refuge bay batteries external to the confines of the emergency refuge bay, thus reducing the risk of fire or explosion from unvented hydrogen gas and reducing potential manual handling injuries due to the need for frequent inspection, maintenance and exchange of batteries which were failing after very short periods due to high temperatures within the existing battery housing. The battery box was designed to prevent the ingress of dust and moisture and to allow movement in one piece with a forklift. It was built with a ventilation system to vent any produced hydrogen gas and an air-conditioning system to maintain the batteries at optimal operating temperature. It was also built with removable trays to provide easier access for inspection, testing, maintenance and exchange of batteries.
- **Shaft cable installer:** The cable installation team, in conjunction with the hoisting maintenance team, developed a new cable lowering system to allow optic fibre cable and supporting steel catenary wire to be run down the shaft in a controlled manner without damaging the cable or wire and without the need for people to work adjacent to the shaft opening. The system involved using a motor and chain driven cable reeler mounted to a large A-frame sled, controlled via a friction drum brake. A pivot mounted detachable boom was designed and attached to the rope winch to allow the cable reeler to be positioned back from the shaft and for the boom to be lowered out over the shaft to safely lower the cable.

Ben Jordan, school-based apprentice, undertakes a boilermaking exercise at the Xstrata Skills Centre.

- **Shaft movement and maintenance management system:** A combined operational, technical and maintenance team developed and implemented a three-pronged management strategy to ensure mining shafts systems remain competent for proposed future higher volume and deeper mining operations. The team developed a trigger action response plan (TARP) to detail responsibilities of individuals and the actions to take should any degree of change be identified within the shafts or hoisting systems. They also introduced a traffic light maintenance alert system so when maintenance is rescheduled it automatically escalates to a higher priority – green activities goes to amber; amber activities goes to red. The shaft movement computer model was updated to produce a more probabilistic approach to prediction, enabling engineers to indicate the reliability of predictions on deformation within the shaft systems.

MANAGING OUR HUMAN RESOURCES

The commitment and capability of our employees is key to the ongoing success and sustainability of Mount Isa Mines. The Xstrata North Queensland Operations Human Resources (HR) Strategy, and accompanying initiatives, supports this requirement through the development of individual capabilities and organisational culture.

In the year ending December 2006, Xstrata North Queensland Operations provided jobs for over 3,600 employees.

Developing vocational skills

Mount Isa Mines works closely with key stakeholders in the community to provide real and meaningful vocational career pathways for individuals, in careers that reflect the needs of our business. Our vocational skills development program aligns a number of key initiatives.

Training opportunities for school students

Our close involvement with secondary schools in the region introduces senior students to opportunities within the mining sector and provides on-the-job training which contributes directly to a recognised qualification (Certificate III or trade). These initiatives include a structured work experience and readiness program, traineeships, school-based apprenticeships, lead involvement in the Queensland Academy of Minerals and Energy, and school-based apprenticeships. In 2006, we awarded 16 bursaries worth $1,000 each to high-performing secondary school students involved in this program. A further 20 bursaries will be awarded in 2007.

Fostering apprentices

Xstrata's north Queensland operations spend close to $7 million a year on apprentice salaries, running the largest apprenticeship program in north-west Queensland. With 72 apprentices recruited into the business in 2006, and a further 74 coming into the business in 2007, our projected apprentice numbers will exceed 250 in 2007. Our apprenticeship program focuses on providing real employment and skills opportunities for people living in the region and currently targets more than eight key trades. In addition to new apprentices, Xstrata north Queensland offers up to 10 adult apprenticeships each year to existing employees who want to move into a vocational career path.

Skills centre

The opening of the Xstrata Skills Centre in 2006 demonstrated Xstrata's commitment to training. The centre, located in Mount Isa and staffed by 10 training professionals, incorporates a series of training rooms as well as metal fabrication, fitting, electrical and diesel workshops that provide state-of-the-art training facilities to the apprentices. Sixty-six apprentices completed their first year training at the centre.

Julian Nardoo and Simon Coles disassemble a 4-stroke engine as part of their training as school-based apprentices at the Xstrata Skills Centre during 2006. Both Julian and Simon have commenced full-time apprenticeships at the centre in 2007.

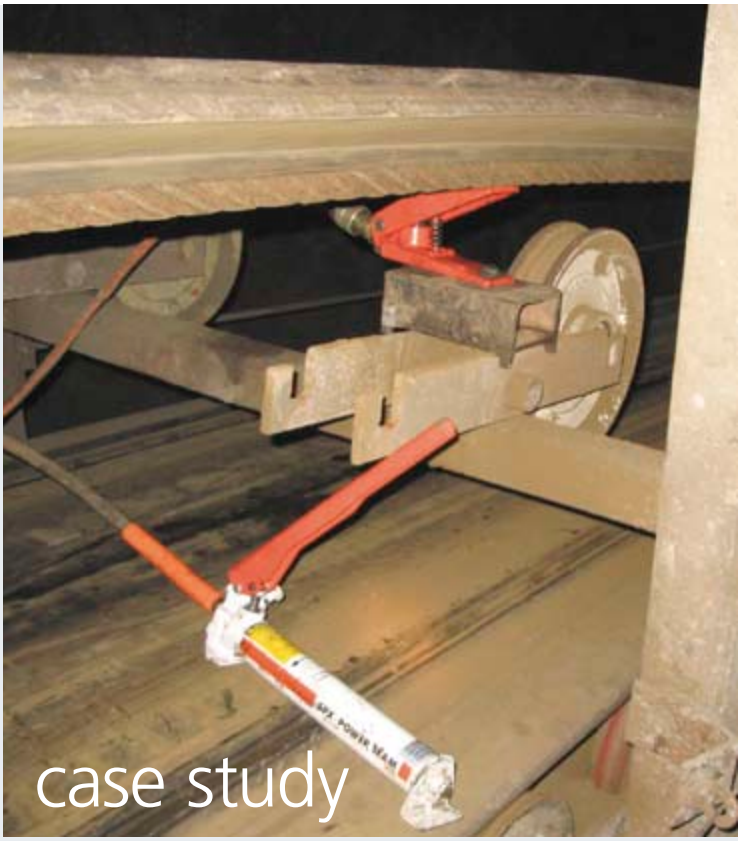
Developing professional skills

The ongoing development of technical and leadership skills is critical, not only for our ongoing success but for the sustainability of our industry. In 2006, Xstrata north Queensland increased the number of scholarships it supports from 12 to 22. The scholarship program provides support to students studying degrees in key skill shortage areas, including geology, mining engineering, mechanical and electrical engineering and metallurgy. The scholarship provides $24,000 to the student over three years and also guarantees vacation work with an Xstrata operation during this time. In 2007, Xstrata north Queensland will increase this program to more than 30 students with a contribution of $720,000 over three years.

In 2006, Xstrata north Queensland employed more than 100 university students in our vacation work experience program. Students worked in an Xstrata business unit and experienced life in a remote or regional Queensland community. The program provides excellent salaries as well as assistance with accommodation and transportation. We also employed 70 permanent graduates across regional and remote Queensland in 2006.

Building leadership

More than 500 people were involved in our leadership development program (LDP) in 2006. The LDP aims to articulate the role of a leader within the business and provide the required skills. Designed and delivered internally, it focuses on the real needs of the business and its leaders. Modules include leadership, coaching for performance, planning and communication.



case study

CABLE BELT POLY-WHEEL CHANGER

The hazards and time associated with changing the wheels on the Mount Isa Mines cable belt underground conveyor have been substantially reduced following the development of an innovative device known as the cable belt poly-wheel changer. The device was recognised with a 2006 Innovations Award at Mount Isa Mines for its practical workplace solution to a safety issue.

Two thousand poly wheels support the steel ropes of the two kilometre-long underground conveyor belt which transports ore from the X41 mine. Moving at 3.4 metres per second and transporting ore at 1,000 tonnes per hour, the poly wheels deteriorate quickly due to the load exerted on them. Around 4,000 poly wheels require replacement each year.

Previously the task of changing the poly wheels required two people using a pull-lift wrapped around the rope to lift the rope and belt off the poly wheel. The task took around 10 to 15 minutes and the awkward procedure exposed operators to manual handling crush injuries.

Maintenance Superintendent for Mine Production Crushing and Conveying, Lotar Krause, said he developed a suggested solution to the problem and passed the challenge of developing the device to graduate engineer Adam Beswick.

"Adam assembled a hydraulic hand pump, hose, hydraulic spreader and a base plate to change the wheels," he said. "The procedure involves positioning the base plate on the centre of the rocker arm and lifting the hydraulic spreader using the hand pump. This allows both poly wheels to be changed by one person in around two minutes."

Lotar said the crushing and conveying operations crew absolutely loved the new device.

"Sometimes you can't see the forest for the trees – the solutions are that simple," he said.

Caring for our environment

Xstrata is committed to the highest standard of environmental management and our goal is continual improvement in environmental performance.

We conserve the environment by managing risks and seeking opportunities to avoid, minimise and mitigate impacts through efficient use of natural resources, pollution control, waste management and biodiversity conservation.

As the business expands these sustainable practices are reflected in process efficiencies. The overall total of natural resources required and wastes generated have reduced as a proportion of the amount of product that is made available to the world markets.

OUR CHALLENGES

Xstrata's key environmental challenges in Mount Isa are to:

- minimise fresh water consumption and maximise process water reuse;
- maximise energy efficiencies to conserve resources and allow for expansion of operational activities;
- plan for effective progressive rehabilitation;
- minimise emissions to air from Mount Isa smelters and dust from surface operations;
- minimise waste generation and maximise materials recycling;
- manage impacts on the surrounding environment in conjunction with continual growth;
- promote a proactive environmental culture; and
- manage issues associated with lead in the environment in conjunction with Queensland EPA, Queensland Health, Mount Isa City Council and the Mount Isa community.

ENVIRONMENTAL COMPLIANCE

Mount Isa Mines was subject to a joint Environmental Protection Agency and Department of Mines and Energy compliance audit in October 2006. Operations were assessed against the two environmental authorities held under the *Environmental Protection Act 1994* and against the Mining Plan 2005–2010 under the *Mount Isa Mines Limited Agreement Act 1985*. The results were very positive with only six minor non-compliances identified. These non-compliances will all be addressed in early 2007.

During 2006 a mine plan variation was submitted to and accepted by the Department of Mines and Energy for the construction and operation of the Rowles Reserve Process Water Dam. The dam was built to replace the No 4 head tanks used for storing water reclaimed from tailings. The original tanks were decommissioned to allow for expansion of the Black Star open-cut.

« Environmental Adviser, Julie Boyer, checks vegetation on the green belt alongside the Mount Isa Mines Lease.

ENVIRONMENTAL PERFORMANCE

2006 Targets	Performance	2007 Targets
Mount Isa Mines		
Complete community health and perceptions study	→ Held over until Queensland Health completes lead in blood study	Complete community health and perceptions study
Implement EMS compliant to ISO14001	→ EMS compliant pending external audit	Complete external EMS audit to demonstrate compliance with ISO14001
Implement Lawlex Compliance Management System	→ Database development completed, integration into operations to commence 2007	Implement Lawlex Compliance Management System into operations
Develop surface water catchment models	→ Death Adder Gully completed; George Fisher Operations 70% complete	Complete George Fisher Operations surface water catchment model
Commission electrostatic precipitator dust leaching plant	✔ Leaching plant commissioned	
Progress towards 95% capture of sulphur dioxide in the copper smelter	→ Significant improvements made to the plant through gas capture, improved maintenance and communication with the SCF acid plant	Progress towards 95% capture of sulphur dioxide in the copper smelter
Install stormwater collection and recycling system at George Fisher mine	→ Pump equipment purchased	Finalise installation of stormwater collection and recycling system at George Fisher Mine
Establish field trials for final capping of waste rock dumps	→ Cover systems modelling complete	Establish field trials for final capping of waste rock dumps
Establish Greenhouse Challenge agreement	→ Greenhouse Challenge Agreement established	Revise greenhouse agreement to include the Xstrata Power Station
		Develop an environmental awareness handbook
		Complete 'whole of emissions' study to differentiate between natural forms of lead and those derived from smelting operations in the environment and assess potential health risks
		Review and refine National Pollutant Inventory (NPI) data collection processes and estimation techniques
		Establish Xstrata smelter project team
		Remove disused copper concentrator crusher building

✔ Achieved ✘ Not achieved → Action continues into 2007

A second mine plan variation was submitted to the Department of Mines and Energy in 2006 for the proposed Xstrata Power Station. In conjunction, one of Mount Isa Mines' environmental licences was amended to allow for the operation of the power station, and specific conditions attached.

Lady Loretta deposit

During 2006, environmental monitoring, including quarterly water sampling, was completed on the Lady Loretta deposit, now under Xstrata ownership following the acquisition of Falconbridge Ltd. In 2007, this work will continue and a new three-year plan of operations will be issued to the regional government authority. No significant environmental or safety events occurred on site during the year.

The pre-feasibility study and mineral resource statements were updated according to the Code for Reporting of Mineral Resources and Ore Reserves (JORC Code) 2004. A technical report, compliant with Canadian Rule NI 43-101 and respecting JORC Code (2004), is due to be issued in early 2007.

National Pollutant Inventory

Mount Isa Mines reported to the National Pollutant Inventory (NPI) for the Australian financial year 2005–2006 as per Federal Government requirements. Increases in emissions reported are directly related to increases in production rates. The NPI provides data on total emissions and identifies potential hazards associated with listed substances. Offsite impacts on human health and the environment are not addressed by the NPI. Emissions that fall within metres of a source on-site, are captured in the figures for total emissions and as such are not an indication of offsite environment and community exposure. Many additional factors must be considered to determine off-site impacts.

A review to refine data collection and emission estimation techniques will be completed during 2007.

Whole of emissions study

In 2006, discussions with regulatory authorities commenced to implement a program to assess potential risks associated with historical contamination in areas adjacent to the Mount Isa Mines operation. Previous remedial works were completed in 1991.

Xstrata Copper in collaboration with Xstrata Zinc have initiated a 'whole of emissions' study titled *'Land, Water, Air Emissions study into Human and Ecological Risk'* by a world class toxicologist. The study will focus on differentiating between natural forms of lead and those derived from smelting operations in the Mount Isa community and assess the risk to human and ecological health. The study will be completed in a consultative process with the Queensland Environmental Protection Agency, Queensland Health, Department of Mines and Energy and the Mount Isa City Council. Information generated by the study will be provided to those regulatory authorities as part of their overall initiative in assessing lead risk in Mount Isa. Results of the study will also be communicated to the community.

Emissions to air

Emissions monitoring, control and impact reduction from our mining, minerals processing and smelting operations on the community and environment of Mount Isa are a major aspect of environmental management at Xstrata's north Queensland operation.

Ambient lead-in-air (PM_{10}) concentrations in Mount Isa remained below the Mount Isa Mines Limited Agreement Act air standard for 90 day average in 2006.

The Ambient PM_{10} (dust-in-air) graph shows that the racecourse monitor exceeded the EPP (Air) Queensland standard. This was due to construction works taking place at the racecourse which will become Mount Isa's new rodeo ground in 2007. The two closest monitoring sites to our operations are BSD and RSL. All other monitoring sites remained below this detection limit throughout 2006.

Location of Mount Isa Mines' environmental monitors in the Mount Isa community. * TEOMs are real time dust concentration monitors.

Marc Katona, Instrument Technician, conducts an instrument maintenance check on one of the 10 sulphur dioxide monitors located in the Mount Isa community.

Managing emissions to air

At Mount Isa Mines we have a comprehensive sulphur dioxide and dust monitoring network to measure and manage the impact of emissions on the community.

There are 10 sulphur dioxide real-time monitoring stations located in the community to ensure that the smelters operate within accepted regulatory limits. Every resident of Mount Isa lives no more than 1,200 metres from one of these sulphur dioxide analysers. There are also five high-volume samplers scattered throughout the community to monitor levels of respirable (particles small enough to be breathed in) lead, cadmium and arsenic in the air. Lead levels are consistently well below the Mount Isa Mines licence limit of 1.5 micrograms per cubic metre, the Queensland state limits, and normally below the federal goal of 0.5 micrograms per cubic metre.

The copper smelter has achieved a 400,982 tonne per annum decrease in sulphur dioxide emissions since 2000. Xstrata Copper is targeting an increase from 80% to 95% capture and treatment of sulphur dioxide (SO_2) emissions from the Mount Isa copper smelter against the baseline established in 2000. In 2006 our emission reduction program included the start of progressive hood installations to the four copper smelter converters, and pressure balances to identify leaks in ducting and ventilation system. These efforts have contributed significantly to reducing fugitive emission releases and SO_2 emitted to the atmosphere. The program has produced improved coordination between the acid plant and copper smelter, as well as enhanced process control and acid plant efficiency.

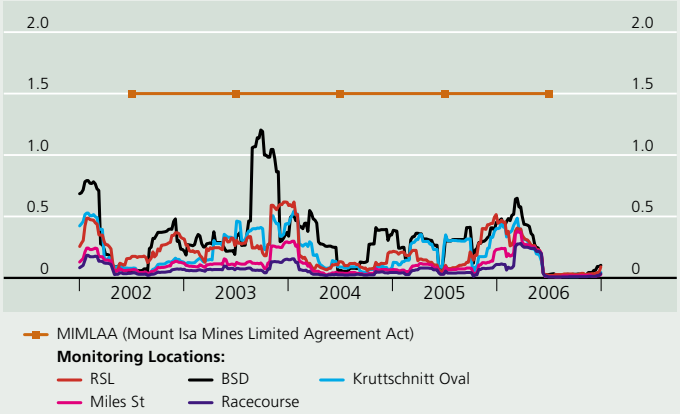
The lead smelter has achieved a 23,279 tonne per annum (17%) decrease in emissions since 2000. A new furnace cooling water system was installed to replace the old one which was interfering with the furnace operation. The new cooling water system will allow improved process control. Improvements to the quality of feeds for the lead smelter also further reduced emission levels, with the improved coke quality from Bowen Coke's operations during 2006 leading to improvements in the furnace performance and smelting reactions.

Dust generation is controlled primarily by regular watering of unsealed roads and by keeping vehicle traffic volumes and speeds to a minimum. Use of dust suppressant additives is now incorporated within Black Star open-cut, underground copper, and George Fisher surface and underground operations. Dust in sealed areas is managed with a heavy duty road sweeper.

Xstrata Zinc employee, Matt Ashkar, takes a sample of production off-gases from the lead smelter stack.

Ambient lead-in-air concentrations for monitored sites*

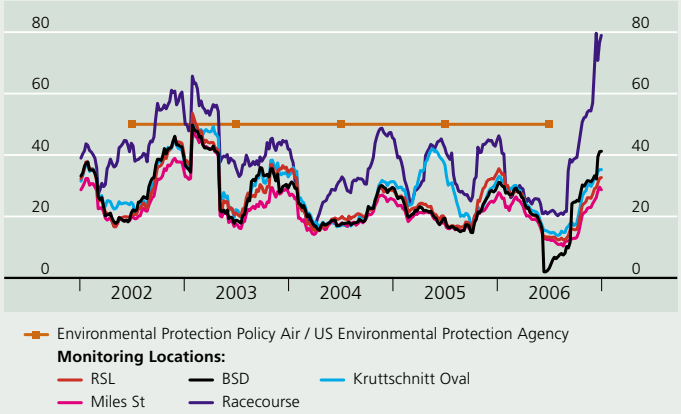
µg/m³ Lead – 90 day average measured in the Mount Isa community



The 'ambient lead in air concentration', as monitored by the high volume samplers across Mount Isa, remained well within regulatory requirements with low levels measured from May 2006 to October 2006. The lower levels can be partially attributed to predominant easterly winds during winter and spring.

Ambient PM_{10} (dust-in-air) concentrations for monitored sites*

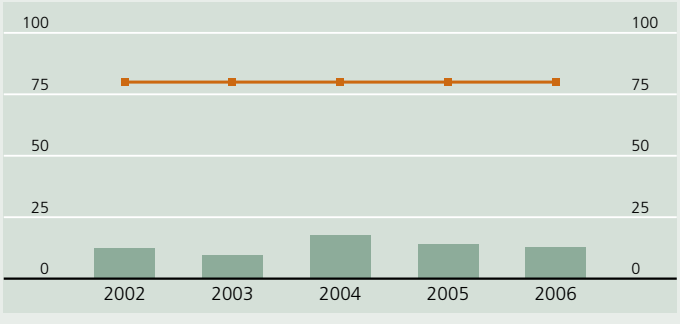
µg/m³ PM_{10} – 90 day average measured in the Mount Isa community



The ambient PM_{10} graph shows that the racecourse monitor exceeded the Environmental Protection Policy (Air) Queensland standard. This was due to construction works taking place at the racecourse which will become Mount Isa's new rodeo ground in 2007.

Annual average ground level sulphur dioxide concentrations*

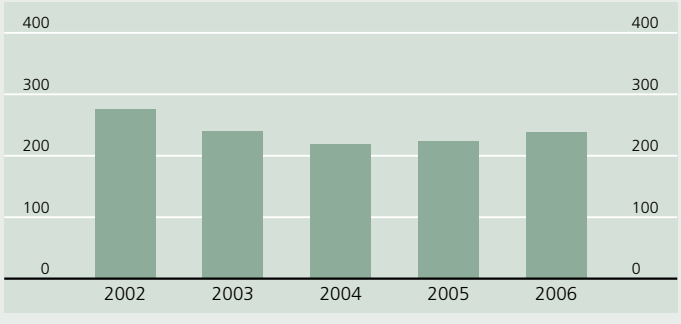
µg/m³ SO_2 – measured in the Mount Isa community



In 2006, our total annual sulphur dioxide emissions fell to 13 µg/m³ compared with 14 µg/m³ in 2005, and the annual average ground level sulphur dioxide concentrations in the Mount Isa community remained well within the licence limit.

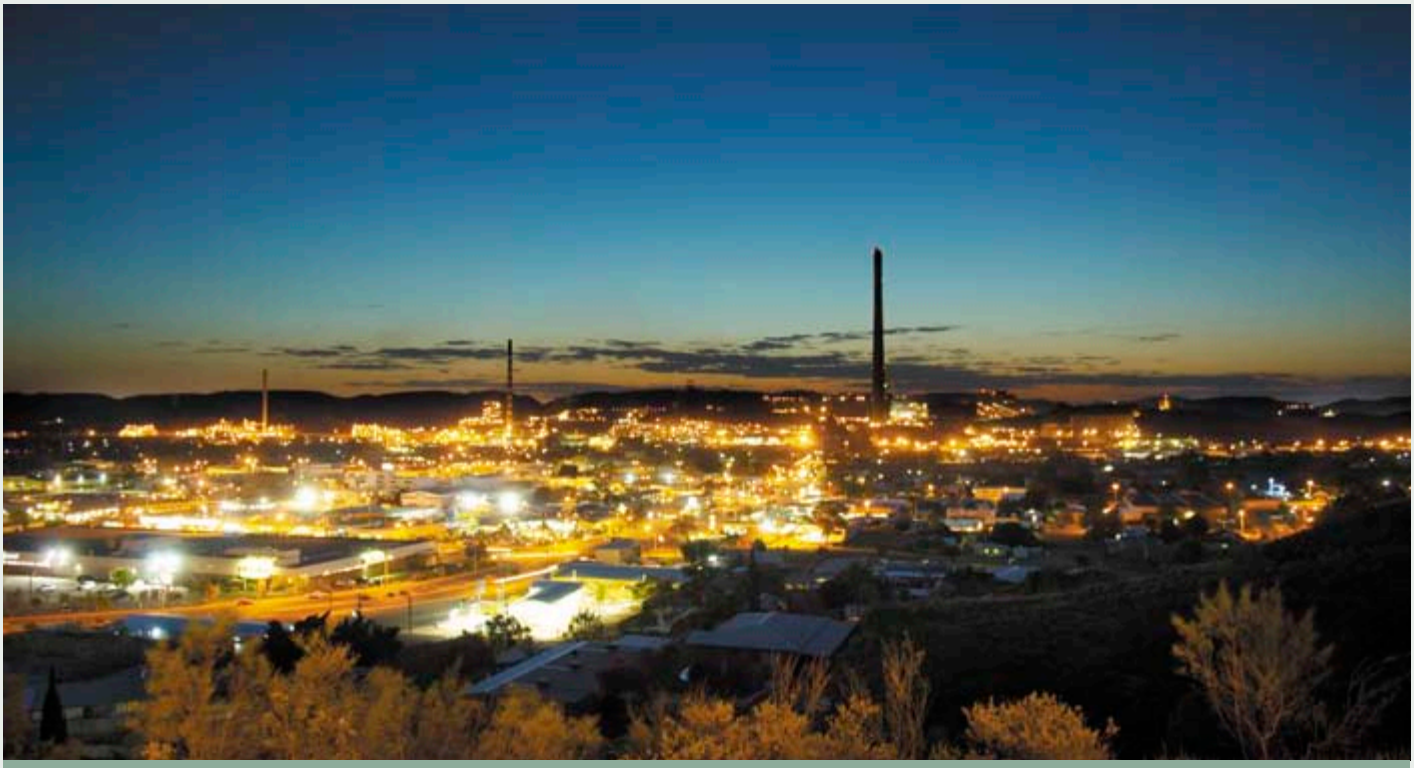
Annual sulphur dioxide emissions for Mount Isa*

Tonnes ('000s) – Mount Isa Mines operations



While emissions have been reduced through the emissions reduction program, increased production of copper anode has seen a resultant increase in total emissions since 2005 as reported in the National Pollutant Inventory (NPI).

* Graphs reported as a combined initiative between Xstrata Zinc and Xstrata Copper.



Mount Isa skyline. The Mount Isa community and the mine sit side by side. The mine is closely integrated into the day-to-day life of the community.

Managing surface and groundwater

There were 12 discharges of stormwater and process water off lease in 2006 from the copper and zinc-lead operations; all of which occurred during high rainfall events in the wet season. There was also a small primary treated sewage effluent discharge off lease. In 2006 ownership and responsibility for managing the surface water overflow points off lease was transferred to operational areas. This resulted in demonstrated ownership and an increase in capital and infrastructure committed to stormwater management.

Stormwater modelling of the Death Adder Gully catchment was undertaken during 2006. An external consultant reviewed the Death Adder Gully catchment and existing stormwater control infrastructure. The system was modelled against 117 years of rainfall data and recommendations for improved surface water management reported. Recommendations from the report are undergoing an engineering options review.

A series of stormwater improvements were completed in 2006. Expansion and improvement works included:

- increased volume and pump-back capacity at tailings seepage pond number 8 with an improved design to segregate clean stormwater;
- extension of railway pond capacity from 500 cubic metres to 1,500 cubic metres and increasing pump-back capacity to 40 litres per second;
- upgrades to the copper smelter slag pond and alterations to ensure diversion of stormwater runoff to holding pond;
- installation of overflow pipelines from the vulcaniser pit to the lead smelter super pit, greatly reducing the potential for off-lease discharges at this off-site overflow point; and
- Black Star open-cut drainage improvements aimed at minimising ponding and capturing as much water as possible for reuse.

In-depth groundwater studies are being undertaken at the Black Star open-cut mine and the proposed George Fisher open-cut site. The first phase of each study will address groundwater influences during the life of the mine, including interaction with the surrounding groundwater environment. The second phase of the study will address final void hydrology for closure.

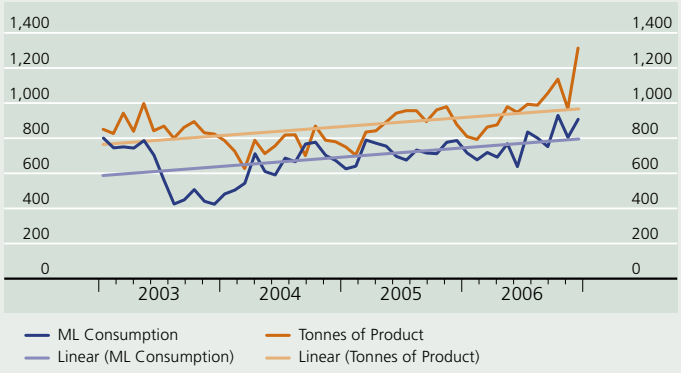
Water use

In 2006, Xstrata Mount Isa Mines purchased the Itron Enterprise Edition (IEE) energy management system. IEE enables operational areas to monitor real-time consumption of resources including electricity, compressed air and water on-line. The system will also enable plant managers and superintendents to identify machinery that is not working efficiently encouraging a proactive approach to limited resource management.

Throughout 2006 an assessment of the entire water system at Mount Isa Mines was completed. All meters were identified, and a plan

Relationship between water consumption and production*

ML per Month vs Tonnes



* Graphs reported as a combined initiative between Xstrata Zinc and Xstrata Copper.

case study

ZINC FILTER PLANT

The completion of a new $21.5 million zinc filter plant and zinc concentrate storage and loadout facility at Mount Isa Mines in 2006 has contributed to a steady reduction in zinc particulates. Monitoring at the adjacent air quality monitoring station has shown a 75% decrease in the zinc concentration from dust deposition results since the construction of the concentrator storage shed.

The new zinc plant is now fully contained, with the zinc filter building recirculating materials within its fully bounded facility. Any spills from the suite of pumps and filters that are housed within the area are collected and retained within the facility. The construction of the storage and filtration shed has reduced the capacity for material to be moved by stormwater within the site and the enclosed zinc concentrate facility significantly reduces zinc dust emissions.

Zinc concentrate slurry is pumped from the zinc-lead concentrator to stock tanks for storage, and these are located within the new bounded zinc filter plant facility. When required, the slurry is fed to the two pressure filters for moisture removal.

The new filters are capable of producing 700,000 tonnes per annum of dried concentrate, nearly doubling the previous production rate. This process results in a filter cake product of 9.5% moisture content which is then loaded onto a 147 metre-long conveyor for storage within the enclosed concentrate storage shed which has the capacity to house 14,000 tonnes of concentrate.

The facility has been built 'inside out' to eliminate build-up of zinc concentrate. All framework and support beams are visible on the exterior of the shed, and cladding of the walls and roof of the shed inside the beams provide a smooth interior surface.

The state-of-the-art loadout facility has been constructed over a railway line, allowing trains to pull into the shed and for the concentrate to be loaded into carts and covered inside the shed.

developed for meter replacement and installation in 2007. All water use rates and costs will be accessible electronically through the IEE system.

Based on 2005 and 2006 statistics, we identified a very strong relationship between water consumption and tonnes produced and processed. As production has increased, water use has increased at a similar rate. In 2007 our focus on reducing water consumption through improved process water recovery will continue.

Energy and greenhouse

In 2006, Xstrata north Queensland joined **Greenhouse Challenge Plus**, a partnership between industry and the Australian Government to manage and, where practicable, abate the greenhouse gases production. In 2007, key performance indicators using the IEE system will be established for reporting to the Australian Greenhouse Office.

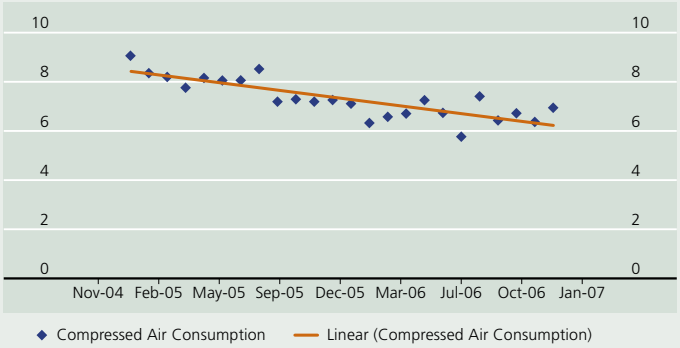
Energy consumption monitoring has been incorporated into the IEE energy management system to enable review and management of data and energy costs by energy users within the operations on a frequent basis.

We continued our focus on reducing compressed air consumption, which is directly related to energy consumption, in 2006 and this work has produced excellent results to date. Compressed air consumption has decreased by 23% since the first quarter of 2005.

The **Energy Breakthrough project** achieved significant reductions in the demand and consumption of energy at Mount Isa's operations. The initiatives focused on resource wastage, and like the compressed air example, energy consumption reductions were achieved through improved maintenance and operating practices. Since the first quarter of 2003 energy use per tonne of product has reduced by about 7%.

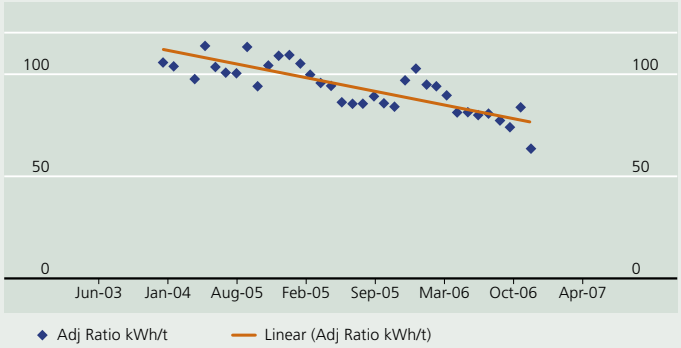
Compressed air consumption*

m^3 (million)



Energy use per tonne of product*

kWh (kilowatt hours) per Tonne (t) – Mount Isa Mines



* Graphs reported as a combined initiative between Xstrata Zinc and Xstrata Copper.

Caring for our environment

Black Star Open Cut pit. Environmental Advisors are heavily involved in correct handling of waste rock from the pit and in controlling dust generation.

Biodiversity

A Biodiversity Strategy and Operation Guideline was developed as part of our progress towards the Xstrata HSEC Biodiversity and Land Management Standard. This standard requires Mount Isa Mines to develop and implement scientifically sound technologies and procedures for the effective management and conservation of biodiversity and rehabilitation of disturbed land to a planned post closure use.

Mount Isa Mines' biodiversity commitments are:

- responsible stewardship of land under our management;
- identification of biodiversity conservation opportunities; and
- involvement of the community and relevant stakeholders in the management of identified biodiversity issues.

The long history of mining operations at Mount Isa creates challenges in terms of establishing biodiversity values that are appropriate for the operation. Following the Queensland Environmental Protection Agency regional ecosystem guidelines, we have established the biodiversity status of the ecosystem types in the Mount Isa region and across our operations on mining lease 8058 (ML8058).

In developing the Biodiversity Strategy several areas of biodiversity significance were identified in the region as significant due to the Queensland Environmental Protection Agency biodiversity conservation status recommendations. The International Union for the Conservation of Nature and Natural Resources (IUCN) Red List also indicated species of biodiversity significance that occurred within and in surrounding areas of ML 8058. This included habitat for the 'near threatened' listed Carpentarian Grass Wren located north of the Mount Isa lease. The strategy was designed to ensure areas of significance are managed appropriately. It has also identified opportunities for several initiatives for biodiversity management such as weed control, vegetation mapping and propagation.

Safe mine completion and rehabilitation

Demolition of the fluo solids roaster (FSR) was completed in 2006 following strict internal procedures to minimise emissions to air, land and water and to carefully manage waste. More than 7,000 tonnes of scrap metal was recycled. During the year demolition of the copper concentrator crusher building commenced which is expected to be completed by April 2007. From the project's commencement the Environment Department worked closely with the demolition contractor to mitigate environmental and community risks from dust, noise and stormwater runoff.

Detailed demolition estimates are being conducted for all infrastructure at Mount Isa Mines. When produced these will be used to refine completion liability estimates allowing for accurate completion planning and financial reporting. Engineers across the site compiled more than 6,000 structural drawings and photos of all major facilities at Mount Isa Mines and George Fisher mine to support the development of the demolition estimates.

Modelling of moisture store-and-release cover systems for planning completion of the Black Star open-cut waste rock dumps was undertaken in 2006. Cover system trials will be initiated in 2007. Xstrata Zinc is a major sponsor of an Australian Centre for Minerals Extension and Research research project, *Designing Effective Store-Release Covers for the Long-Term Containment of Mine Waste – the Role of Vegetation*. Additional trials will be developed as part of this research project. Successful cover systems developed for the Black Star open-cut waste rock dumps can then be adopted across the rest of Mount Isa Mines to close out other final mine landforms.

Managing waste

The total waste management system established in 2005 has continued to evolve, with a new waste management contract established in 2006. The contract is implemented through the entire site using the 'polluter pays' principle. Waste costs are distributed to departments based on the volume they produce, with the incentive that any money received through scrap steel recovery in their area is credited back to the owner of that area. Mount Isa Mines almost doubled scrap metal recycling in 2006, from an average of 110 tonnes per month to 180 tonnes per month, with a significant proportion resulting from the recovery of redundant copper cable by the underground operations.

case study

« New fabricated cover on the Converter Secondary Ventilation Hood significantly reducing the air infiltration.

EMISSIONS REDUCTION SUCCEEDING

Fewer fugitive emissions and significant gains in the sulphur dioxide (SO_2) gas capture rate at the Mount Isa copper smelter are demonstrating that its emissions reduction program is proving successful. Capture rates of SO_2 measured towards the end of 2006 were regularly exceeding 85% and once all converter hoods are operational, the SO_2 capture rate will exceed 90%.

During the converting process, molten matte with 60% copper is oxidised to produce blister copper, slag and sulphur dioxide.

The converter gases contain 6% to 8% sulphur dioxide and are further processed to produce sulphuric acid. A gas capture system has been installed above the converters consisting of water-cooled panels that cool the hot gases leaving the converter before being sent to the acid plant. Cooling the converter gas helps to control the total volume and increases the capture rate of SO_2 at the acid plant.

During the copper smelter shutdown the ISASMELT, Rotary Holding Furnace and anode furnaces were re-bricked, the hygiene ventilation duct system between the smelter and acid plant was repaired and improved, and new water cooled panels were installed on the No 4 converter. The hygiene ventilation system improvements included the redesign of the doors and covers on the converter secondary ventilation, to improve the flow of SO_2 process gases and reduce the crane aisle emissions level. Reducing the ingress of air has helped keep the SO_2 concentration higher in the delivery gas to the acid plant and captured greater levels of SO_2.

A converter hood replacement program is well underway which is expected to be complete by the end of 2007. These hoods will make a significant contribution to capturing fugitive emissions.

Administrative controls, including improved communication between the acid plant and copper smelter operators and management, have played an important part in the SO_2 capture program. Improved shutdown coordination and planning between the copper smelter and acid plant is minimising the time that emissions cannot be diverted to the acid plant. The introduction of a nine-hour converter schedule is improving synchronisation between the converters and other activities within the smelter.

The long-term goal of the copper smelter's emissions reduction program is 95% capture of SO_2. If the successes to date are any indication, Mount Isa Mines is well on its way to achieving that goal.

Twenty-two thousand tonnes of waste was sent to the landfill in 2006 and 2,630 tonnes of scrap steel was recycled. Mount Isa Mines also retrieved about 19 tonnes of paper and cardboard for recycling during 2006. After joining the 'Cartridges 4 Planet Ark' toner cartridge recycling program during the year, we diverted more than 70 kilograms per month of toner cartridges from the landfill.

Mount Isa Mines and the Mount Isa City Council held an amnesty for hazardous household waste as part of the Clean Up Australia Day activities. We coordinated safe disposal of the waste and also assisted in removing illegally dumped car bodies from around the town.

Cultural heritage

In 2006 the zinc-lead operations conducted a cultural heritage assessment on 220 hectares at George Fisher mine for the widespread drilling program being undertaken for the proposed mine development.

The mine's environmental advisers spent three days with 11 indigenous representatives from the Kalkadoon Land Council walking the ridges and open country of the Handle Bar Hill area. Numerous artefacts were found across the region including stone axes, stone knives, and spear heads. The assessment was a resounding success. While on site, the Kalkadoon Land Council members taught Mount Isa Mines environmental advisers about some of the local bush tucker and medicinal plants, including the bush orange, grape, cucumber and banana.

Members of the Kalkadoon Land Council undertook a Cultural Heritage Survey at George Fisher Mine during 2006 with Julie Boyer, Xstrata Zinc Environmental Adviser.

Caring for our community

We believe that the wellbeing of our employees, their families and the communities in which we operate is crucial to maintaining our social licence to operate.

Xstrata's north Queensland operations have made a significant contribution for more than 80 years to the economic and social wellbeing of Mount Isa and its surrounding regions. Mount Isa is experiencing a new era of growth, with its population now exceeding 23,500 and continuing to increase, largely due to the expansion of Xstrata's operations and the subsequent employment and business opportunities.

Redevelopment of the Buchanan Park complex is underway following Xstrata's $1 million donation to the project.

Xstrata Community Partnership Program

The Xstrata Community Partnership Program North Queensland was established in 2004, reflecting our belief that local communities should benefit from our operations, both in the short and long term. The initial three-year program commenced in 2005 as a $4 million program that supported 34 community initiatives in the north Queensland communities of Mount Isa, Cloncurry, Townsville and Bowen.

In keeping with Xstrata's Corporate Social Involvement (CSI) Policy, the program's initiatives focus on the following areas:

- enterprise and job creation;
- education;
- environment;
- social and community development;
- health; and
- arts and culture

Our initiatives in these areas seek to actively promote partnerships with communities; training, welfare and education organisations; and state and local governments, for the betterment of our community.

« Year 3 students from Happy Valley State School visited Xstrata's display at the 2006 Mount Isa Mining Expo.

SOCIAL RESPONSIBILITY PERFORMANCE

2006 Targets	Performance	2007 Targets
Mount Isa Mines		
Introduction to boiler making to be added to indigenous training program	→ Indigenous training program extended to include heavy vehicle training and licensing	Continue to expand indigenous training program into other areas of Xstrata's mining operations
Continue commitment to the existing scholarship and bursary program and award an additional 10 scholarships and bursaries	✔ Scholarships increased from 12 to 22 and 16 bursaries awarded to local students	Further expand program by awarding additional 8 scholarships and 4 bursaries
Further expand apprentice intake to 70	✔ Apprentice intake increased to 72 full-time apprentices	Continue to expand apprentice intake to 74
		Complete community attitude survey in Mount Isa
		Continue to develop systems to encourage indigenous trainees into apprenticeships
		Develop cultural awareness training course for Xstrata staff
		Develop an Indigenous Relations strategy

✔ Achieved ✘ Not achieved → Action continues into 2007

It is delivering real improvements to the communities where Xstrata's employees and their families live and work, and the community has responded positively. The program has been extended in 2006 and now supports more than 60 initiatives in north Queensland, with a total program value of $5.87 million.

A range of new partnership projects commenced in 2006 including:

Artists-in-residence school program

Students at Barkly Highway State School, known for its innovative dance, drama and art curriculum, are enjoying the benefits of two artists-in-residence programs – the result of $30,000 in funding from Xstrata. The dance artists-in-residence program introduced students to creative dance and provided professional development to teachers at Barkly and other local schools. The visual artists-in-residence program culminated in the creation of two large murals by all the students in the program. Xstrata will continue to fund the programs in 2007 and 2008, having committed additional funding of $40,000.

Rodeo arena

Mount Isa, home of the rodeo, will soon have a major new venue for staging rodeos and exhibitions. In 2006 work commenced on the construction of a 2,000 square metre pavilion and rodeo area as part of the Buchanan Park Redevelopment Project. Xstrata contributed $1 million to the project which involves the federal and state governments and the Mount Isa City Council. On completion, the park will be transformed into an outdoor venue capable of hosting the city's major events such as race meetings, the annual rodeo, mining expo, show and campdraft.

SimBaby extends medical training

Following the initial success of the SimMan adult-size medical mannequin, purchased by the James Cook University Mount Isa Centre for Rural and Remote Health (MICRRH) with Xstrata funding for training medical staff, a SimBaby infant-size medical mannequin was purchased with additional funding from Xstrata in 2006. During the year Xstrata extended its partnership with MICRRH by committing a further $110,000 over three years. Since the partnership's inception in 2005, more than 200 medical staff from Queensland Health and the Royal Flying Doctor Service have been trained on the mannequins.

Fifth and sixth year medical students undergo training on SimMan with Mount Isa Centre for Rural and Remote Health's Director, Dr Dennis Pashen.

Xstrata Community Partnership Program
North Queensland

Caring for our community

A selection of Xstrata's north Queensland Community Partnership Program initiatives in 2006 are listed below.

Project	Partner	Description	Funding and timeframe	Status/update
Enterprise and job creation				
Centacare indigenous employment and training	Centacare Employment Mount Isa	Further develop Indigenous Employment Initiative to identify and exploit employment opportunities for Indigenous job seekers in the north-west minerals province	$150,000 from 2005 to 2007	Appointed a full-time Indigenous Support Officer. Developed an industry-specific (mining) training program. Around 50 trainees completed program and many have found employment in mining industry
Arilla Indigenous Women's Paper Mill	Arilla Paper	Update equipment and increase training opportunities for local Indigenous women to develop high quality paper products	$45,000 from 2005 to 2007	Equipment purchased enabling pulp production to be doubled
Education				
Multimedia Learning Development Centre	Townview State School	A new multimedia centre to educate students and teachers in technology and IT skills	$160,000 from 2005 to 2007	Centre established with 20 new computers and associated equipment purchased and permanent computer technician employed
Youth Pathways Program and multimedia initiative	Spinifex State College	Alternative school curriculum for at-risk school students; new digital multimedia centre for senior students	$250,000 from 2005 to 2007	47 students enrolled in program during 2006; multimedia studio established, software purchased and teacher training provided
Social and community				
Youth program for children in care	Centacare Mount Isa	Four youth group play therapy programs a year to assist children in care and who are victims of abuse	$60,000 from 2005 to 2007	30 children have benefited from these programs
Mount Isa home skills support development project	Mount Isa Community Development Association	Education and training in basic life skills for disadvantaged people living in community housing	$110,000 from 2005 to 2007	Needs analysis completed; training modules developed and implement with clients of 40 households
Life-saving projects				
SimMan and SimBaby	James Cook University Mount Isa Centre for Rural and Remote Health	Artificial simulators (medical mannequins) to improve training of health professionals in advanced procedural and emergency situations	SimMan $135,000 from 2005 to 2007; SimBaby $110,000 from 2006 to 2008	More than 200 medical staff trained on the mannequins. Training sessions video taped for assessment
Mount Isa Teaching Medical Centre	Mount Isa City Council, Mount Isa District Health Service, Mount Isa Centre for Rural and Remote Health, North and West Queensland Primary Health Care	Establish a teaching medical centre to increase the number of full-time equivalent general practitioners from 3.5 to 9.5; decrease patient numbers at the accident and emergency section of the Mount Isa Hospital	$350,000 from 2006 to 2008	This program is still in its establishment phase
Health				
Diabetes Centre	Queensland Health	A centre to provide consistent, modern diabetes management, including a diabetes educator for outlying Indigenous communities	$150,000 from 2005 to 2007	Centre established in Mount Isa; treated and advised more than 1,700 patients; diabetes educator presents workshops for health workers in indigenous communities and provides information sessions for community groups
Enhance RFDS capabilities	Royal Flying Doctor Service (RFDS)	Provide funding for RFDS to purchase medical equipment	$45,000 from 2005 to 2007	Oxylog 3000 portable ventilator purchased; latest technology satellite phone and tracking system installed to rescue and retrieval aircraft
Arts and culture				
Arts and cultural enrichment with live performances	Queensland Arts Council	Each year the Queensland Arts Council brings a production on tour to Mount Isa and Cloncurry	$225,000 from 2005 to 2007	Two productions have visited Mount Isa, providing entertainment and workshops for aspiring actors, dancers and musicians

DIABETES SERVICE MAKING A DIFFERENCE

More than 1,700 people with diabetes in the Mount Isa region have received free treatment and advice for their condition since the Mount Isa Diabetes Service commenced in 2005. Established by Queensland Health, with funding assistance from Xstrata North Queensland, the service targets prevention, early intervention, treatment and self management of diabetes.

Diabetes is a serious chronic health problem that affects seven per cent of Australians. However, the rate of diabetes among indigenous Australians is 24 per cent. Almost a quarter of Mount Isa health service district's population is indigenous, therefore the demand for diabetes management and education is high.

The Diabetes Service provides a free 'one-stop-shop' community clinic which diagnoses diabetes and assists adults, youth and children, as well as women suffering gestational diabetes, to manage their illness.

The service's Diabetes Educator, Darlene Russell, provides advice to general practitioners in Mount Isa on the treatment of patients with diabetes, visits many local community groups and organisations on a regular basis to provide information on managing diabetes, and travels to outlying indigenous communities where she runs diabetes workshops for health workers.

"There is no lack of customers because unfortunately diabetes, especially Type 2, is on the increase," Darlene said. "There are around 12 children in the district with Type 1 diabetes who come to us, whereas there are a few thousand people with Type 2. This is largely due to changes in diet and lifestyle, particularly in young people."

The biggest challenges she faces are the sheer number of people with diabetes, language and literacy barriers, and the tyranny of distance.

To help break down the language and literacy barriers, she works as a team with the health workers and social workers from the indigenous communities.

"The lifestyle of the indigenous people is quite different to non-indigenous Australians and you need to spend time getting to know them and their families," she said. "They also prefer learning as a group and often bring their family members in with them."

Over the past year Darlene visited Doomadgee, Camooweal, Dajarra, Mornington Island, Normanton and Karumba and her efforts are paying off.

"I'm now getting new health workers from the communities ringing me with questions and wanting resource information to help their clients with diabetes. They have found my visits and in-service education very helpful," she said.

Darlene said diabetes education was "largely about educating people about diet and exercise".

"Many people don't need to go on medication – they can manage their diabetes without it," she said. "But they need the correct information and support to do so."

- **Raw Metal Dance Company**

The community was entertained and aspiring dancers and percussionists were treated to a series of remarkable workshops when the Raw Metal Dance Company and master drummer Grant Collins visited Mount Isa during 2006. The dance company members are leading exponents of rap, tap, break dance, funk and hip hop. The visit was made possible by the Queensland Arts Council's partnership with Xstrata, which has committed $225,000 for projects in 2005 to 2007 and an additional $255,000 to extend the partnership through to 2009.

- **Apprentices and trainees**

Our apprenticeship program, school-based workplace training, graduate recruitment and development, vacation employment and scholarship programs are vital to our continued success and long-term sustainable business strategies. In 2006 we took on 72 new apprentices, awarded 22 scholarships to students studying degrees in key skill shortage areas, employed more than 100 students for vacation work experience, employed 70 permanent graduate employees and awarded 16 bursaries to high school students.

DONATIONS AND SPONSORSHIPS

In addition to the Xstrata Community Partnership Program in north Queensland, Xstrata spent more than $478,000 on sponsorships, donations and other community support initiatives, with close to $300,000 spent on initiatives in Mount Isa. These initiatives included:

- sponsorship of Mount Isa Rotary Rodeo;
- major sponsorship of Outback at Isa tourist attraction;
- donations to welfare, health care, education, sporting, cultural, environmental, Indigenous and arts projects;
- major sponsorship of the Mount Isa Mining Expo; and
- funding of Indigenous training program in Mount Isa which prepares local indigenous people for full-time positions at the mine.

Students from Townview State School in Mount Isa work on colourful additions to the murals created as part of the artists-in-residence program.

COMMUNITY ENGAGEMENT AND COMMUNICATION

Engaging with our local communities is critical to our understanding of relevant regional issues. Sharing clear, open and honest information on our activities is also equally important to our social licence to operate. During 2006 we communicated with employees, contractors, stakeholders, local organisations, community members, visitors and other interested parties using the following methods:

- three community information sessions to share information on Xstrata's operations and allow questions from community members;
- an information session for key local stakeholders regarding Xstrata's proposal to build a 30 megawatt gas fired power station during 2007;
- increased content and circulation within the community of our Mine to Market newsletter;
- monthly contributions to an industry and innovation liftout in the local newspaper to keep members of the community informed about our operations;
- representation on many local committees and membership of community development organisations;
- regular contact and follow up with partners in the Xstrata Community Partnership Program North Queensland;
- attending many local and regional events;
- conducting regular surface tours of the mining operations in conjunction with community tourism organisations;
- visiting local schools to explain mining processes to students studying mining units in science
- anniversary dinners for long-term employees celebrating 20, 30, 40 and 50 years of service; and
- completing and distributing the 2005 Xstrata North Queensland site sustainability reports throughout the communities in which we operate.

Valuing feedback

Following our successful community perception survey in 2005, we developed an action plan for implementation in 2006 to address issues of concern expressed by the community with a renewed focus on the long-term future of the mines in Mount Isa. Xstrata will conduct a community attitude survey and a follow-up community perceptions survey in 2007 which will allow us to determine where our efforts have been successful and to identify emerging areas where additional action may be needed.

Members of Raw Metal Dance Company visited Mount Isa during 2006 as part of the Xstrata Community Partnership Program north Queensland.

Handling complaints and enquiries

Mount Isa Mines operates a 24-hour community information telephone line from its Air Quality Control (AQC) centre to manage complaints and enquiries and to provide feedback to callers. The centre has 15 monitoring stations throughout the city that monitor ambient sulphur dioxide levels in the air. These in turn direct operations at Mount Isa Mines' smelters and Southern Cross Fertiliser's acid plant.

In 2006, complaints received by Mount Isa Mines fell by 40%. All complaints are handled by members of the Community Relations team and complainants are responded to promptly. Most commonly, Mount Isa complaints are associated with sulphur dioxide emissions and callers are advised of current AQC centre status. As a result of wind blowing over the city, the copper smelter was shut down for a total downtime of 657.6 hours and the lead smelter for a total downtime of 200 hours to control sulphur dioxide levels in Mount Isa.

Mount Isa community complaints

No.	Description	Action taken
39	Sulphur dioxide levels in the community	Complainants advised of AQC status and any action being taken
1	Vibration causing cracking of house foundations	Investigation into noise and vibration data from previous years

Glossary

AQC – Air Quality Control centre
The centre monitors sulphur dioxide emissions and weather conditions and directs the operations of the Mount Isa Mines smelters to control sulphur dioxide concentrations within license limits.

Biodiversity
An abbreviation of "biological diversity" that means the variability among living organisms from all sources, including land based and aquatic ecosystems of which they are a part. These include diversity within species, and of ecosystems.

Completion Plan
A formal document detailing a costed conceptual outline of how the operation will be completed, taking into account the options available to deal with prevailing social and environmental issues.

DI – Disabling Injury
Calculated as lost time injuries plus restricted work injuries (LTI + RWI).

DIFR – Disabling Injury Frequency Rate
Disabling injury frequency rate = DI x 1,000,000/hours worked.

DISR – Disabling Injury Severity Rate
Disabling injury severity rate =
(LTI days lost + RWI days lost) x 1,000,000/hours worked

EMS
Environmental Management Systems.

EPA
Environmental Protection Agency.

EPP air goal
Maximum levels for air quality indicators to be progressively achieved as part of achieving overall Environmental Protection Policy objectives.

Fatality
A death resulting from an occupational injury or disease/illness and identified within the reporting period.

Gj
Gigajoules (a thousand million joules).

Greenhouse gas
Any gas that absorbs infra-red radiation in the atmosphere, causing the warming of the earth's atmosphere.

HSEC
Health, safety, environment and community.

IEE
Itron Enterprise Edition.

ISO
International Standardisation Organisation.

ISO14001
The International Standardisation Organisation's standard for environmental management systems.

LTI – Lost Time Injury
An occupational injury or disease that results in days away from work on any rostered shift subsequent to that on which the injury occurred. A fatality is also recorded as an LTI.

LTIFR – Lost Time Injury Frequency Rate
Lost time injury frequency Rate = LTI x 1,000,000/hours worked.

ML
Megalitres (1 megalitre = 1,000,000 litres or 1,000 kilolitres).

µg/dl
Micrograms per decilitre.

µg/m²/day
Micrograms per square metre per day.

NOHSEC
National Occupational Health and Safety Commission.

Particulate emissions
Controlled discharges from stacks containing microscopic solids in the form of dust or smoke.

PAS
The Panel Assessment Study into the impact of sulphur dioxide emissions from the Mount Isa Mines smelters – established by Mount Isa Mines in cooperation with the Queensland EPA in 1997.

PASS
Positive Attitude Safety System.

PM_{10}
Particulate matter less than 10 microns in size.

Raw water
Untreated water extracted from groundwater, dams or rivers.

Recycled water
Recycled water is water:
- that has been used at least once in a process within the operation or at another operation; and
- that would otherwise be part of a waste stream; and
- if not re-used, would require the input of raw water.

Rehabilitation
In this report, rehabilitation is defined as disturbed areas that have been prepared for rehabilitation and seeded.

RWI – Restricted Work Injury
An occupational injury or disease that results in a person being physically or mentally unable to perform all or any part of his/her normal assignment during any rostered shift subsequent to that on which the event occurred.

Social Involvement Plan
A plan produced by each Xstrata commodity business to set out engagement with local communities detailing the range of initiatives to be undertaken and the resources, financial and otherwise, dedicated to this area of the business.

Tailings and tailings dams
The fine fraction of waste rock remaining after the mining and on-site processing of mineral resources. This consists of finely ground particles and traces of process reagents and chemical residues. Tailings are piped into engineered impoundments known as tailings dams, which are developed, operated, monitored and maintained to prevent seepage and water contamination both during and after mining operations.

TEOMs
Tapered Element Oscillating Microbalances.

TRI – Total Recordable Injuries
A measure that includes:
- lost time injuries (including fatalities);
- restricted work injuries (RWI); and
- medical treatment injuries (MTI).

TRIFR – Total Recordable Injury Frequency Rate
Total recordable injury frequency rate =
(LTI + RWI + MTI) x 1,000,000/hours worked.

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