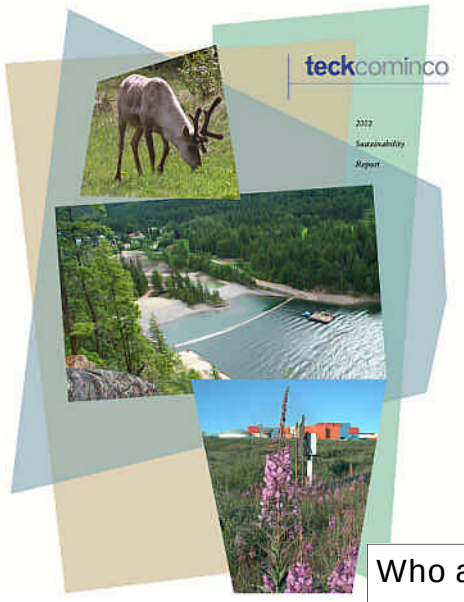
teckcominco

2002 Sustainability Report



On the cover:
Top: Caribou grazing on the reclaimed waste dumps at the Bullmoose Mine. The work done here won the 2002 B.C. Mine Reclamation Citation.

Middle: Aerial view of Galena Bay at Bluebell Mine. The work done here won the 2002 B.C. Mine Reclamation Award.

Bottom: Red Dog Mine.

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Who are we?

Teck Cominco Limited and its subsidiary and associated companies ("Teck Cominco"), are a diversified mining, smelting and refining group headquartered in Vancouver, British Columbia. At the end of 2002, Teck Cominco held interests in eight producing mines in Canada, the United States and Peru, mining zinc, copper, lead, gold and metallurgical coal from both open-pit and underground operations. Teck Cominco Metals Ltd., a wholly-owned subsidiary, produces zinc, lead and a number of by-product metals and chemicals through its two refining facilities in Canada and Peru.

Revenues in 2002 were Cdn$2.2 billion and net earnings were Cdn$30 million. The company has 8,183 shareholders and 5,631 employees.

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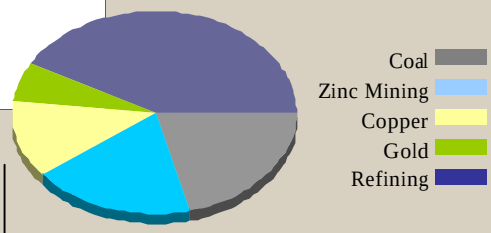
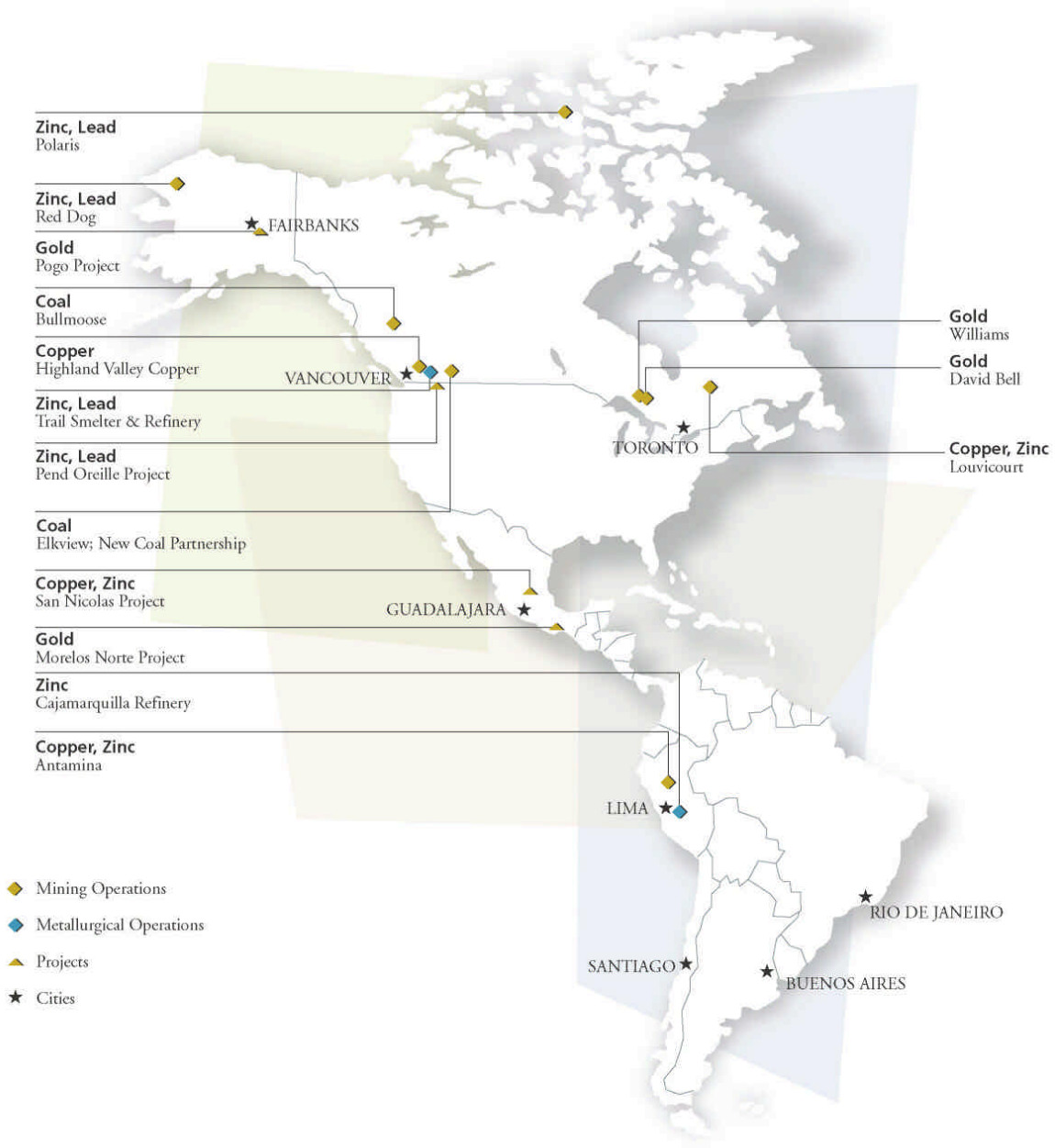
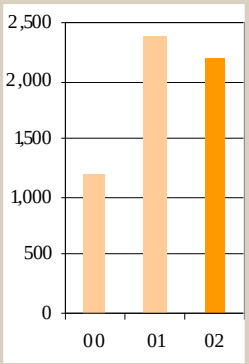


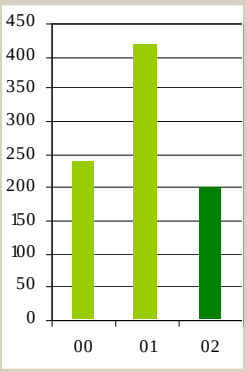
2002 Revenue by Product
$2.19 Billion



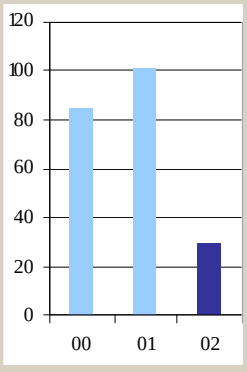
> revenue
> $millions



> cash flow
> $millions



> net earnings (before asset writedowns)
> $millions



DAVID A. THOMPSON
Deputy Chairman and Chief Executive Officer

Teck Cominco is committed to sound and responsible business practices in every aspect of its activities. In 2002, Teck Cominco undertook a critical review of its corporate governance practices and was guided by proposed new governance rules being considered by U.S. and Canadian securities regulators.

As a result of these reviews, the Board of Directors adopted a revised Charter of Corporate Responsibility and Code of Business, Environmental and Health and Safety Practices at its November meeting in 2002. The company also adopted a revised set of standards for environment, health and safety management based on ISO 14001 and adopted a complementary set of guidelines for the corporate environmental audit program.

The company established a new Environment, Health and Safety Committee of the Board in this past year. This committee will oversee management's handling of environmental issues and will set goals for environmental, social and safety performance for the company. The Corporate Environment and Risk Management Committee, comprised of senior officers, continues to establish priorities and directions for the day-to-day environmental, health and safety programs. Direct accountability for these areas is with operations' management across the company.

The test of good governance is reflected in results achieved through operations and other corporate activities. In 2002, Teck Cominco received recognition for positive action from a number of agencies. The company won the British Columbia Mine Reclamation award for its voluntary clean-up work at the site of the old Bluebell mine. The company also won the annual British Columbia citation of excellence for the reclamation work under way at the Bullmoose coal mine. At the international level, Compañía Minera Antamina (jointly owned by Teck Cominco, Noranda, BHP Billiton and Mitsubishi) was ranked as the best mining company in Peru with respect to social and environmental responsibility. The Refinería de Cajamarquilla received special recognition for its support of a major archaeological excavation in the vicinity of the refinery. Lima's daily newspaper El Comercio said "Finally, Cajamarquilla will live again" in an article that went on to describe the work of uncovering ruins at this site which dates back to A.D. 600. The state of Oregon recognized Teck Cominco's reclamation of the Glenbrook Nickel site in Riddle, Oregon, by nominating the company for a special citation of excellence. The U.S. Coast Guard offered a public commendation to Foss Maritime and Red Dog Operations for their excellent efforts to secure and recover a barge that broke loose during a storm at the Red Dog port on the Chukchi Sea.

The company's overall safety performance improved, recording a 35% drop in accident frequency from 1.7 to 1.1 (accidents per 200,000 hours worked), a new record. Unfortunately, this safety record was marred by fatal accidents at Antamina and Elkview. Any fatality is unacceptable and we will continue to do all we can to eliminate these tragedies from our operations.

The signing of the Kyoto Accord commits Canada to reducing greenhouse gas emissions to 6% below the level of 1990 by the end of

2012. To date, Teck Cominco has achieved a 25% reduction in greenhouse gases from the 1990 levels. Even though we have already exceeded the target, we will continue to look for ways to further reduce these emissions.

Looking ahead to 2003, we have set objectives to improve performance on a number of fronts:

- In safety, we will strive to achieve a company-wide lost-time accident frequency of less than 1.0 per 200,000 hours worked with no fatalities;
- In environmental protection, we have set goals to achieve performance that results in no environmental enforcement actions and no significant environmental incidents;
- In environmental management, we will complete the implementation of environmental management systems that conform to ISO 14001 standards at all major sites;
- In community engagement, we will ensure that appropriate consultation and collaboration on community sustainability initiatives are pursued in areas where we have operations;
- In resource stewardship, indicators will be established at operations to measure material inputs and outputs of resources and energy and track recycling;
- In product stewardship, the company will expand its recycling services to customers.

In addition to continuing efforts to improve its performance against corporate objectives, Teck Cominco will benchmark itself against external standards and indicators like those measured by the Dow Jones Sustainability Index. We will also work to build on our commitment to sustainable development through implementation of our charter, codes and policies. With that in mind, we have set measurement standards and established procedures for tracking and reporting successes and failures. We believe that success will create value for our shareholders and benefits for our employees, as well as for communities near our operations and facilities, and for customers and suppliers.

David A. Thompson
Deputy Chairman and Chief Executive Officer

March 31, 2003

Sampling at Bullmoose Mine

Teck Cominco's Board of Directors provides direction and oversight to ensure that appropriate corporate governance is in place throughout the company and its operations. The Board's direction is reflected in the charter and policies, while oversight is provided through the management structure, internal processes and procedures.

1. Environment, Health and Safety Committee of the Board of Directors (EH&S Committee): Constituted in April 2002 to set goals and strategies for environmental, social and safety performance for the company. The committee is comprised of five Board members: Robert Wright, Lloyd Barber, James Gill, Norman Keevil III and Warren Seyffert (Chair).

2. Corporate Environment and Risk Management Committee (CERMC): Chaired by the CEO, CERMC is a senior management committee that establishes priorities and directions for environmental, health and safety programs, tracks performance and measures results.

3. The Product Stewardship Committee reviews new product applications and provides management oversight to ensure that the company's products are used safely and in an environmentally responsible manner throughout their life cycle

Policy hierarchy

In addition to the charter and code, the primary policies used to guide and govern Teck Cominco in the conduct of its affairs include:

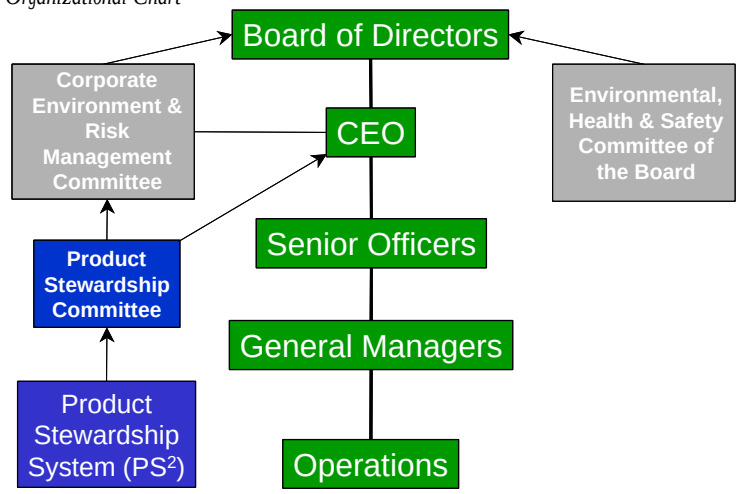
- Health and Safety Policy (revised in 2002); and a Health and Safety Guide for Exploration (introduced in 2002);

- Code of Business Ethics: This code, which is under review, will ensure that expectations for conducting business in an ethical manner are explicitly stated for all employees;

- Environment, Health and Safety Management Standards: These standards set out minimum expectations for the development of local management systems and are broadly compatible with the ISO 14001 international standard for environmental management systems and the OHSAS 18001 specifications for occupational and health management. The standards provide auditable criteria against which Teck Cominco's EHS management systems are measured. The EHS Management Standards are available on the web.

These principles apply at all Teck Cominco sites. Beginning in 2003, employees will be required to review and report any deficiencies in implementation and conformance. Beginning in 2004, the corporate audit program will assess the adequacy of the management systems established. The principles themselves are subject to annual review and revision.

Organizational Chart



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TECK COMINCO
CHARTER OF CORPORATE RESPONSIBILITY

Teck Cominco is committed to conducting its business in an honest and ethical manner. We are committed to protecting the health and safety of our employees, and the environment in the communities where we work.

We are committed to providing a workplace free of discrimination where all employees can fulfill their potential based on merit and ability.

We strive to deal with everyone in a fair and open manner and our employees strive to conform to the spirit and intent, as well as the technical requirements, of all contracts we enter into and all laws, regulations and rules which govern us.

We support sustainable development and we willingly accept our obligation to constantly improve our methods of harvesting the world's resources to the benefit of our shareholders, employees, customers, local communities and all others who use or enjoy nature's bounty.

We value our reputation and the trust and confidence placed in us. If a problem arises we will deal with it in a lawful and proper manner, we will act to alleviate it and we will respond with support to those affected. Our mandate is to create value for our stakeholders while continually improving our performance as a good corporate citizen and a leader in our industry.

We take these commitments seriously and our management and Board of Directors will make every effort to foster a culture at Teck Cominco to support and honour them. We will communicate to all our employees, officers, directors and other representatives that Teck Cominco expects and requires that their actions and conduct comply with this Charter and all policies undertaken to further its objectives.

D. A. Thompson

David A. Thompson
Deputy Chairman and
Chief Executive Officer

February 2003

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TECK COMINCO
CODE OF BUSINESS, ENVIRONMENTAL AND HEALTH AND SAFETY PRACTICES

To implement its Charter of Corporate Responsibility, Teck Cominco will:

1. Obey the law and conduct all business in an ethical manner, meeting or exceeding Teck Cominco's Code of Business Ethics.
2. Ensure that no discriminatory conduct is permitted in the workplace and that all decisions on job selection, advancements and promotions are unbiased and based solely on merit and ability.
3. Strive to identify and eliminate or control all safety and health hazards and monitor worker health performance to continually reinforce a company-wide commitment to excellence.
4. Conduct its operations in a sound environmental manner, seeking to continually improve its performance and incorporate policies for pollution prevention and waste minimization into its daily actions.
5. Conduct regular environmental, health, safety and emergency preparedness audits and identify and resolve all short-comings.
6. Continually improve its environmental, health and safety management systems, policies and controls, ensuring that these are fully integrated into each operation's business plan.
7. Include closure and reclamation plans as a critical component of all development projects. Undertake progressive reclamation at operating mines and reclaim dormant sites to ensure long-term protection of the environment.
8. Encourage the safe use, reuse and recycling of its products.
9. Support and conduct research to improve environmental, health and safety performance at its operations and to enhance its products for the economic, social and environmental benefit of people everywhere.
10. Foster open and honest dialogue with all of its stakeholders, respect the rights, interests and aspirations of local indigenous people and seek out and listen to those in the community who are affected by its operations.
11. Support local communities and their development by seeking locally-sourced goods and services and employing local people.

David A. Thompson
Deputy Chairman and
Chief Executive Officer

February 2003

TECK COMINCO
HEALTH & SAFETY POLICY

EVERYONE HAS THE RIGHT TO A SAFE AND HEALTHY WORKPLACE
OUR OBJECTIVE THEREFORE, IS TO ATTAIN ZERO INCIDENTS.

To achieve this objective, this statement of policy and the associated standards must influence all our daily activities and decisions, including those to do with the selection of resources and information, the design and operation of working systems, and the design and delivery of products and services.

The challenge of implementation into effective practice must be supported by communications and the promotion of competence enabling all employees to make a responsible and informed contribution to the zero incidents objective. Everyone at every work site must be fully committed in this effort to attain the desired health and safety performance.

Teck Cominco therefore commits to:

- Implement the company-wide health and safety policy standards;
- Provide the necessary resources to satisfy the requirements of the standards;
- Measure performance against these standards; and
- Clearly identify accountability for health and safety.

Everyone in our workplaces must commit to actively participate in the health and safety program by:

Taking a moment at the start of each day to think about their safety and the safety of their co-workers;

- Working in compliance with established work procedures;
- Recognizing hazards and striving to minimize the risks associated with these hazards;
- Asking for guidance or information if there is any uncertainty;
- Assisting in the search for better ways of doing things; and
- Demonstrating leadership by setting a good example.
- Visible and active leadership by all is required to maintain the focus of the health and safety policy performance.

ZERO INCIDENTS IS OUR OBJECTIVE

Achieving sustainability requires balancing the economic, social and environmental consequences of activities. Teck Cominco is well positioned to contribute to sustainability through the essential products we manufacture and the financial and social benefits we bring to society. The challenge is to improve performance by developing and using innovative, clean, resource-efficient technology; using less energy; generating less waste; and contributing to the social and financial well-being of our shareholders, employees and the communities where the company is active.

Product Stewardship

Public acceptance and demand for our products is an important indicator of Teck Cominco's contribution to sustainability. The inherent qualities of durability and recyclability of metals and minerals are key attributes underlying the viability of the industry. Yet many aspects of metals life cycle management remain to be addressed. Teck Cominco's ability and determination as a company, and collectively through industry associations, to address these challenges will influence materials use well into the future. To this end and at the invitation of the Government of Canada, Teck Cominco has joined with representatives of other communities of interest to produce recommendations and a framework for National Metals and Minerals Indicators. This initiative is expected to produce a series of key performance indicators related to the relative impacts of metals and their contributions to sustainable development.

A Product Stewardship System (PS^2) operates within Teck Cominco to track how our products are used and look for opportunities to work with customers in meeting their product stewardship needs. The system is used to encourage the safe use, reuse and recycling of our products. PS^2 is responsible for ensuring that products are managed in a manner that conforms to legal and regulatory requirements, company policies and sound management practices.

The Product Stewardship Committee, a team of corporate officers and senior managers reporting to the Chief Executive Officer, oversees the management of product information and provides guidance and direction on new product development. The committee's objective is to further Teck Cominco's goal of providing products that offer high value-added utility to customers and society while minimizing environmental, health, safety and product-related risks.

The Product Business Development group is another core function area in Teck Cominco's product stewardship agenda. Through this group, the company is actively pursuing business opportunities to increase the company's product suite. One of the objectives of this group is to expand the company's capacity to recycle the products it supplies to customers.

Waste Reduction, Reuse and Recycling Programs

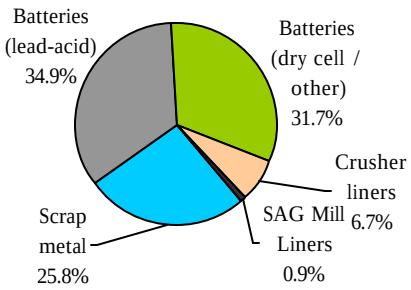
Mining activities generate an assortment of wastes and Teck Cominco employs a variety of reuse and recycling programs throughout its operations. Waste reduction programs and appropriate residuals management systems are also employed. The following figures and charts illustrate the focus of these programs.

The majority of liquid wastes at Teck Cominco sites are generated through the maintenance of equipment in mill or coal plant facilities, energy facilities, and from mobile equipment at mines. Large open-pit mines such as Highland Valley Copper and Antamina generate and recycle large volumes of waste oil. This is reflected in a total of 2.5 million litres between the two sites, and is attributed to the maintenance of large fleets of mobile mining equipment and primary and secondary copper grinding mills. Waste oil from Canadian operations is handled appropriately and recycled off-site. In Peru, waste oil is reused by cement plants as a source of energy. Other maintenance products at Teck Cominco operations (glycol, solvent and waste paint) are recycled in the amounts shown.

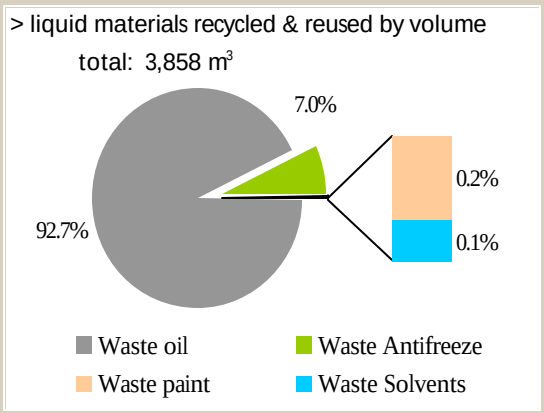
For the last 10 years, waste oil products have been reused at Teck Cominco coal mines to replace virgin diesel fuel in the blasting process and in a blended emulsion product for dust suppression on rail cars that transport the coal to West Coast ports.

Solid wastes are also recycled at all operations and typically include scrap metal (8,500 tonnes), SAG mill and crusher liners (2,500 tonnes) and batteries. Teck Cominco also recycles significant volumes of waste grease, drums, plastic pails, tires, conveyor belting, wood, office paper, cardboard and many other post-consumer goods. Lead acid batteries and other battery materials, totaling 22,000 tonnes, were reprocessed at the Trail smelter in 2002. Batteries comprised 66% of the large-volume solid wastes recycled by Teck Cominco. In addition, Teck Cominco-owned MiningSurplus.com (www.miningsurplus.com) features one of the world's largest inventories of new and used surplus mining equipment and parts from the company's properties across Canada, the U.S., and South America.

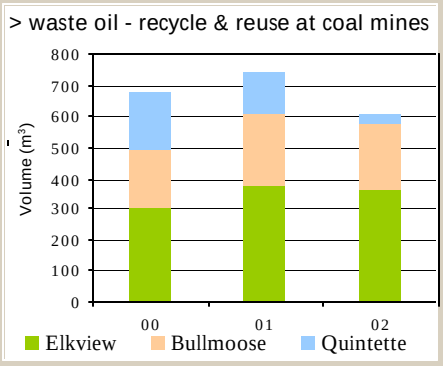
> solid waste materials recycled by tonne
total: 307,314 tonnes



> liquid materials recycled & reused by volume
total: 3,858 m^3



> waste oil - recycle & reuse at coal mines



Return to Work Programs—Reuse and Recycling at Highland Valley Copper

Highland Valley Copper has a very progressive disability management program that includes a modified work centre to accommodate employees who are unable to do their normal duties by reason of industrial or non-industrial injury or illness. The centre is housed in a separate building dedicated to the reduction, reuse, and recycling of mine supplies that might otherwise be discarded. Some of the work performed by employees in the centre includes repairing valves, pipe clamps, pumps and wheelbarrows, and washing and sorting gloves and rainwear for reuse. But the program has another purpose — ensuring an effective return-to-work opportunity after injury or illness.

In 2002, the centre produced a total of $440,000 in goods and 22,400 individual units (rainwear, gloves).

In the area of waste reduction, Teck Cominco has significantly reduced a primary waste stream in Trail by creating products for the cement industry from the 180,000 tonnes of ferrous granules (slag) produced annually by the smelting process. This material has been shown to improve the qualities of concrete and lead to longer life installations.

Generating Wealth

Generating economic wealth is essential if people wish to live in a prosperous society and enjoy high standards of living. In addition to the profits we strive to create on behalf of our shareholders, Teck Cominco's products generate income for employees as well as royalties and taxes that support government's capacity to provide the social and physical infrastructure underpinning society.

Teck Cominco is focused on finding world-class mineral assets that can be operated in the bottom quartile of the production cost curve. To achieve this, the company sets stringent financial and environmental criteria that must be met before a decision to invest. This discipline results in operations that remain viable in challenging economic times, thus avoiding "boom and bust" impacts on communities traditionally associated with resource development.

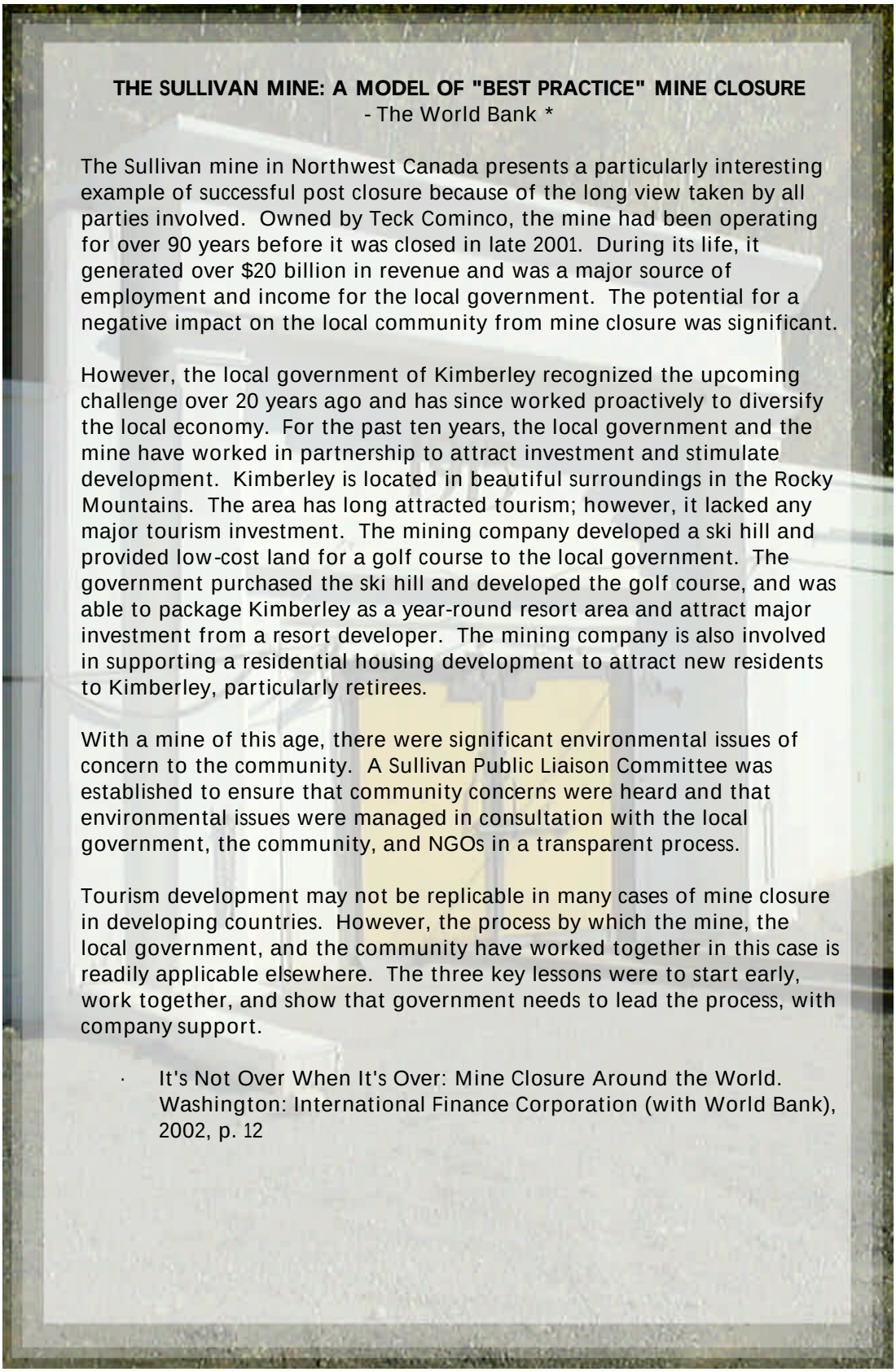
Financial discipline also translates into fiscal management that allows for investment in science and technology and exploration for new resources. Teck Cominco's success at creating financial and economic sustainability is addressed in detail in the quarterly and annual reports.

Contributing to Community Sustainability

The contribution of mining to community sustainability begins at the earliest stages of exploration and extends through construction, operation, mine closure and long-term care and maintenance. In the case of metal refining operations, that interaction can continue almost indefinitely.

Teck Cominco strives to ensure that its operations provide benefits to the people living in proximity with our operations. The first and most direct contribution is the creation of jobs. The operations use their best efforts to hire local people so that the full value of the income accrues locally. Teck Cominco works with community organizations to help create opportunities locally through all activities related to mining. Training and skills development in the local population can provide lasting benefits while royalty and tax payments contribute to the provision of infrastructure, education, health care and other services. Teck Cominco focuses on training at all operations and supports the provision of education and health services directly through charitable contributions and indirectly through taxes and royalty payments.

Teck Cominco's work in collaborating with communities on sustainability is discussed further under operations' highlights and is illustrated in the following case study quoted with permission from the World Bank publication, "It's Not Over When It's Over: Mine Closure Around the World."



THE SULLIVAN MINE: A MODEL OF "BEST PRACTICE" MINE CLOSURE
- The World Bank *

The Sullivan mine in Northwest Canada presents a particularly interesting example of successful post closure because of the long view taken by all parties involved. Owned by Teck Cominco, the mine had been operating for over 90 years before it was closed in late 2001. During its life, it generated over $20 billion in revenue and was a major source of employment and income for the local government. The potential for a negative impact on the local community from mine closure was significant.

However, the local government of Kimberley recognized the upcoming challenge over 20 years ago and has since worked proactively to diversify the local economy. For the past ten years, the local government and the mine have worked in partnership to attract investment and stimulate development. Kimberley is located in beautiful surroundings in the Rocky Mountains. The area has long attracted tourism; however, it lacked any major tourism investment. The mining company developed a ski hill and provided low-cost land for a golf course to the local government. The government purchased the ski hill and developed the golf course, and was able to package Kimberley as a year-round resort area and attract major investment from a resort developer. The mining company is also involved in supporting a residential housing development to attract new residents to Kimberley, particularly retirees.

With a mine of this age, there were significant environmental issues of concern to the community. A Sullivan Public Liaison Committee was established to ensure that community concerns were heard and that environmental issues were managed in consultation with the local government, the community, and NGOs in a transparent process.

Tourism development may not be replicable in many cases of mine closure in developing countries. However, the process by which the mine, the local government, and the community have worked together in this case is readily applicable elsewhere. The three key lessons were to start early, work together, and show that government needs to lead the process, with company support.

- It's Not Over When It's Over: Mine Closure Around the World. Washington: International Finance Corporation (with World Bank), 2002, p. 12

Pursuing Best Practices in Sustainability

Teck Cominco's ability to manage its affairs has been built over the years from the collective experiences of its people and from what has been learned from other communities of interest. In recent years, collaboration with others through community liaison activities and industry association and government initiatives has helped drive the corporation's vision on how best to contribute to and achieve sustainability. Teck Cominco is an active participant in several initiatives:

- The Prospectors and Developers Association of Canada electronic manual of exploration best practices for environmental performance. The manual is available to subscribers on-line at www.pdac.ca.

- The Mining Association of Canada (MAC) Tailings Management process, which includes the Tailings Management Guide (1998) and the Guide for Developing Operation, Maintenance and Surveillance Manuals for Tailings and Water Management Facilities (2003).

- MAC's Towards Sustainable Mining (TSM) initiative, which is being pursued to motivate improvements in industry practices. In 2003, the TSM will develop performance indicators in crisis communication, tailings facility management, social responsibility, energy management, external dialogue with communities of interest, and environmental performance reporting. Teck Cominco will benchmark itself against these indicators.

- The International Zinc Association's Sustainable Development Action Plan, which will establish codes of practice to underpin its sustainability charter. Four guiding principles and codes of practice - Mine Tailings and Process Residue Management, Reporting of Environmental Performance, Product Stewardship and Environmental Management Systems - will be the focus of a gap analysis by Teck Cominco in 2003.

Comparing Teck Cominco's performance to others in the industry helps determine how the company measures up to its peers. Several organizations now provide guidance and information on socially responsible investing, including the well-known Dow Jones Sustainability Index (DJSI). These external evaluations help give an understanding of key issues of importance to social investors and other members of the public. In 2002, Teck Cominco participated in several of these analyses and received recognition in areas of community development work, work with aboriginal communities, and environmental performance at some sites. In some instances, gaps in corporate polices, management systems, and reporting were noted, including:

- The need to establish a clear code of conduct and a supporting compliance and reporting system;

- Publicly reported and quantified occupational health and safety targets;

- Tracked and benchmarked

feedback on employee satisfaction;

- Adoption of a biodiversity policy; and
- Operations-wide assessment of environmental performance in terms of percentage of energy consumption through renewable sources, total water use and total waste generation in terms of units of production.

In 2003, Teck Cominco will continue to consider these gaps and take steps to address them where action is deemed appropriate, having regard to the company charter and code and overall priorities.

Laguna Antamina before dewatering

Emergency Preparedness and Crisis Communications

Programs and training to instill superior emergency preparedness and crisis communications are a priority at Teck Cominco. The corporation's objective is to take all possible steps to avoid any crisis. However, when a crisis incident occurs, Teck Cominco intends to be as well prepared as possible. To ensure this, trained personnel drawn from across the corporation, together with external professionals, identify, study and review specific crises that might arise and address how to avoid and mitigate them through pre-planning and written procedures as well as through on-site training or simulations.

A review of all written emergency preparedness plans was conducted to ensure that major risks have been addressed and that appropriate plans are in place to mitigate and manage the risks, including information requirements, procedures, regular training exercises, and communication links to partners. Shortcomings identified through this process were noted and improvements were made.

In 2002, the corporate Crisis Management Team, which was established to coordinate company action in the event of a crisis, undertook a simulation and training session based on a previous incident. A full simulation will be carried out in 2003.

The response team at Pogo

Sullivan Public Liaison Committee Meeting

Teck Cominco intends to create value for its stakeholders while continually improving its performance as a good corporate citizen and a leader in the mining and metals industry. To achieve this, the company must:

- Understand what constitutes "value" for its various stakeholders, recognizing that there are many groups with different priorities and perspectives;
- Measure and report its performance;
- Set targets for improvement in a meaningful way; and
- Report its performance and compare this with its peers.

Teck Cominco establishes what comprises "value" for different stakeholders through dialogue, feedback and consultation involving employees, customers, shareholders and communities.

Measuring performance is an ongoing and comprehensive process. Teck Cominco's monthly and quarterly environmental reports track many performance indicators including compliance with permits, environmental monitoring, materials inputs and outputs, community concerns and actions, reclaimed land, and dialogue processes initiated, to name just a few.

Objectives for improvement are set on an annual basis and most of them are stated as specific objectives for corporate or operational groups within the organization. Leadership and overall responsibility for achievement of objectives rest with senior personnel.

Environment, Health & Safety Management Standards

Significant progress has been made over the past year in advancing uniform management standards throughout the corporation. This has been accomplished through the introduction of the Environment, Health and Safety (EHS) Management Standards, which are available on the website. The standards are broadly compatible with the ISO 14001 international standard for environmental management systems and the OHSAS 18001 specifications for occupational health and safety management. The intent of the management standards are to: (1) provide a consistent and systematic framework for identifying EHS issues; (2) ensure that EHS risks are managed; and (3) ensure continuous improvement in EHS programs and performance.

Operations-related aspects and activities addressed in the standards include:

- Policy and Leadership
- EHS Requirements
- Priorities and Planning
- Capital Projects and Business Transactions
- Product Development and Stewardship
- Organization and Responsibilities
- Training and Education
- Communications and Reporting
- Community Rights and Public Consultation
- Documentation and Document Control
- Operational Control and Change Management
- Contractors and Suppliers
- Emergency Preparedness

- Incident Response and Investigation
- Monitoring and Inspection
- Corrective and Preventive Action
- Record-keeping
- Auditing
- Management Systems Review

The EHS Management Standards will guide management activities and serve as a foundation for auditing and performance review throughout the company.

Corporate Audit Program

Teck Cominco's audit program is based upon the EHS Policy and Procedures Audit Manual which was formally approved for adoption in 2002. The audit program serves to:

- Identify environment, health and safety risks at business units and other business activities so that appropriate steps can be taken to reduce and manage these risks;

- Assess regulatory compliance and conformance of business units and other business activities with the applicable laws and regulations of the jurisdictions in which they operate;

- Assess health and safety practices and ensure appropriate steps are taken to meet requirements;

- Assess the level of conformance to each business unit's own EHS policy and EHS management system;

- Assess the adequacy of environment, health and safety management systems at business units in accordance with Teck Cominco's EHS Management Standards and industry good management practices;

- Contribute to the company's objectives of environment, health and safety protection and continual improvement through performance of business units as outlined in the Charter of Corporate Responsibility and Code of Business, Environmental and Health and Safety Practices; and

- Report to senior management committees on progress toward the realization of corporate objectives on environment, health and safety.

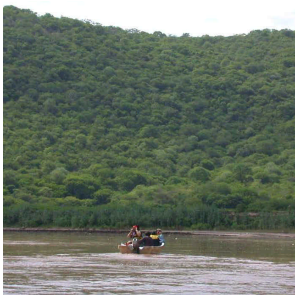
2002 Audit Program

Environmental audits were completed at the following business units during the year:

- Cajamarquilla Zinc Refinery in Lima, Peru, received a comprehensive regulatory and environment management systems audit in January.

- Compañía Minera Antamina, which owns and operates the Antamina copper/zinc mine located in the high Andes of Peru, was subject to a comprehensive audit in February. The mine, pipeline and the Port of Huarmey were reviewed with respect to applicable government regulations, site permits and environmental management systems.

- The Pogo advanced exploration project near Fairbanks, Alaska, was audited in June. The audit incorporated the dual objectives of regulatory compliance and



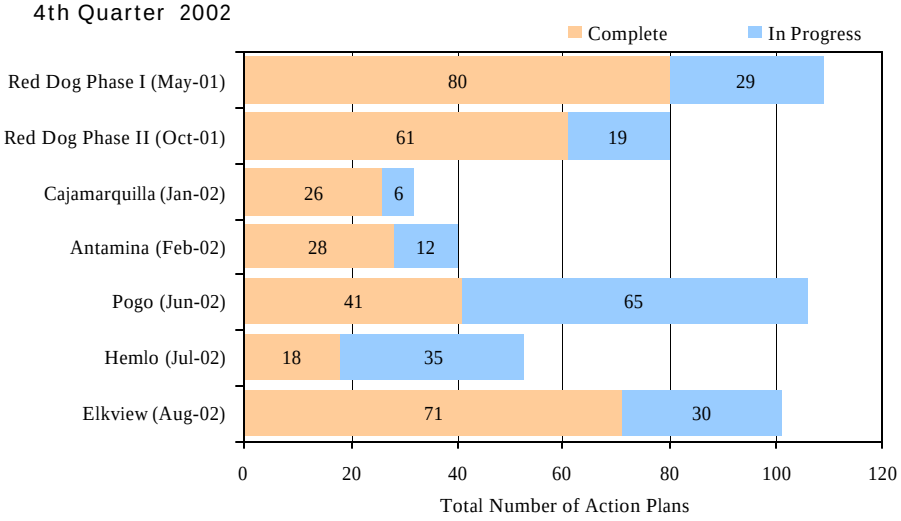
Auditors accessing the Morelos exploration project by boat on the River Balsas in southern Mexico

environmental management systems.

- The Morelos exploration area in the Guerrero state of Mexico was reviewed in June. The scope of the review included regulatory compliance, good management practice and an evaluation of the feasibility of the project from an environmental perspective.

- The Hemlo gold operation (Williams and David Bell mines) in northern Ontario was audited in July against several objectives including regulatory compliance, environmental management systems, tailings management

> Environment Audit Action Plan Status
4th Quarter 2002



practices and the International Cyanide Code. The tailings management protocol was based on the Mining Association of Canada's Guide(s) for operating tailings facilities.

- The Elkview coal mine in southeastern British Columbia was audited in August for regulatory conformance, environmental management systems and tailings management.

After an audit has been completed, the business unit is required to develop and implement an action plan for each finding. Good progress has been made in responding to these findings as shown in the accompanying graph.

2003 Audit Program

Three audits are planned: one at a major international exploration site, another at the Trail Metallurgical Operations in B.C. and one at Cominco Engineering Services Ltd. in Richmond, B.C.

The audit protocols will be revised to support the EHS Management Standards approved by the Board in 2002. Business units will be audited against the new protocols in 2004.

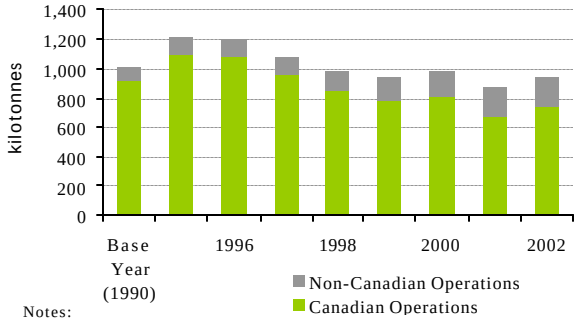
Climate Change and the Kyoto Protocol

In 2002, Canada became a signatory to the Kyoto Protocol. The protocol calls for Canada to reduce emissions of greenhouse gases (GHG) to 6% less than 1990 levels by the end of 2012. Teck Cominco and its predecessor companies have been working to reduce GHG emissions for some time. Achievements to date have been documented through Teck Cominco's participation in the Canadian Voluntary Challenge and Registry Inc. (VCR) at www.vcr-mvr.ca. In 2000, the former Cominco received an award from the VCR for leadership in GHG emission reductions. Readers are encouraged to examine the contributions of the Canadian mining industry to the reduction of GHG emissions at the MAC web site, www.mining.ca.

Recent trend data on GHG emissions and emissions intensity (efficiency) is provided for each operation in the "Reporting Site-Specific Performance" section of this report. In addition, the accompanying graph provides a complete overview of GHG emissions trends since 1995 and those at the reference base year of 1990 for the entire company and its predecessors. As well, emissions intensities by product commodities are provided on the website. Data is aggregated by Canadian and other worldwide operations.

Readers will note that emission trends are not consistent over time and that this reflects changes in the status of certain operations. For Canadian operations, emissions in the 1990 base year were lower than normal due to a labour interruption at Trail Operations that year. The three-month shutdown of these facilities is also the main reason for reduced emissions in 2001. The company-wide trend perspective is significantly influenced by the Red Dog mine, which consumes large quantities of diesel fuel for electric power generation. Nevertheless, the 25% emissions reduction from Canadian operations and a reduction of about 10% in emissions company-wide are indications of significant progress and reflect our commitment to continual improvement.

> Total Direct GHG Emissions in kilotonnes CO_2e from All Operations



Notes:
Trail - Kivcet online in 1997, summer shut down in 2001.
David Bell and Williams - 100% of emissions included.
Operations included: Trail, Cajamarquilla, Red Dog, Sullivan, Polaris, Afton, Hemlo, Elkview, Bullmoose and Quintette

Water Conservation

Initiatives to conserve water are in place at all operations where consumption can be significant in relation to local supply. Some examples of programs are provided below:

At the Cajamarquilla zinc refinery, treated effluent is utilized by a local farmers' cooperative to irrigate crops and the refinery's own green areas. To ensure consistent quality, the water is captured in two holding ponds which are operated in series. Any effluent not meeting the standards is recirculated to the plant for further treatment.

At the Antamina mine, water used in the pipeline to transport concentrates between the mine and the port loading facilities is treated to remove metals and other impurities. The water is then used to irrigate a 170 hectare tree farm established in the desert between the port and the Pan-American Highway, which is a few kilometres south of Huarmey. Numerous tree species and inter-row crops such as alfalfa are being grown. Within a few years, travellers along the Pan-American Highway will pass by a new Peruvian coastal forest.

At Red Dog, fresh water is required for cooling and potable applications. The amount of fresh water used is small in relation to the quantity that is recycled for use in the mill. In 2002, about 123 million gallons of fresh water were drawn from a nearby

Employee collecting native seeds from a high elevation site

reservoir and, of this, 97 million gallons were used for cooling (78% of the total). Approximately 22 million gallons (23%) of this volume were recovered and used for mixing mill reagents, and a smaller volume was recovered for other purposes. The volume of potable water consumed in 2002 was about 24 million gallons (20% of the total). A large volume of water is recycled from the tailings pond for use in the milling and concentrating process. In 2002, about 3.1 billion gallons of water were reclaimed from the tailings pond for use in the process, greatly reducing the amount of fresh water pumped from natural sources. Overall, fresh water supply accounts for only about 4% of the total volume of water used each year.

Biodiversity

Teck Cominco recognizes that its activities may impact on the natural environment, including the diversity of flora and fauna and their habitats, and therefore undertakes to design and operate its projects to minimize these impacts. Upon closure, efforts are made to create a productive habitat for species identified near the site.

At the Quintette coal mine in northeastern British Columbia, an assessment of the diverse populations of native flora and fauna has facilitated a state-of-the-art reclamation and closure program. As a result of the high elevation, mountainous terrain and difficult climatic conditions, a unique approach was needed to reintroduce these diverse and hardy native species through the progressive reclamation of mining areas. The program has been implemented over a 10-year period and is now coming to completion through the direct seeding of native species onto the reshaped mining lands. Quintette's high-elevation native species reintroduction program has been awarded several government citations for innovative research and implementation of the programs.

Our ability to integrate biodiversity and economic values in land use management is now being enhanced through aerial photography and satellite imagery and the use of geographic information systems (GIS). These techniques allow our engineers and scientists to evaluate and measure reclamation success on a large scale so that improvements can be made as results are assessed.

At the Sullivan mine, commercially available agronomic species constitute most of the vegetation being established on reclaimed tailings areas. However, native grasses and shrubs

Diverse native plant species island at high elevation at the Quintette coal mine.

are being planted in corridor zones from which it is expected that they will propagate over time. In addition, various habitat management techniques are being used to ensure the productive use of reclaimed areas by a range of mammals and birds significant to the region. These include the planting of woody species for elk and deer to forage on in elevated habitat corridors, constructing small mammal refuges and installing elevated perches for raptors in open areas. Undisturbed company land with important biodiversity values is being transferred to the B.C. Lands Conservancy.

The North American Bird Conservation Initiative (NABCI) is a continent-scale undertaking aimed at the conservation of local and migratory bird species though habitat protection/restoration projects and other forms of management. It operates through regional organizations based on the collaboration of conservation groups, government agencies, academia, land users and industry. During 2002, Teck Cominco was invited to take a seat on the Board of the Canadian Intermountain Joint Venture (CIJV) of the NABCI, which covers much of B.C. Teck Cominco looks forward to contributing to the development of conservation programs through the CIJV as well as continuing to facilitate biodiversity programs at the local level.

Health & Safety

The company's overall safety performance, as measured by lost-time accident frequency, has improved 35% since 2001 (from 1.7 to 1.1) and 50% since 2000 (from 2.4 to 1.1). This significant achievement resulted from the efforts of facility managers and employees, who embraced the objectives set out by the Corporate Health and Safety Committee, now superseded by CERMC.

Despite the reduction in lost-time accidents, there were two unfortunate accidents that resulted in fatalities. In January, an Elkview employee died as a result of injuries sustained while repairing a shovel at the mine site. In November, an employee operating a bulldozer at Antamina sustained fatal injuries due to the collapse of lake sediments which were being removed during mining operations. New procedures have been put in place to prevent any repeat occurrence and to reinforce the importance of working in a safe and responsible manner.

Worker at Trail Operations

Teck Cominco Limited
Health & Safety Statistics

	1999	2000	2001	2002
Lost time accidents	193	186	105	89
Fatalities	0	1	2	2
Frequency*	2.8	2.4	1.7	1.1
Severity**	63.7	137.3	240.5	186.7

* Frequency = Lost Time Accidents per 200,000 Hours Worked
** Severity = Days Lost per 200,000 Hours Worked
(Contractors not included)

Respect for Local Indigenous People

Teck Cominco has pledged to respect the rights, interests and aspirations of indigenous people. Over the past 60 years, Teck Cominco has gained significant experience working with indigenous communities, particularly in northern Canada and Alaska and more recently in Peru.

It takes time and sincere respect to gain a full appreciation of important cultural values. In the case of the Red Dog mine, Teck Cominco recognized the importance of the traditional subsistence lifestyle of the NANA people and adjusted work schedules and transportation timetables to respect hunting, fishing and gathering seasons as well as the migration patterns of wildlife. Through community dialogue processes, particular attention is given to identifying and understanding traditional values and cultural priorities. This understanding also helps to ensure that employment skills training programs are properly developed and adequately resourced.

Discovery of pre-Incan cloth fragments sparks international interest, helping reintroduce traditional weaving skills to local women generating employment in the community.

Case Study - Cajamarquilla and the Community

Proyecto Arqueológico Cajamarquilla — the Cajamarquilla archaeological project — is a short distance from the western boundary of Teck Cominco's Cajamarquilla zinc refinery near Lima, Peru. Although known about for decades, the site had been neglected and was being encroached upon by a growing community. In 1996, refinery personnel became directly involved in archaeological work at the nearby pre-Inca ruins. It became obvious that the only way to protect the site was to initiate a viable and scientifically sound archaeological project. In 2000, the refinery provided financial support and formed a partnership with the Yachay Wasi Institute of Conservation and Restoration, a not-for-profit organization dedicated to the investigation, preservation and restoration of Peru's archaeological wealth.

The archaeological site consists of four large pyramids, numerous walled areas and plazas, hundreds of small rooms, burial chambers and some 3,000 silos or storage holes. Pinpointing the exact dates of occupation of the site is difficult, but Cajamarquilla appears to have been built around A.D. 600-700 (predating the Inca conquest of the central coast of Peru by some 800 years) and occupied for a century or so. Then it was abandoned until more construction took place in A.D. 1100. Discoveries over recent years in various parts of the site have included skeletons, skulls with hair intact, fragments of cloth, beads and decorative combs, vegetal remains (mangos, peanuts, seeds), animal remains (guinea pig, llama, monkey), spoons and pottery and a giant bird — a condor with a 3.4 metre wingspan. To date, only about 15% of the total site has been studied in detail.

Future plans for the project include the development of a school program to teach local children about the importance of the site in their midst — both from the point of view of the community's history and from the possible employment and revenue it could generate. It is hoped that this site, along with other archaeological areas such as Puruchuco and Huaycan Baja, will become part of a tourist circuit that could one day rival Cuzco and the Sacred Valley of the Incas.

Exploration

As a result of changing attitudes and increased awareness of the risks associated with exploration activities, Teck Cominco initiated a program in 2001 to review its exploration safety program and procedures with a goal to develop a more disciplined approach to safety practices, training and incident tracking.

Accordingly, during 2002, a number of steps were taken to build a coordinated safety program:

- Safety coordinators were appointed in all exploration offices.
- A comprehensive manual, "Health and Safety Guide for Exploration," was distributed to all employees.
- Statistics covering frequency and severity of accidents in exploration are now being compiled and "lessons learned" are shared throughout the exploration group.
- Every employee has been informed of the "Perfect Day" health and safety objective.
- Safety meetings and training sessions are held regularly in field offices.

The exploration "Perfect Day" was defined as a day when there are no incidents involving violence, no accidents or injuries among employees or contractors and no problems or serious complaints from local communities. A target of 350 Perfect Days was set for the group in 2002.

Exploration, mine development and production have a major socioeconomic impact on communities. Although this impact is relatively minor during early exploration stages, it is often at this time that the company makes its first contact with local communities. Initial impressions formed as a result of interaction with exploration personnel are long-lasting, so it is imperative that a good working relationship is fostered at these early stages of communication.

In the past, community relations have been handled by field personnel skilled in establishing relationships with community leaders and inhabitants. While generally successful, Teck Cominco is striving to improve the capabilities of field personnel through training and education on this important aspect of our work. A training module is being written using a compilation of previous experiences and case histories. In addition, industry best practices in environmental protection and community dialogue are being developed in association with the Prospectors and Developers Association of Canada and will be incorporated into Teck Cominco's programs.

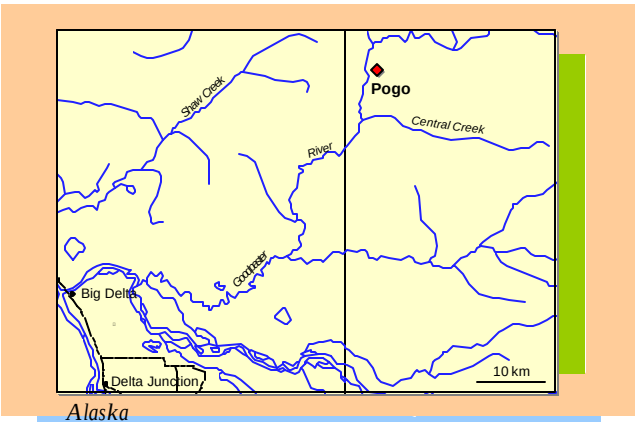
Pogo (gold)

Teck Cominco Limited, through a joint venture agreement between Teck-Pogo Inc. (a wholly-owned subsidiary), and Sumitomo Metal Mining America Inc., is proposing to develop an underground gold mine in the interior of Alaska. A National Environmental Policy Act (NEPA) review and the Environmental Impact Statement (EIS) process were triggered for the Pogo Project in August 2000. The notice of availability of the Draft Environmental Impact Statement was published in the U.S. Federal Register on March 14, 2003, which starts the 60-day comprehensive public review period that will end May 13, 2003. Following the public review of the Draft EIS, the Environmental Protection Agency and state government agencies will be in a position to complete the Final EIS during 2003. Subject to a favourable outcome, the government agencies can then begin issuing construction and other permits and approvals for the project. There are 46 major federal and state permits and approvals anticipated for mine development to proceed.

The Pogo mine will require approximately two years to construct and will have an operating life of approximately 10 years based on the current ore reserves. It is estimated that 500 employees will be required for mine construction and 288 for operation. Many of these new employees will be recruited from local-hire and training programs.

Efforts to expand the local workforce available for mine construction and operations have already begun. Meetings with local and regional recruiting agencies and organizations have been held to help plan recruiting and training efforts. Since the region has no history of underground mining, significant training will be required to produce a viable local workforce. The training curriculum is being designed in an effort to establish those skills needed to meet the requirements of an entry-level underground miner. A six-week pilot training course began in the first quarter of 2003 with eight local candidates.

To date, Teck-Pogo completed its fourth year of full compliance with the 39 state and federal permits associated with the surface and underground exploration programs.



Pend Oreille (zinc, lead)

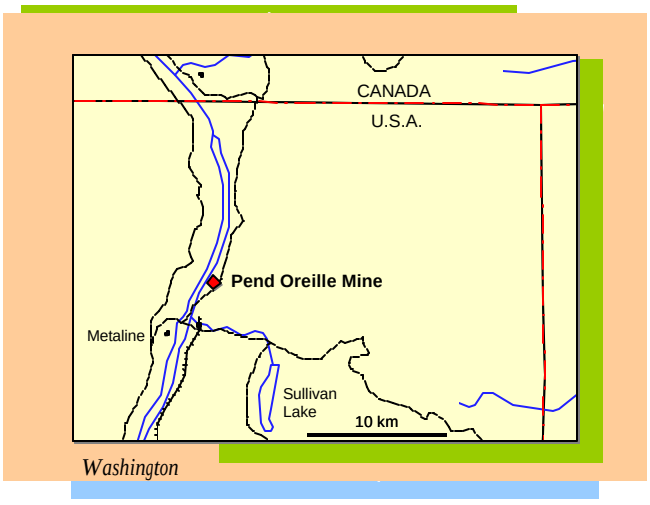
During the year, Teck Cominco's Pend Oreille mine project in Washington State continued on track toward a scheduled start of mine operations in 2004. Major work included underground shaft-sinking and development, surface electrical work and general site preparation. All contracts included a requirement to include a local hire program.

Continuing a program of community consultation, mine management issued monthly reports on mine progress and activities in the local press. Issues discussed included contracts issued, local hiring opportunities and environmental performance. As well, the local citizens' consultative committee, the Selkirk Community Teck Cominco Planners, met quarterly to discuss integration issues between the community and the mine. The project also provided cash contributions to local non-profit community support groups, extracurricular school events and annual community celebration events.

The project is on schedule to fully implement an Environmental Management System, or EMS, by the end of 2003. The EMS conforms to the ISO 14001 standard and is based on the company's corporate EHS Management Standards. At the end of 2002, the general requirements and many activity-focused environmental management plans were completed, including those concerning underground waste rock, fugitive dust and non-process waste streams.

Initiated with consultations involving the Washington Department of Ecology and the non-governmental organization (NGO) community, the Pend Oreille mine continued its program of biological water treatment experiments. The purpose of this program is to develop a system to further reduce the low metals loading in the mine discharge by utilizing a naturally occurring strain of sulphate-reducing bacteria to fix dissolved metals. A full-scale demonstration test will be carried out in 2003 to determine if the system tested can be used to effectively and economically treat the mine effluent.

Under the existing mine effluent permit, there were three exceedances of the total suspended solids limit in January. These excursions occurred when settling capacity in the mine was reduced in order to plug inadequately abandoned exploration drill holes in a large underground mine-water settling sump. Repairs have since been completed, and full settling capacity has been restored well in advance of mine start-up.



Red Dog Mine (zinc/lead)

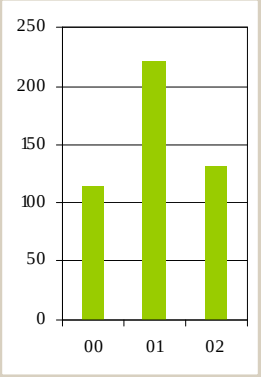
Operating in the sensitive Arctic environment under intense scrutiny by regulatory and public stakeholders, the Red Dog mine is faced with significant challenges in terms of environmental performance. During the year, a small group from a local village filed a citizen's suit claiming a substantive penalty assessment for alleged violations of effluent discharge permit requirements at both the mine and the port. The court process dealing with the suit was just under way at year end. NANA, the native corporation that owns the mine, and the Northwest Arctic Borough, the regional government authority, have applied to intervene on behalf of the Red Dog mine in the court action.

Minimizing the fugitive dust along the road to the port and at the port itself continues to take high priority. The mine is committed to dust control associated with the transportation and handling of concentrates, and additional control measures for this purpose were implemented or were being planning during the year. One project carried out was the "high float" sealing (a form of pavement) of several miles of road near the port as a trial to reduce dust entrainment. Another major improvement involved modifications to the port's truck dump building. This facility is used to unload concentrate trucked from the mine and convey it into the storage building. During the year, dust control measures were implemented, including the construction and commissioning of a new 40,000 cfm baghouse. This unit collects dust and provides a clean air wash across the truck being unloaded. The expenditures to control dust at the port amounted to US$7 million.

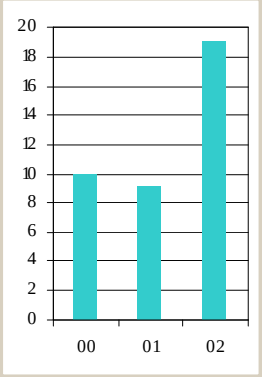
The operation has commissioned engineering and design studies for the modification of its barge loading facility. Construction plans are being formulated for the completion of this modification prior to the summer 2003 shipping season. Finally, modifications to the ship loading barges are also being made to minimize dust losses during loading and unloading of concentrates.

Management and assessment of the dust issue continues under the review of a group consisting of state and federal agencies and NANA, which represents the region's villages. Under this group, a comprehensive contaminated sites model and full risk assessment work plan were developed and are now under public review. As was established in last year's finding by the state, local subsistence food

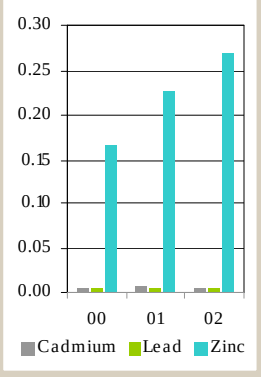
> reportable spills
> number



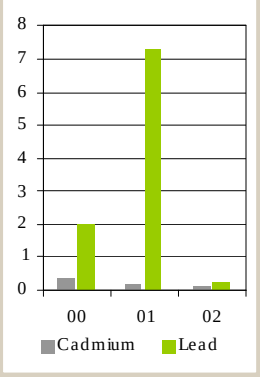
> permit excursions
> number



> metals released in effluent
> tonnes



> red dog creek natural metal loadings: Cd / Pb
> tonnes



use is not a health threat. The mine is conducting air quality monitoring in the village of Noatak and initiated a sampling program with residents of the village of Kivalina to assess the quality of drinking water.

The mine completed the development of an environmental management system conformant with the ISO 14001 standard. Full implementation will be carried out in 2003 and preparations will be made to pursue registration to the standard in early 2004. Underpinning the EMS has been the development of a property-wide Environmental Management Information System (EMIS) that provides essential documentation to all personnel throughout the operation with the use of the mine intranet. The environmental responsibilities of each and every employee have been identified, and tasks are assigned and tracked electronically.

Modifications to the current water treatment system are being implemented with the objective of controlling total dissolved solids (TDS) accumulations in tailings pond water. As well, a promising trial of a novel method for controlling acid rock drainage (ARD) generation from mine waste rock was carried out in 2002. While further research on the method is required, the test demonstrated a 50% reduction in ARD relative to a control.

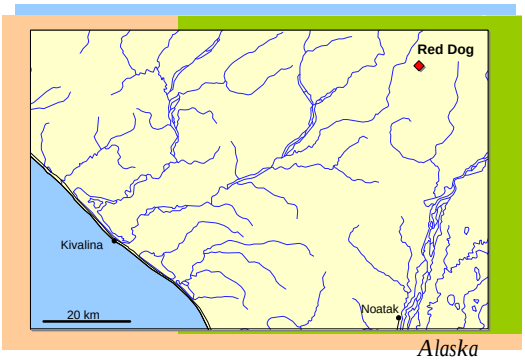
Discussion of Performance Indicators

Reportable Spills

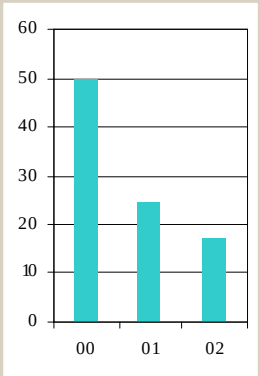
- The mine continues to encourage the internal reporting of spills through its Sivulliqsi, "pulling together" program. The total number incurred and reported to government was greatly reduced in 2002, particularly in the second half of the year. This improvement was achieved in spite of a further tightening of spill reporting thresholds by the state of Alaska that now include fresh water spills over a specified volume.

Permit Compliance

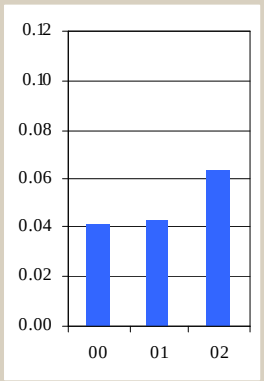
- The number of reported excursions increased in 2002 over 2001 but this is primarily due to a change in recording procedures such that all administrative non-conformances related to air and effluent permits are now included in the total. The numbers for previous years cover only effluent quality exceedances as required under the mine's permits.



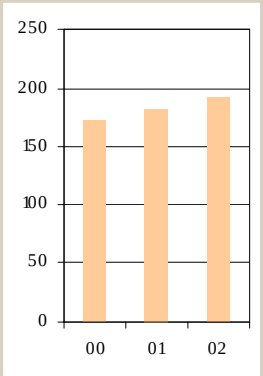
> red dog creek natural metal loadings: zinc
> tonnes



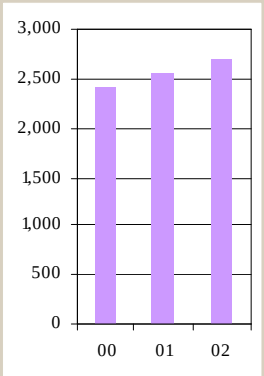
> zinc concentrations in effluent
(permit limit 0.12 mg/L)
> mg/L

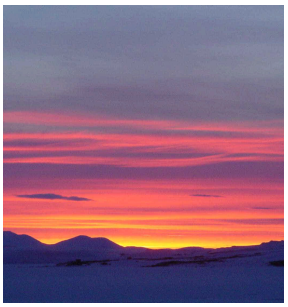


> greenhouse gas emissions
> CO2e (kilotonnes)



> carbon energy consumption
> terajoules





Metals Released in Effluent

- The quantities of metals released, particularly of zinc, in treated effluent at the mine increased somewhat in 2002, but concentrations were well within permit limits and very low in comparison to background concentrations in the receiving stream.

Natural Metal Loadings in Streams

- The natural background loadings in Red Dog Creek were significantly lower in 2002 than the preceding two years, but still exceeded those in effluent discharges by a factor of about 70.

Energy Consumption/Greenhouse Gas (GHG) Emissions

- Fuel consumption for power generation and trucks as well as for other mobile equipment increased in 2002 for the third consecutive year. GHG emissions increased accordingly. However, the carbon energy intensity in metals contained in concentrates was reduced slightly in the year due to efficiency improvements.

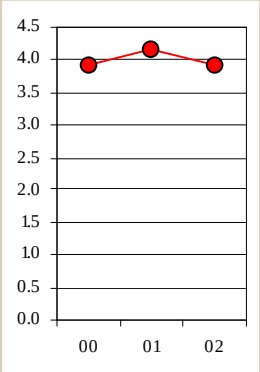
Highland Valley Copper Mine

The mine, located in south central British Columbia, and 64% owned by Teck Cominco, continues as Canada's largest non-ferrous metal mine. It is a model in terms of low-cost production and is a substantive economic contributor to a number of local communities as well as to the overall industrial output of the province. At the same time, it has a fine environmental performance record and is applying progressive reclamation in preparation for mine closure in 2009.

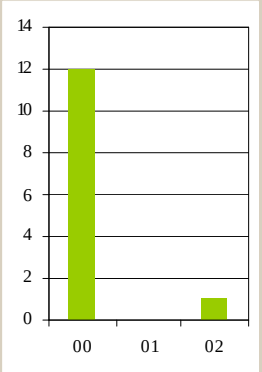
During 2002, a review of total land disturbance area at active and former mining locations resulted in the disturbed mining "footprint" being reduced from 6,400 hectares reported in 2001 to 6,000 hectares, the difference being permanent water reservoirs and areas under power lines that do not require any form of land restoration. The total area reclaimed to date is 2,000

British Columbia

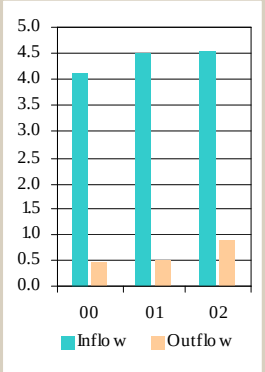
Red Dog > carbon energy intensity in product: zinc & lead
> GJ / tonne



Highland Valley Copper > reportable spills / incidents
> number



> passive treatment results: average molybdenum
> mg/L



hectares, an increase of 100 hectares during the year. The mine continues to make extensive use of biosolids as a reclamation amendment and is pursuing long-term supply contracts with B.C.'s lower mainland municipalities for which the application is a contribution to sustainability.

The development of an exciting new tool to monitor reclamation success was advanced in the year and is illustrated in the accompanying image. The mine is exploring the use of remote aerial sensing as a technique for assessing vegetation performance on reclaimed land. This approach has great promise for being a more effective and economic method than conventional systems that rely on spot sampling of vegetation productivity on the ground.

The mine received an important approval that clears the way for the continuance of production through to the end of the economic mining life in 2009. The Basal Aquifer Dewatering Project was authorized after review under the B.C. Environmental Assessment Act that entailed extensive consultations with the public and First Nation groups. This project involves the withdrawal of groundwater to allow deepening the Valley pit, and the assessment concluded that its discharge to a surface water course will not cause deleterious downstream impacts.

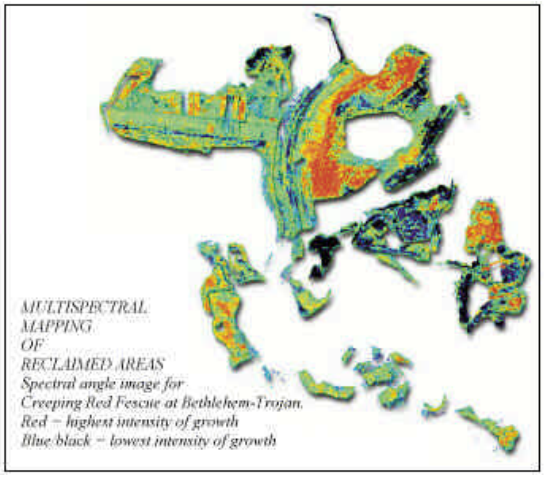
Discussion of Performance Indicators

Reportable Spills / Incidents

- After a perfect year in 2001, the mine had one reportable incident in 2002 concerning a release of natural gas from a broken pipeline. This was contained and had no detrimental consequences.

Reclamation Progress

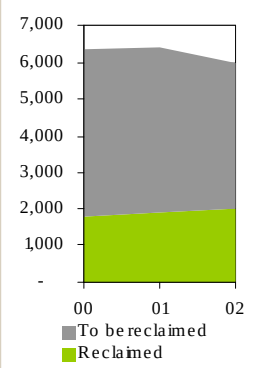
- Operational reclamation continued in the year in accordance with the pre-closure plan. A large proportion of the total area disturbed is represented by the tailings pond, and this can only be reclaimed after closure.



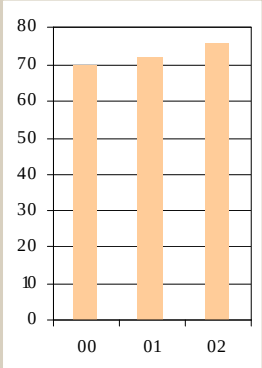
Energy Consumption / Greenhouse Gas Emissions

- Consumption and emissions increased slightly in 2002 due to the need for hauling additional quantities of waste rock to maintain production rates of copper concentrate. This is also reflected in the increase of carbon energy intensity in copper contained in

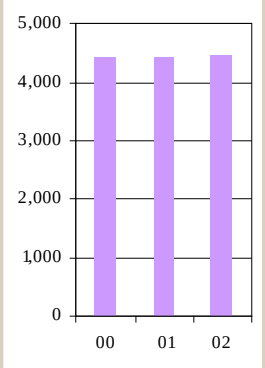
> reclamation progress
> hectares



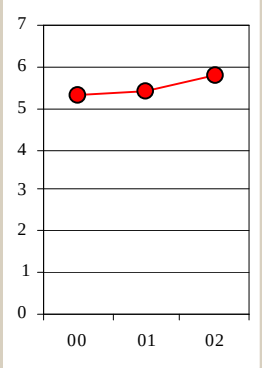
> greenhouse gas emissions
> CO2e (kilotonnes)



> total energy consumption
> terajoules



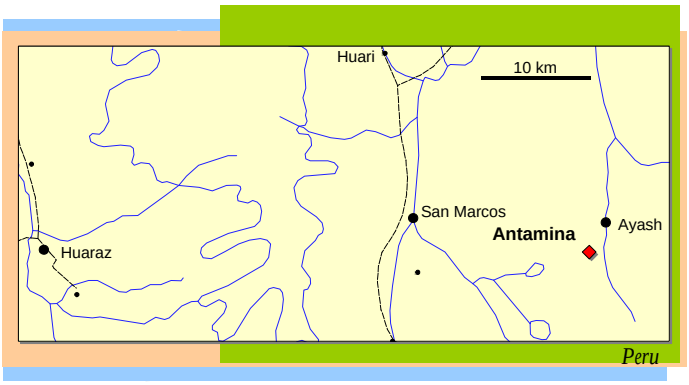
> carbon energy intensity in product: copper
> GJ / tonne



Antamina Mine (copper/zinc)

Compañía Minera Antamina S.A. (CMA) operates the Antamina copper-zinc mine in the high Andes of northern Peru. Teck Cominco is one of four partners in the Antamina project, with 22.5% ownership; the others are Noranda (33.75%), BHP Billiton (33.75%) and Mitsubishi (10%). Antamina reached commercial production in late 2001 after a 2.5-year construction and start-up window. The open-pit mine, rock dumps, low-grade ore stockpiles, froth flotation concentrator, tailings impoundment, maintenance facilities and a 1,500-person camp are located at an altitude of 4,200 metres (13,800 feet) above sea level in the Peruvian Andes, 250 km north of Lima. The mine is accessed via a 120 kilometre-long paved road from the Conococha crossroads.

Over the course of an operating life of at least 23 years, some 1,700 ha of land surface will be disturbed by project development, of which approximately 770 ha will be revegetated as part of the mine closure. Although the project is not subject to regulatory requirements regarding closure and rehabilitation, these considerations were included during project planning, design and execution. This is consistent with the requirements of the environmental policies of Teck Cominco and the other project partners and is in part driven by the requirements of international lending agencies.



Antamina's reclamation program was initiated in 1999 and includes a campaign of progressive reclamation that, to date, has successfully reclaimed over 153 ha of land at the mine site and 213 ha along the access road. In addition, a series of revegetation trials have been initiated to establish criteria for successful post-closure reclamation. A relatively mild climate, seasonally abundant rainfall and a plentiful supply of local labour facilitate reclamation activities that are challenging at this high altitude site. All trees planted at the mine site are purchased from the Ayash and Huaripampa local communities instead of growing them in an on-site nursery. Quinual is one of the native species in danger of extinction but very easy to propagate.

Copper and zinc concentrates are transported in a slurry pipeline to dewatering and storage facilities and a marine terminal at Puerto Punto Lobitos, on the Pacific coast near the town of Huarmey. The slurry transport water is treated and used in an irrigation system that effectively disposes of approximately 65 L/s of water from the pipeline. Numerous tree species and crops such as alfalfa are now growing on the 170 hectares of irrigated land a few kilometres south of Huarmey, between the port and the Pan-American Highway.

CMA is actively engaged in working with those communities that have been directly affected by the project. The primary objective of the community development plan is to provide a framework for the creation of improved and sustainable living

conditions through education, training and direct assistance.

Thirty-one community development programs are currently being implemented in the two main regions impacted by Antamina's operations: Huarmey/pipeline corridor and San Marcos/Ayash Basin. The programs are aimed at:

- Upgrading living standards by installing drinking water distribution systems (Ayash);
- Improving education and health services;
- Improving agricultural and livestock practices;
- Promoting the establishment of small-sized companies; and
- Safeguarding cultural heritage and protected areas in the vicinity of CMA operations.

According to a recent survey, CMA has been ranked as the best mining company in Peru in the last two years for social responsibility and environmental protection efforts. The survey took into account the following factors: protection of the environment, working conditions, quality of its products, treatment of suppliers, social programs, transparency and ethics, treatment of clients, and reputation and image.

CMA was also ranked first for environmental responsibility across all sectors and second overall for its relationship with communities.

Antamina has published its "2001 Sustainability Report" which provides information on its social and environmental activities, and summarizes its efforts to control and reduce the impacts of its operations on the environment.

Polaris Mine (zinc/lead)

Located in Nunavut, in Canada's High Arctic, Teck Cominco's Polaris mine is the most northerly metal mine in the world. It commenced production in 1980 and closed in September 2002 after a fine 22-year environmental performance record with only isolated exceptions. The last shipment of lead and zinc concentrates to European smelters was made in October, and now the focus of action has turned to the extensive and costly programs for mine closure.

Minimal environmental impacts have resulted from the Polaris mine over its operating history. It was an underground operation with very compact surface facilities; with the successful disposal of tailings to the naturally anoxic bottom zone of Garrow Lake, there is no surface tailings impoundment. As well, due to the mine being in permafrost and the benign nature of mineralization in ore and waste rock, there is no acid rock drainage that requires remediation. Decommissioning and reclamation programs will cost about $40 million with the logistics of mobilization and supply being a major expense factor.

Material from the demolition of surface facilities and buildings will be placed in a surface rock quarry and will subsequently be capped. Metals and fuel-contaminated locations will be remediated to approved risk-based standards. It is expected that the project work for closure will be completed in 2004 but monitoring, particularly related to water quality in Garrow Lake, will continue through to 2011.

In June, a significant volume of diesel (1,200 to 1,500 litres) was inadvertently released from a secondary containment to the foreshore area of Crozier Strait, with some reaching the ocean. The incident was promptly reported to Nunavut and federal authorities, and clean-up actions were initiated by mine personnel. Subsequently, consultants were brought to the mine to assess the impacts resulting from the spill and to advise on supplementary remediation measures. While it is believed that there were no significant impacts from the spill and that final clean-up of the foreshore can be satisfactorily accommodated in closure project work, Environment Canada has charged the mine with three violations under the Fisheries Act. A conclusion on this matter is expected in 2003.

Discussion of Performance Indicators

Garrow Lake Water Quality

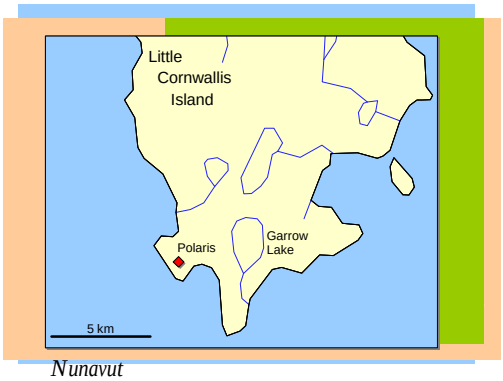
- The concentration of zinc was well below the Water License limit of 0.5 mg/L. Zinc and lead concentrations are expected to decline now that tailings deposition in the bottom anoxic zone has ceased.

Zinc Loadings in Garrow Lake Discharge

- Concentrations in this discharge were lower than those in the surface layer, but the zinc loading increased slightly due to a significantly higher volume discharged compared with 2001.

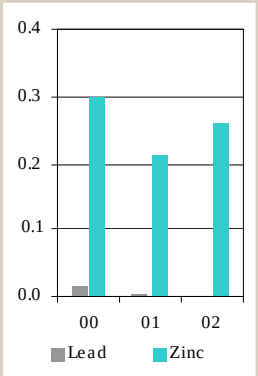
Energy Consumption/Greenhouse Gas Emissions

- The generation of electricity by diesel engines has been the dominant consumer of fuel. Consumption and GHG emissions were lower in the year due to mine closure in September. Fuel energy intensity in products as contained metals increased due to declining ore grades in the last year of production.

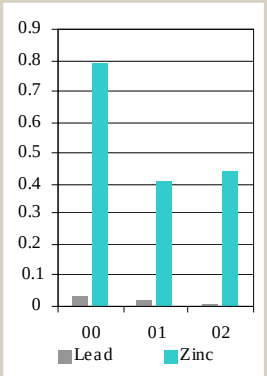


Nunavut

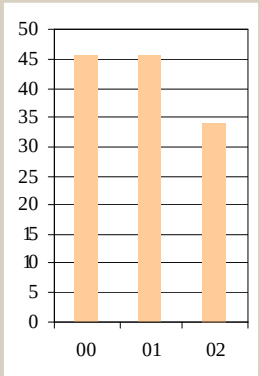
> garrow lake annual average surface water quality
> mg/L



> annual discharge to garrow lake
> tonnes



> greenhouse gas emissions
> CO2e (kilotonnes)



Louvicourt Mine (copper/zinc)

Louvicourt is a copper-zinc mine located about 20 km east of Val d'Or, Quebec, and is a joint venture between Teck Cominco Limited, Novicourt (a subsidiary of Noranda) and the operator Aur Resources Inc. The known ore reserves are expected to be exhausted in May 2005.

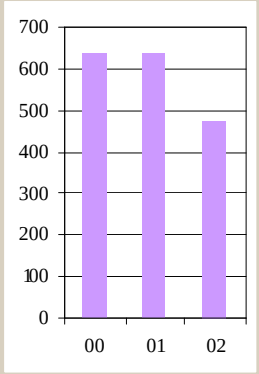
This modern mining operation was designed and operated from the outset with closure and reclamation in mind. Detailed reclamation plans are regularly updated and provided to the Government of Quebec along with appropriate levels of financial assurance to cover the cost of reclamation and closure.

In 1995, a collaborative project was initiated under the Mine Environment Neutral Drainage (MEND) program using the Louvicourt site to demonstrate the effectiveness of subaqueous tailings disposal in man-made or artificial impoundments to prevent acid rock drainage. The final report of the research project was completed in June 2002 by SENES Consultants Ltd. One of the major conclusions was that shallow water covers in man-made basins are an effective means of reducing sulphide oxidation rates by about a thousand fold. The results confirm that the approach used by Louvicourt to maintain a 1.0 metre water cover during operations and after closure will be protective of the receiving environment.

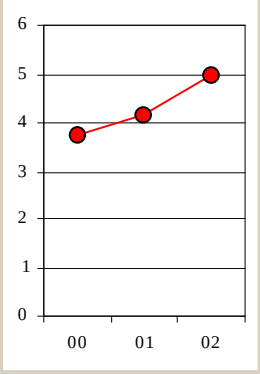
Louvicourt was in full compliance with operating and environmental permits in 2002.

Polaris

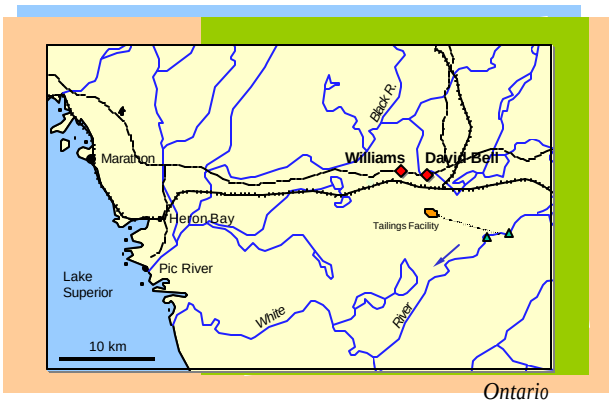
> energy consumption
> terajoules



> carbon energy intensity in product: metal contained in concentrate
> GJ / tonne (zinc & lead)



Hemlo Mines (gold)



Ontario

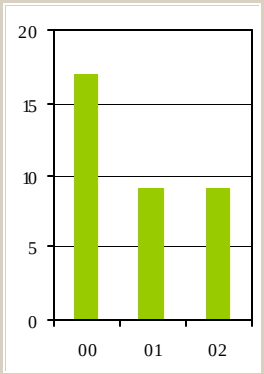
In partnership with Barrick Gold Corporation, Teck Cominco operates the David Bell and Williams gold mines (Hemlo Gold Operation) in northern Ontario, 40 kilometres east of Marathon. Ore is mined from underground operations at both properties and from an open pit at Williams. Since the closure of the mill at David Bell in 1999, ore from both operations has been processed at Williams, which also operates the tailings impoundment, polishing pond and, seasonally, the effluent treatment plant.

During the year, an application for the expansion of open-pit operations was prepared. Numerous studies and engineering designs for environmental protection of the area associated with the proposal were carried out, including geochemical characterization and planning for waste rock management, hydrogeological studies, engineering designs for collection ponds and infrastructure, reclamation and closure planning and development of plans for improving spawning areas in Moose Lake to compensate for losses in potential fish habitat within the proposed pit area.

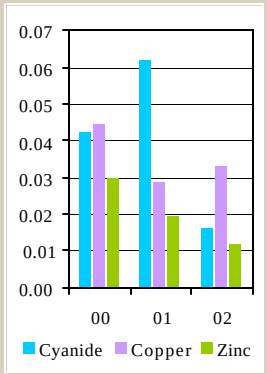
Several public meetings were held to explain the proposed expansion, the permitting process, and proposed environmental protection and mitigation strategies. These meetings included presentations to the town councils of Marathon and Manitouadge and two open houses with local First Nation communities of the Ojibway. Further dialogue with the First Nation communities has been initiated with respect to economic benefits, water quality management and long-term management of waste facilities. The permitting process is on schedule for submission to government by July 2003.

This community process was facilitated through MAC training

> reportable spills
> number



> annual average effluent discharge quality
> mg/L



sessions for outreach and dialogue in the "Toward Sustainable Mining" program. Workshops had been completed by corporate initiative leaders including Teck Cominco, their Hemlo partner and another mine in the vicinity. On the basis of this training, the trio put in place a training program to pass on the outreach process to the sites. At this workshop, the Hemlo Camp joint communities of interest (COI) were identified, outreach teams were established and plans were made to carry out dialogue in small meetings with each COI. Several key meetings have since been held jointly with the Ojibway of the Pic River First Nation in Heron Bay and the town councils at nearby Marathon and Manitouadge communities.

Discussion of Performance Indicators

Effluent Discharge Quality

- Treated effluent was well below Certificate of Approval (COA) limits and provincial Municipal Industrial Strategy for Abatement (MISA) requirements. The mine operation has been in full compliance with permit conditions for several years.

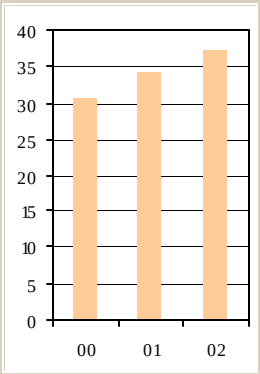
Reportable Spills

- There were nine reportable spills in 2002, with five related to pipeline failures on fused welds. Appropriate response action was taken in each case and impacts to receiving environments were minimal. A quality assurance program for fused welds has been initiated. In October, an overflow of the mine site polishing pond occurred due to excessive water volumes on the property and coincidental tailings system repairs. However, water quality was well within COA limits.

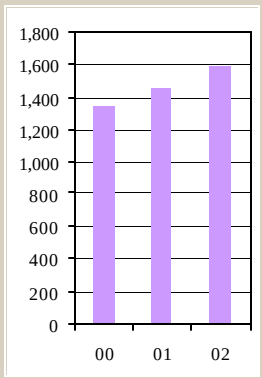
Energy Consumption/Greenhouse Gas Emissions

- Energy consumption and the corresponding GHG emissions have shown an increasing trend over the past three years, largely as a result of increasing mill throughput and longer waste hauls from the open pit. The energy intensity per ounce of gold recovered also increased during this period due in part to lower ore grades.

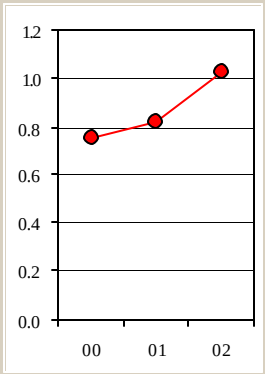
> greenhouse gas emissions
> CO2e (kilotonnes)



> total energy consumption
> terajoules



> carbon energy intensity in product: gold
> GJ / oz



Elkview Mine (coal)

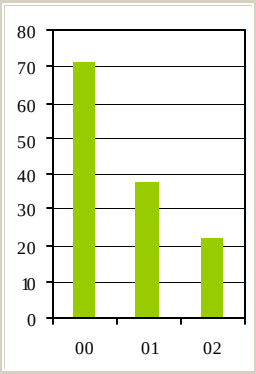
The Elkview mine is located in the Elk Valley near Sparwood, B.C., in steep mountainous terrain. The mine is only one of two metallurgical coal mines in the world with reserves over 200 million tonnes of high-strength coking coal. Production totaled 5.54 million tonnes of clean coal in 2002.

The principal issues facing all of the metallurgical coal mines in southeastern British Columbia include water quality in mine drainage (suspended solids, nitrate, selenium), minimizing suspended particulate in the atmosphere and reclaiming mine disturbances, particularly the angle-of-repose waste dumps at high elevation.

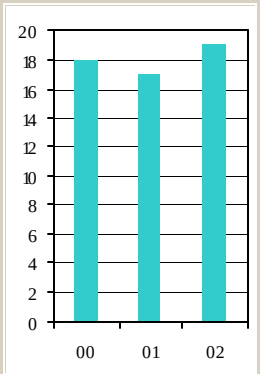
Maintaining clear water discharges during mountain storm events and spring runoff is a particular challenge that Elkview has been addressing over the years. Efforts are being made to improve the capacity of sedimentation ponds, but in some cases, remotely operated flocculent systems are also required to improve settling capacity. Despite these improvements, the site exceeded permit conditions for total suspended solids on 12 occasions during the year. Management is committed to achieving 100% compliance and will continue to improve the performance of the water-handling facilities.

A government-industry taskforce was created in 1997 to conduct research to determine if any adverse effects are occurring in the aquatic environment from selenium contained in water leaving the property. To date, no negative impacts on fisheries resources have been identified. The research project was expanded in 2002 to include waterfowl, ungulates and biota in lentic environments (slow-moving water). The avian study examined potential impacts to American Dipper and Spotted Sandpiper. Although the report is still in draft, preliminary conclusions indicate virtually identical results between reference (non-impacted) and exposed dippers, but that exposed sandpipers had approximately double the concentrations of those from the reference location. No significant differences in productivity (number of eggs, number of hatchlings and number of fledglings) in either species were determined, and no defects were found in any of the embryos, hatchlings or adult birds studied. The Lentic Selenium Study is in its early stages, with phase one making recommendations on study design following initial reconnaissance work in 2002. Significant field work is being planned for 2003.

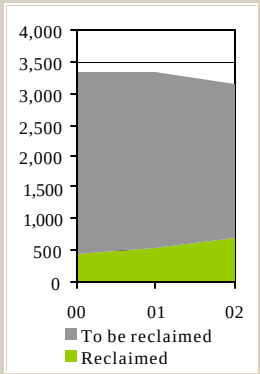
> reportable spills
> number



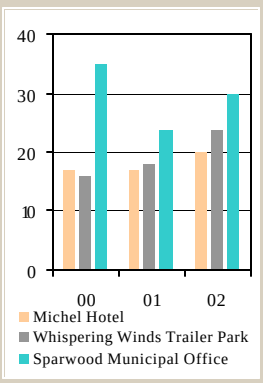
> permit excursions
> number



> cumulative reclamation progress
> hectares



> annual average ambient air quality: particulate
> µg/m^3

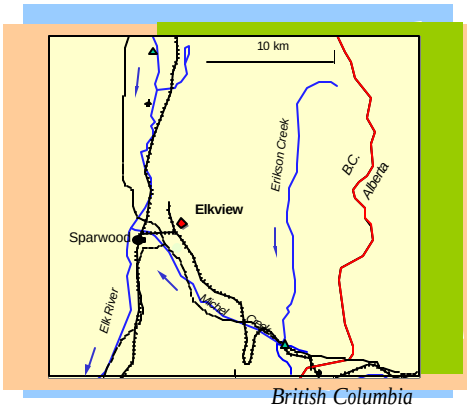


Elkview engages the community in regular communications through a variety of forums. Frequent presentations are made to local community groups, including the Sparwood town council, where four meetings have been held to discuss future mine plans and ambient air issues. A "mine store front" is maintained at the local shopping mall to provide an opportunity for residents to drop by and discuss any issue of concern or talk about mine development plans, employment or any other topic. The mall office is staffed on a rotating basis by the mine manager, departmental superintendents and the senior environmental coordinator. The office is open one day each week.

Air quality is the single largest concern raised by residents in the nearby community of Sparwood. In 2002, Elkview initiated a variety of programs to improve air quality monitoring, enhance community dialogue and address specific dust-related concerns. Following are some of the actions taken to reduce dusting incidents and improve general air quality:

- The dust collection system at the in-pit breaker station was replaced with a dry fog dust suppression system. The dry fog system should result in total elimination of air flow and dust through the breaker stack, possibly to the point of removing this site as a point source from permit conditions. The system was installed in the fall, but was not operational at year-end due to problems with water containment and application of the dry fog. Elkview is working with the supplier to resolve these issues.

- At the Lagoon D coal tailings pond, dusting results from freeze-drying in combination with high wind events. However, windblown dust can also be an issue during extended dry periods and during years of less than average precipitation. After several years of experience and a variety of efforts to control dust, the operation is now using tackifiers, water cannons and snow-making equipment to manage the exposed coal fines in the pond. The program proved to be very successful in 2002, with no dusting events recorded.

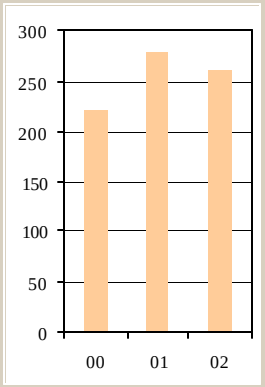


Discussion of Performance Indicators

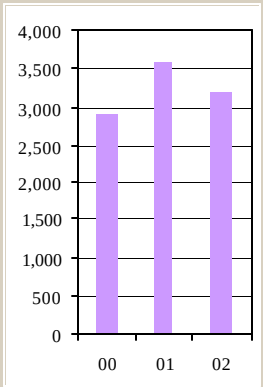
Ambient Air Quality

- On the monitoring front, the mine has initiated a fine

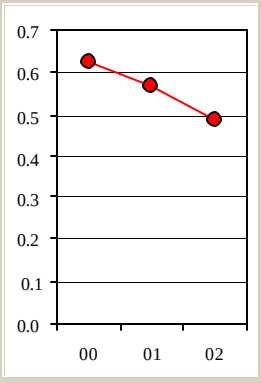
> greenhouse gas emissions
> CO2e (kilotonnes)



> total energy consumption
> terajoules



> carbon energy intensity in product: coal
> GJ / tonne



particulate monitoring program ($PM_{2.5}$ and PM_{10}) to complement the total suspended particulate and meteorological monitoring conducted in the valley at key air-quality monitoring stations. Data from the $PM_{2.5}$ and PM_{10} units were collected almost daily at a downtown Sparwood station and every six days (national schedule) at the other stations. Ambient air values were within provincial guidelines for total suspended particulate 99.4% of the time. The average particulate levels at the three monitoring locations showed increases in 2002 (to a high of 36 $\mu g/m^3$); however, these results are much less than the provincial objective concentrations of 150 $\mu g/m^3$ for residential areas (see graphs).

Permit Compliance

- A total of 19 permit excursions occurred in 2002, including the in-pit breaker station, which has been addressed, and the flow rate of the sewage treatment plant for which a permit change was submitted six years ago.

Reportable Spills

- The number of reportable spills totaled 22, a significant decrease from 2001 and 2000. Spills are primarily related to hydrocarbon losses from mobile equipment and refuelling spills.

Energy Consumption/Greenhouse Gas Emissions

- Total fuel consumption and greenhouse gas emissions decreased in 2002, despite an increase in coal production. The decrease is a reflection of efficiency gains and improvements in the mine plan. The carbon intensity in coal production has also decreased significantly and is another indicator of efficiency improvements.

Reclamation Progress

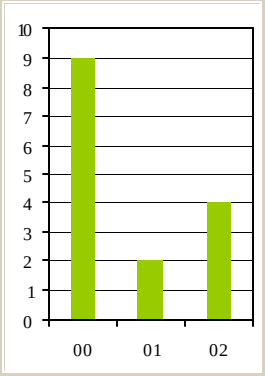
- Seventy-one hectares were reclaimed and 34,000 seedlings planted in 2002.

Bullmoose Mine (coal)

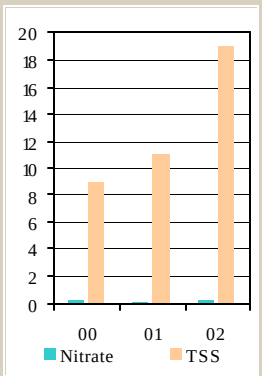
The Bullmoose mine, located near Tumbler Ridge, B.C., has been in production since 1983 but will close early in 2003. Since completion of mining is fast approaching, detailed mine closure and reclamation plans are being finalized. Consultants have been engaged to begin contaminated site identification and priority ranking in accordance with the Contaminated Site Regulations.

Bullmoose

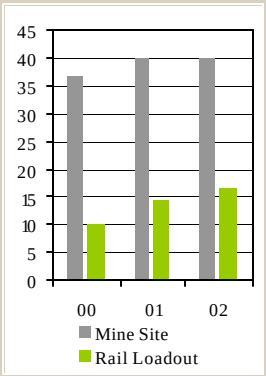
> reportable spills
> number



> discharge to south bullmoose creek: annual average discharge quality
> mg/L



> annual average ambient particulate levels
> number



In September 2002, Bullmoose received a citation for outstanding reclamation achievement at the annual B.C. Mine Reclamation Symposium. Dr. John Errington of the Ministry of Energy and Mines stated, "The citation recognizes outstanding work in the areas of materials handling related to sloping, contouring and revegetation, all of which has been directed at achieving wildlife habitat."

A geographic information system was implemented in 2002. This technology, when combined with air photo and satellite imagery, will be used to evaluate the reclamation program and assess wildlife habitat creation on a large scale.

Discussion of Performance Indicators

Reclamation Progress

- To date, 55% of the total disturbance at Bullmoose has been revegetated. Excluding the 76-ha footwall, the area remaining to be reclaimed after mine closure is 364 ha. The majority of this area comprises 278 ha in the high elevation Southfork mining area, which will be reshaped and seeded in accordance with the reclamation plan.

Water Quality

- Nitrate and suspended solids in discharge to South Bullmoose Creek were well within permit conditions.

Reportable Spills

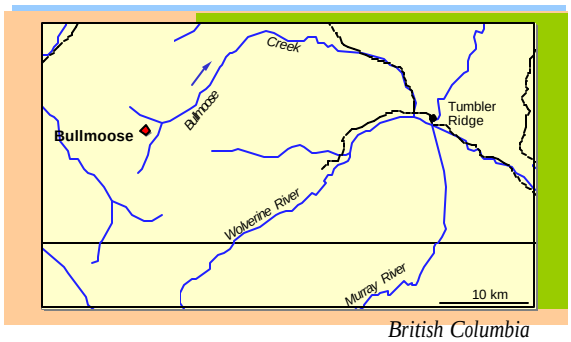
- Four reportable spills were recorded in 2002, compared with two in 2001 and nine in 2000. Efforts at minimizing the frequency of spill events are evident. None of the spills have resulted in an off-site impact.

Ambient Suspended Particulate

- Suspended particulates levels are low and well within the objective levels for residential areas of 150 µg/L. There are no residential areas near Bullmoose.

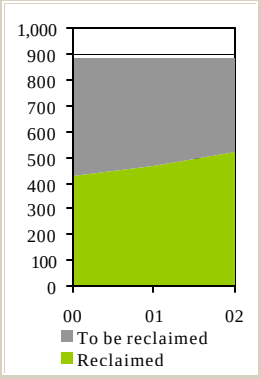
Energy Consumption/ Greenhouse Gas Emissions

- Energy consumption has increased toward the end of mine life due to coal production increases. The energy intensity in coal product has shown a decrease over the past three years, reflecting energy efficiency improvements in the mine plan and equipment.

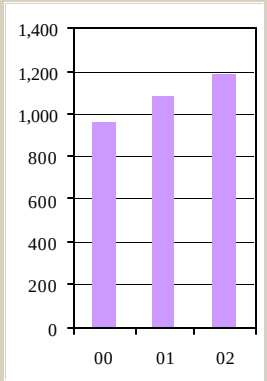


British Columbia

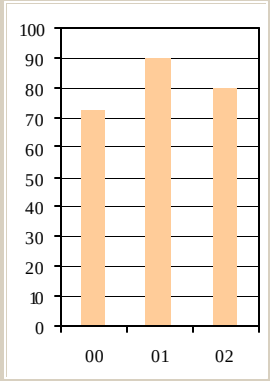
> cumulative reclamation progress
> hectares



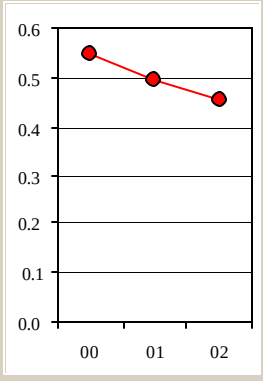
> total energy consumption
> terajoules



> greenhouse gas emissions
> CO2e (kilotonnes)



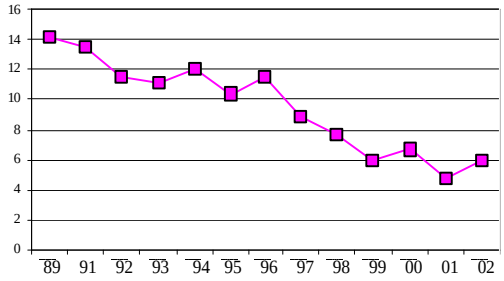
> carbon energy intensity in product: coal
> GJ / tonne



Trail Metallurgical Operations

Overall environment, health and safety performance was at a very high level in the year with a number of performance indicators reaching new records. Production of metals and associated chemical products was at design capacity rates throughout the year, except for a one-month shutdown during which the periodic maintenance program on the boiler of the Kivcet lead smelter was carried out. Unlike the experience in 2001, the work overall was accomplished safely although a small number of workers exhibited modest short-term increases in urine thallium concentrations. This resulted from substantive upgrades to exposure control and hygiene management practices.

> Geometric Mean of Blood Lead Levels for Children in the Trail Area
> µg/dL

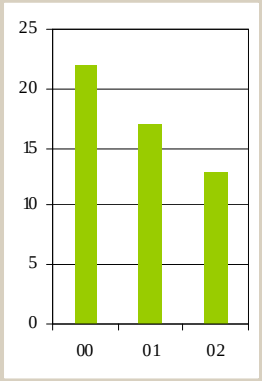


Concerning the 2001 thallium incident, the B.C. Workers Compensation Board (WCB) issued its final report confirming Teck Cominco's responsibility for the matter. The agency also levied a penalty of $270,000, most of which has been committed for the longer-term monitoring of the health of significantly exposed workers and a broader study of exposure to metals in the workplace. The implementation of action in response to the health hazard management systems audit in late 2001 continued in the year under the review of the unions and WCB and is expected to be complete by early 2003.

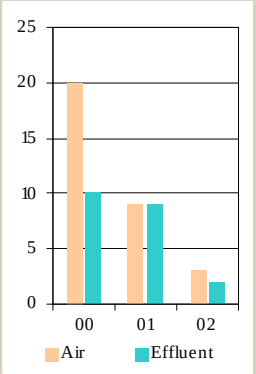
Trail operations established a new safety record in 2002 with a lost-time accident (LTA) frequency of 1.4 and a severity rating of 39. This represents a significant improvement over 2001's results (frequency = 2.4; severity = 66). Noteworthy is that the LTA frequency for the second half of the year was only 0.28. As well, the occupational health protection program continues to yield improvements as reflected by the sustained decline in employee blood lead concentrations and the proportion of workers over the stringent level of concern (see graph).

On the community health front, the process of implementing the actions recommended by the Trail Community Lead Task Force continued through the year with responsibilities being shared by Teck Cominco, the city of Trail and the regional health authority. This is under the oversight of the Trail Health and Environment Committee (THEC), a public consultative group. As indicated in the trend chart, mean

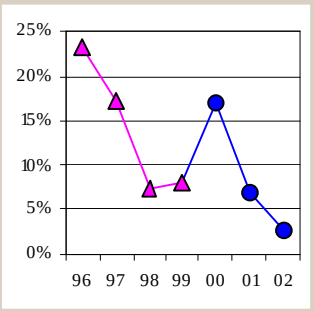
> reportable spills / incidents
> number



> permit excursions
> number



> employee blood lead levels percent over concern levels
> 2000-01: < 35 µg/dL
Pre-2000: < 40 µg/dL



British Columbia

blood lead concentrations in children from the 2002 fall sampling clinic rose to 6.0 µg/dL from 4.7 µg/dL in 2001. The increase may be attributable to extremely dry and windy conditions in the summer. While the mean did increase, it should be noted that the proportion of children with concentrations over the 10 µg/dL level of concern continued to decrease. Activities for 2003 within the operation will focus on reducing fugitive dust emissions.

The Interior Health Authority conducted a urine thallium survey of 50 people, including 25 who consume local produce. The results, similar to U.S. general population background levels, confirmed that thallium is not a health risk in the community. Moreover, the consumption of local vegetables was not a factor in the survey data.

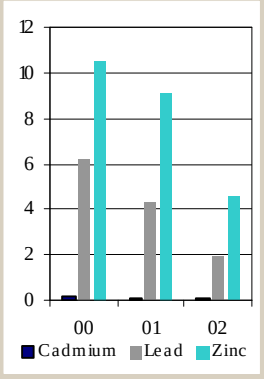
Compliance under permit limitations and the control of contaminant releases were outstanding in the year with new environmental performance records being set. Particularly noteworthy was the control of ambient sulphur dioxide concentrations as there were only two limit exceedances while there were seven in 2001 and 18 in 2000. While the metals loadings in monitored emissions were low in 2002, these did not result in reductions in ambient concentrations in the community. Although current levels are not of concern, it is evident that increased attention to process emissions as well as fugitive emissions from stockpiles and other sources is warranted.

For the past several years, Trail has had a program to investigate and remediate historic landfills that may be causing impacts to surface and groundwater. In 2002, Trail completed most of a $3-million project to cap an old landfill and advanced a management plan to resolve the matter of historically deposited waste materials outside of the current operating boundary. These projects are expected to further reduce the amount of contaminated groundwater that enters nearby Stoney Creek.

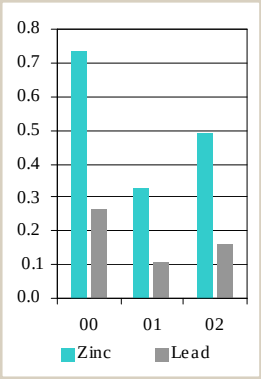
Progress continued on the wide area


Landfill cover being installed in Trail.

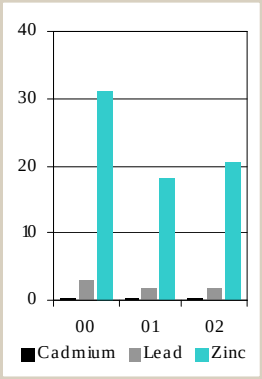
> metals released in air emissions
> tonnes



> annual average ambient air quality
> µg/m³



> metals released in effluent
> tonnes



ecological risk assessment (ERA), which was focused primarily on the deposition of contaminants from historic emissions. The study, likely the largest of its kind ever done in Canada, will be linked to human health risk studies done under the Trail Community Lead Task Force when it is completed in 2004. During the year, terrestrial field work, including additional soil sampling, was completed, and the emphasis will shift to the aquatic environment in 2003.

Discussion of Performance Indicators

Reportable Spills/Incidents

- There were 13 in the year, which continued the improved trend over the last three years. Most were process-related incidents and did not have significant impacts on effluent or receiving water quality. None were direct spills to the environment.

Permit Compliance

- There were five air and effluent quality limit exceedances in 2002 in comparison to 18 in 2001, sustaining a very dramatic improvement over the past three years. It should be noted that the operation has about 80,000 compliance determinations every year.

Air Emissions and Ambient Air Quality

- Although the production shutdown was only one month in 2002 in comparison to three months in 2001, measured metals releases were reduced substantially in the year due to the continuing improvement of controls. However, ambient concentrations increased in the year. While the shorter shutdown was a factor, it is believed that fugitive dust emissions from areas of the operation also contributed to the increase.

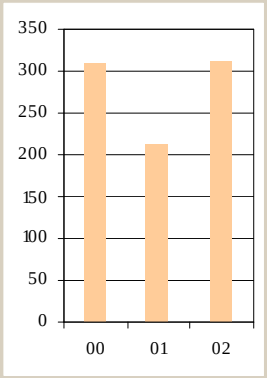
Metals Released in Effluent

- Releases of zinc increased by 10% in 2002, but were essentially the same as in 2001 for other metals. This is considered to be satisfactory in view of the significantly longer operating time in 2002.

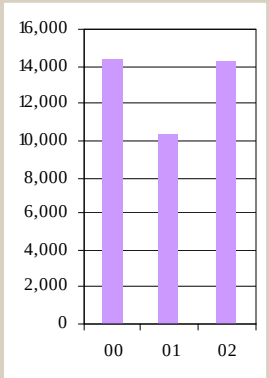
Energy Consumption/Greenhouse Gas Emissions

- Total consumption and emissions increased significantly over levels in 2001 due mainly to the increased operating rate in 2002. However, the carbon energy intensity in the major metal products was reduced by about 15% as a result of fuel efficiency improvements.

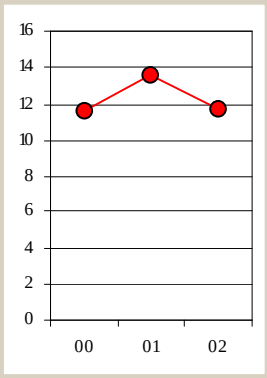
> greenhouse gas emissions
> CO2e (kilotonnes)



> total energy consumption
> terajoules



> carbon energy intensity in product: zinc & lead
> GJ / tonne



Cajamarquilla Zinc Refinery

Teck Cominco's 120,000 tonnes-per-year zinc refinery in Peru was shut down for three months in 2002 due to market conditions.

In last year's report, it was noted that the operation was experiencing a difficult challenge in meeting its own voluntary sulphur dioxide emissions limit of 500 ppm even though it easily surpassed Peruvian regulatory requirements. Through the outstanding efforts of refinery personnel early in the fourth quarter of 2002, sulphur dioxide levels in emissions are now well below the voluntary limit. A survey by expert consultants has confirmed that the refinery's emissions are now consistent with the acid plant technology employed by the operation.

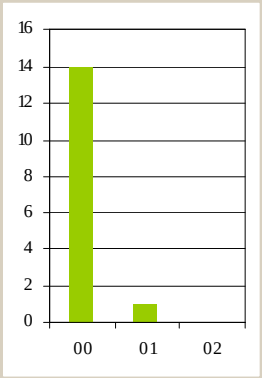
The refinery's treated water is used to a large extent by a local farmers' cooperative to irrigate their crops. To ensure the water meets the regulatory requirements for irrigation, it is captured in two large final effluent ponds and carefully monitored. Any water not meeting the standards can be recirculated to the plant for further treatment. No problems were experienced during the year, and the refinery continued to supply water to the cooperative during the three-month shutdown. The remaining part of the water is used to irrigate the refinery's own lands and green areas. This activity is being extended as an additional 9 hectares have been covered with topsoil and will be planted with trees in 2003.

The operation has embarked upon a campaign to reduce the number of spills on the site. This will be helped considerably by work completed in 2002, whereby the pipelines carrying the jarosite residue to permanent storage are now located in a containment system. Any leaks will be captured and pumped back to the plant.

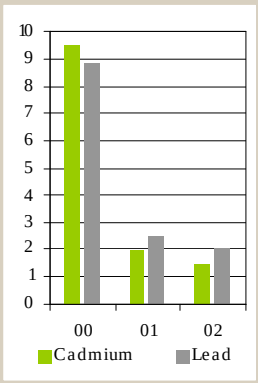
During the year, the refinery launched a major EMS development initiative with the objective of having an ISO 14001-conformant system in place by the fourth quarter of 2003. By year-end, the program was at the stage where the significant environmental aspects at the refinery had been defined and work was under way on setting performance targets and related management programs.

The refinery's safety performance was mixed by its own high standards. A lost-time accident (LTA) frequency of 1.6 was slightly higher than the 1.5 target. However, severity at 19 was

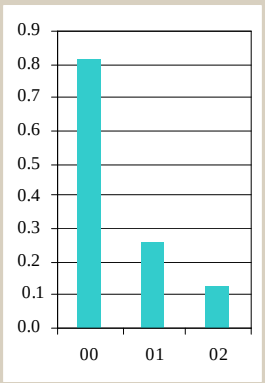
> permit excursions
> number



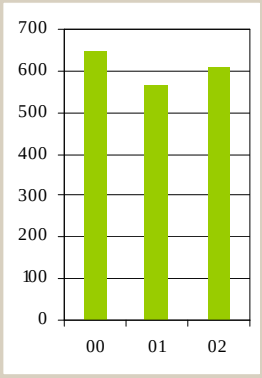
> metals released in effluent: lead and cadmium
> kilograms



> metals released in effluent: zinc
> tonnes



> annual average sulphur dioxide emissions
> ppm



excellent in comparison with the target of 47.

Discussion of Performance Indicators

Regulatory Compliance

- The operation had no regulatory limit exceedances in 2002, while there was one effluent excursion in 2001 (corrected from zero in the 2001 report).

Sulphur Dioxide in Emissions

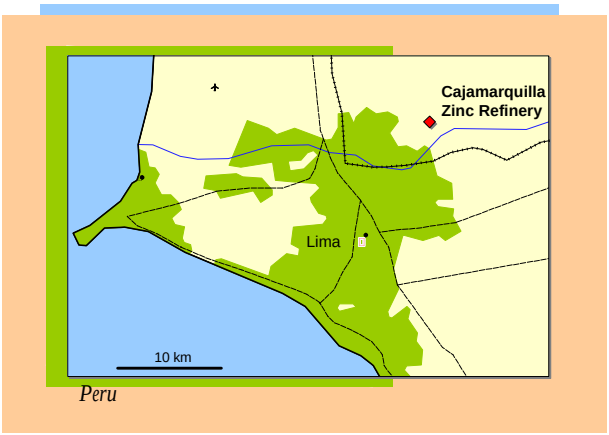
- Sulphur dioxide concentrations in emissions increased to an average of 610 ppm in 2002, which is well above the operation's voluntary limit of 500 ppm (a North American standard). However, this improved in the fourth quarter with the completion of certain projects. Concentrations have averaged less than 400 ppm since that time.

Metals Released in Effluent

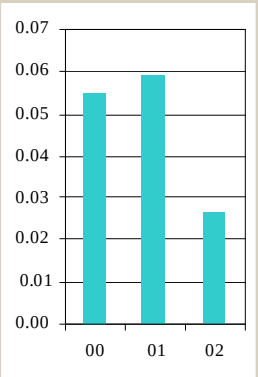
- Quantities released in 2002 were reduced over those in 2001, representing an improvement sustained over the past three-year period (albeit the shutdown was a factor). All treated waste water continues to be combined with Rimac River water and used by local farmers for irrigation purposes.

Energy Consumption/Greenhouse Gas Emissions

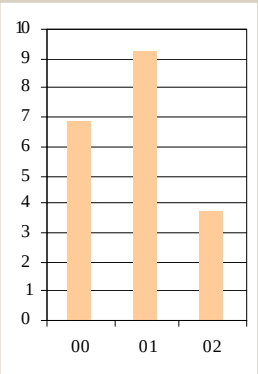
- The total consumption and GHG emissions reduction from 2001 was about 20%, but this can be attributed to the three-month shutdown. Real improvements were measured in the intensity of energy consumption in 2002.



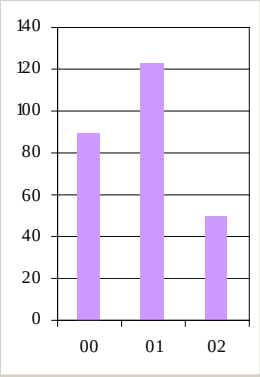
> annual average ambient air quality: sulphur dioxide
> µg/m^3



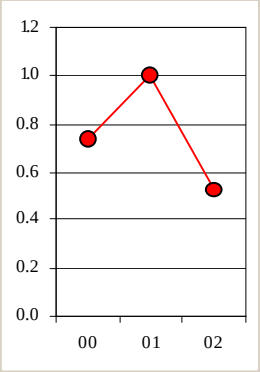
> greenhouse gas emissions
> CO2e (kilotonnes)



> carbon energy consumption
> terajoules



> carbon energy intensity in product: zinc
> GJ / tonne



Quintette Mine (coal)

The Quintette mine is situated in the eastern foothills of the Rocky Mountains, approximately 22 km south of Tumbler Ridge, British Columbia. The mine produced metallurgical coal from 1983 until August 2000, when market conditions necessitated the closure of the mine. Three separate areas have been mined, two at high elevation and the other in the Murray River valley. These are known as the Mesa/ Wolverine, Babcock and Shikano pits.

Since the mid-2000 termination of mine operations, Quintette has progressed through several stages of closure in connection with work programs in mine reclamation, water management, contamination assessment and infrastructure demolition.

Of considerable note, the land reclamation completed during this timeframe was 1,282 ha, which equates to 31,000 hours of D10 dozer time to reshape waste dumps, 226,000 bank cubic metres (bcm) of material placed to improve growing media, 106 helicopter hours of seeding and fertilizing, 25 hours of fixed-wing flights with foliar maintenance fertilizer, and 101 tonnes of seed. In 2002, 118,000 deciduous and coniferous seedlings were planted at the mine. All in all, it was a massive undertaking, which leaves the site in the excellent position of 83% completion toward its target of successful landform stabilization and regeneration of vegetation over 100% of the mine site.

Water management is a key component of leaving any mine site in a stable condition into the long-term future. The purpose of the Quintette closure water management plan is to prevent erosion, reduce the release of suspended solids into the receiving environment and preserve long-term water quality. Stormwater handling is a critical aspect of these plans and required careful engineering and design. An outfall spillway for the Shikano South open pit was constructed in bedrock and forms a pleasing waterfall down the bedrock steps into the oxbow system of the Murray River.

Discussion of Performance Indicators

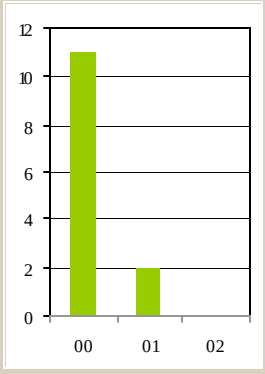
Reportable Spills

- No reportable spills occurred during the year.

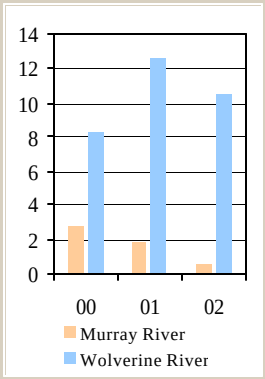
Permit Compliance

- A total of nine permit exceedances occurred during

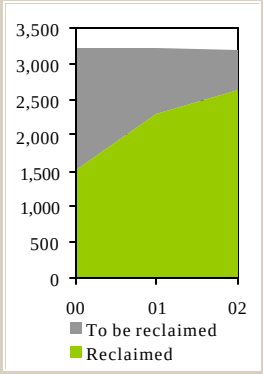
> reportable spills
> number



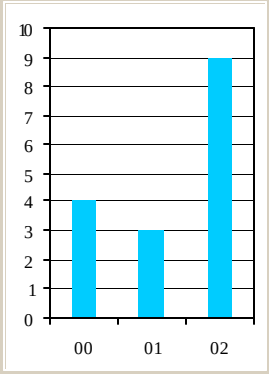
> annual average discharge quality
> mg/L



> cumulative reclamation progress
> hectares



> permit excursions
> number



Outfall spillway for the Shikano South pit.

2002, primarily from one large storm event in June that exceeded the treatment capacities of four settling ponds. Three excursions were recorded during the drawdown of the plant site tailings dam seepage collection pond as part of the closure activity.

Reclamation Progress

- The trend graph indicates that reclamation activity increased significantly since closure in 2000. As well, decommissioning and demolition of facilities were well advanced in the year.

Energy Consumption/Greenhouse Gas Emissions

- Fuel consumption and GHG emissions are substantially reduced as would be expected following closure of mine operations.

Sullivan Mine (zinc/lead)

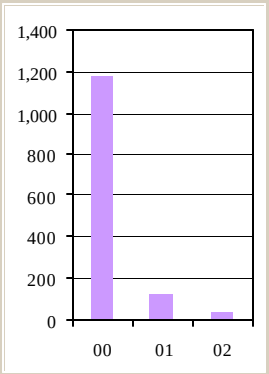
2002 was the first full year of closure for the Sullivan mine, following shutdown in 2001 and more than 90 years of operation. While progressive reclamation and remedial programs have been under way since the 1970s, final decommissioning and closure activities were fully commenced early in the year with efforts being directed at the sale of residual assets, buildings demolition, land reclamation and the removal of site services. Public safety measures were given priority through the construction of a fence system around the subsidence area at the mine and the installation of concrete caps on all openings to the mine. All waste dumps and tailings dams received a final geotechnical review to confirm that they meet long-term stability criteria concerning severe earthquake and flood events.

Progress continued on the combined human health/ecological risk assessment with the completion of the problem formulation phase and further sampling programs to characterize site and downstream watercourse conditions. The public participates in this study through the Sullivan Public Liaison Committee, which also continues to meet to review all reclamation and ongoing environmental management activities at the mine.

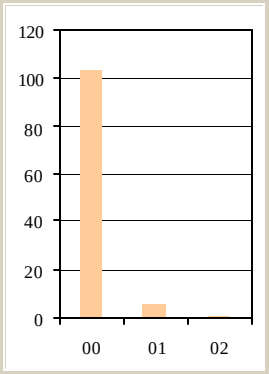
The first year of a new contaminated drainages management system proved to be very successful. Flows from the mine and tailings impoundment used to be stored in the latter facility and treated continuously. However, in order to facilitate the complete reclamation of the tailings

Quintette

> total energy consumption
> terajoules

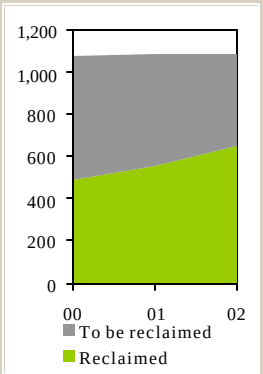


> greenhouse gas emissions
> CO2e (kilotonnes)



Sullivan

> cumulative reclamation progress
> hectares



impoundment, a separate storage pond was built from which drainage is treated on a campaign basis in the spring and fall. As well, the mine is now an underground storage reservoir which is gradually filling and from which drainage will be intermittently pumped for treatment once it is at operating level in about three years.

The mine continued to support the economic sustainability of the community by finalizing land sales to the city of Kimberley for the development of a new golf course and by selling land to other parties interested in developing commercial activities in the area. In addition, the development of tourism was aided by providing land and artifacts for the Sullivan Mine Interpretive Centre and the Bavarian City Mining Railway. Land and building space was also made available to the local community college so it could expand an on-site trades training program.

Discussion of Performance Indicators

Metals Released in Treated Effluent

- Quantities released to the St. Mary River were greatly reduced from those in 2001. This is primarily due to much lower volumes of contaminated drainages requiring treatment now that the mine is closed.

St. Mary River Water Quality

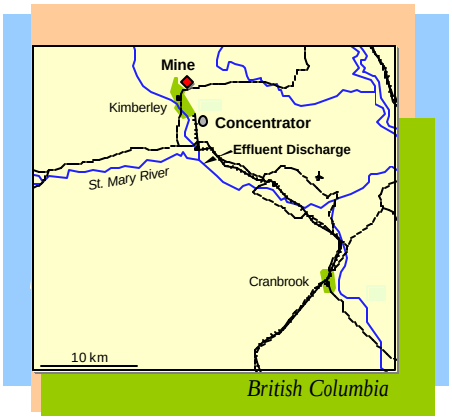
- While still far below drinking water standards and below aquatic life standards, metal concentrations downstream of the mine and the city of Kimberley increased in 2002. The reason for these increases has not been determined but may, in part, be due to sampling location influences.

Reclamation Progress

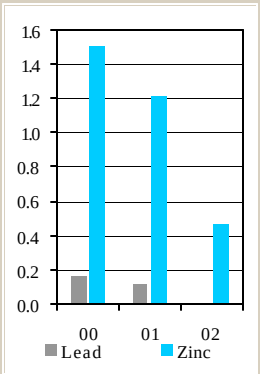
- The trend graph indicates that reclamation activity increased significantly in 2002, the first year of mine closure. As well, facilities decommissioning and demolitions were well advanced in the year.

Energy Consumption/Greenhouse Gas Emissions

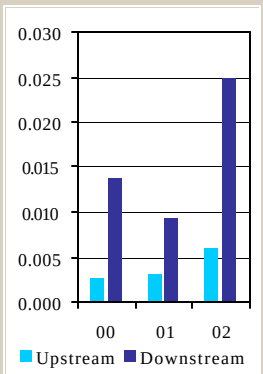
- Fuel consumption and GHG emissions are substantially reduced as would be expected following closure of mine operations.



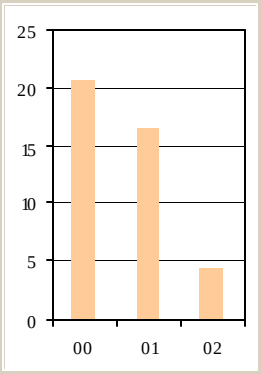
> metals released in effluent
> tonnes



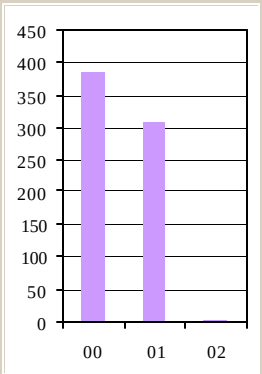
> st. mary river annual average zinc concentrations
> mg/L



> greenhouse gas emissions
> CO2e (kilotonnes)



> carbon energy consumption
> terajoules



Abandoned mines have been drawing increased international attention due to concerns over their environmental and social impacts. Teck Cominco recognizes the importance of this issue and accepts responsibility for conditions at older mining and industrial operations that were created by the company and its predecessors. Given the long tenure of the company in both Canada and the U.S., in particular, it has many properties under active care and management, some of which can be classed as true historic operations. It is important that these dormant properties be distinguished from "abandoned mines."

These older mines and industrial facilities were operated and shut down in accordance with accepted practices of the day. While most generated profits for the company, they had broader societal benefits and, in some cases, were significant contributors to infrastructure development.

The company currently has more than 20 former mines and industrial operations under active care and management. They are located in six provinces and territories in Canada and six states in the U.S. The programs at these sites range from large-scale remediation projects to monitoring and assessment. Virtually all activities are being undertaken voluntarily, either independent from or under agreements with regulatory authorities. Expenditures on the program in 2002 exceeded $5 million. The case study of the Bluebell mine is an illustrative example of the efforts under way.

Case Study - Bluebell Mine
Remediation of a Historic Mine Site

The Bluebell mine was a lead, zinc, silver mine discovered circa 1820 and is one of the oldest mines in British Columbia. It had a number of owners throughout its life and was mined through a combination of open-pit and underground methods. It is located in the hamlet of Riondel on the shores of Kootenay Lake in southeastern B.C. Starting in the 1930s, Cominco Ltd. gradually acquired the surface and mineral rights to the property and eventually operated the mine from 1952 to 1972. In 2001, Cominco Ltd. was privatized by its largest shareholder, Teck Corporation and changed its name to Teck Cominco Metals Ltd. Teck Cominco Metals continues to own and manage the site.

The mine was reclaimed to the standards of the day upon closure in 1972. In the light of more recent environmental and safety standards, Cominco initiated investigations in 1997 to identify potential environmental and public safety issues at the site. Attention focused on mine openings, waste rock dumps, deposits of process fines (residual tailings and concentrates) and deposits of sediments from mine water discharged during operations. During the phase of Cominco operations, tailings were discharged below the surface of the lake near the entrance to Galena Bay. Wave action and spillage from the concentrator had resulted in significant contamination of the foreshore area of this bay. As well, the environmental investigations located and quantified the contaminated materials at other locations on the site and confirmed their impacts on surface and groundwater quality. There were also a number of mine workings at or near the surface that, while fenced and signed, represented a potential public safety concern.

In 2000, Cominco approached the Kootenay Mine Development Review Committee and proposed a remedial work program to substantially improve both the

environmental and public safety aspects of the site. This program focused on the remediation of the contaminated soils in the terrestrial areas of the site, in particular. ARD-generating process fines were removed and transported to the tailings facility at Teck Cominco's Sullivan mine in Kimberley, B.C., where all contaminated drainages are managed and treated. Mine water sediments and waste rock, being predominantly limestone, were removed from the wet meadow adjacent to the Galena Bay mill site and used to fill a large open pit referred to as "the Glory Hole." The filling of this large mine opening eliminated one of the major public safety concerns at the site.

In 2001, the more challenging portion of the remedial work was carried out. Process fines and other contaminants on the foreshore of Galena Bay were known to be impacting groundwater and were being actively disturbed by wave action from the lake. These materials were excavated, starting from above the high-water elevation of the lake, and progressing downslope to at least 0.5 metres below low-water elevation. Once the contaminated materials were removed, an engineered beach was constructed that extended out into the bay a minimum of 5 metres below low water. This was required to cap remaining contaminated lake sediments to a depth where storm events would not remobilize and redeposit them back onto the foreshore. Timing of this complex work was critical as it had to coincide with the brief period in the spring when the lake elevation was drawn down to its minimum by dams controlling the outflow. As most of the work was within the aquatic environment of Kootenay Lake, approvals were required from 11 different agencies and from three levels of government. Protection of the aquatic environment was the most critical aspect of the foreshore remedial work. Containment of suspended sediments within the work area was achieved through the use of a custom-designed floating dual silt curtain barrier system. Systematic monitoring of water quality using field and laboratory methods was undertaken to track the performance of the control system. The work was successfully completed and Galena Bay now has a new beach consisting of clean rock.

At the end of 2001, the majority of the planned remedial work had been completed. A number of lower-priority environmental and public safety concerns remain and will be addressed during the last phase of work. Meanwhile, comprehensive monitoring of the site groundwater and adjacent lake-water quality is ongoing. Major improvements to the environmental quality of the site have already been achieved.

In recognition of this work, the annual Jake McDonald B.C. Mine Reclamation Award was presented to Teck Cominco in 2002. The B.C. Ministry of Energy and Mines Reclamation and Permitting Manager, Dr. John Errington, presented this major award at the annual Reclamation Symposium, stating that "...this was a very challenging project and Teck Cominco should be applauded for their diligence and innovative work."

Red Dog Mine

• Base Metal - zinc & lead (100%)

Reportable Spills

	2000	2001	2002
Number	113	221	131

Greenhouse Gas Emissions

tonnes	2000	2001	2002
CO_2 equivalents	172.6	183.2	192.6

Permit Compliance Number of Excursions

	2000	2001	2002
Effluent	10	9	19

Energy Consumption

terajoules	2000	2001	2002
Fuel	2,416	2,563	2,695

Metals Released in Effluent

tonnes	2000	2001	2002
Cadmium	0.004	0.007	0.003
Lead	0.004	0.004	0.004
Zinc	0.166	0.227	0.269

Carbon Energy Intensity in Product

	2000	2001	2002
GJ / t (zinc & lead)	3.93	4.18	3.93

Concentrations in Effluent

mg/L	2000	2001	2002
Cadmium (Permitted: 0.002)	0.0014	0.0012	0.0009
Lead (Permitted: 0.081)	0.0011	0.0006	0.0637
Zinc (Permitted: 0.120)	0.0413	0.0423	0.0637

Production (metal contained in concentrate)

000 tonnes	2000	2001	2002
Zinc	531.2	517.7	578.4
Lead	83.0	95.3	107.9
Total	614.2	613.0	686.3

Red Dog Creek Natural Loadings

tonnes	2000	2001	2002
Cadmium	0.25	0.18	0.12
Lead	1.46	6.49	0.27
Zinc	37.2	21.6	16.9

Highland Valley Copper Mine

• Base Metal - copper (63.9%)

Reportable Spills / Incidents

	2000	2001	2002
Number	12	0	1

Greenhouse Gas Emissions

kilotonnes	2000	2001	2002
CO_2 equivalents	69.9	72.0	75.4

Cumulative Reclamation Progress

hectares	2000	2001	2002
To be reclaimed	4,598	4,500	3,989
Reclaimed	1,772	1,900	2,005

Energy Consumption

terajoules	2000	2001	2002
Fuel	978	1,007	1,055
Hydroelectricity	3,446	3,421	3,421
Total	4,425	4,428	4,476

Passive Treatment Results: Average Molybdenum

mg/L	2000	2001	2002
Inflow	4.11	4.47	4.55
Outflow	0.45	0.51	0.88

Carbon Energy Intensity in Product

	2000	2001	2002
GJ / t (copper)	5.30	5.40	5.82

Production (metal contained in concentrate)

000 tonnes	2000	2001	2002
Copper	184.6	186.6	181.3

Polaris Mine

• Base Metal - zinc & lead (100%)

Garrow Lake Surface Water Quality

mg/L	2000	2001	2002
Lead	0.014	0.002	0.001
Zinc	0.30	0.21	0.26

Greenhouse Gas Emissions

kilotonnes	2000	2001	2002
CO_2 equivalents	45.7	45.5	34.1

Metal Loadings: Garrow Lake Discharge

tonnes	2000	2001	2002
Lead	0.03	0.02	0.01
Zinc	0.79	0.41	0.44

Energy Consumption

terajoules	2000	2001	2002
Fuel	639	637	477
Hydroelectricity	-	-	-
Total	639	637	477

Production (metal contained in concentrate)

000 tonnes	2000	2001	2002
Lead	135.2	123.1	78.6
Zinc	34.0	30.6	17.6
Total	169.2	153.7	96.2

Carbon Energy Intensity in Product

	2000	2001	2002
GJ / t (zinc & lead)	3.8	4.2	5.0

Hemlo Gold Operations

• Williams and David Bell gold mines (50%). All figures stated account for 100% of emissions.

Reportable Spills

	2000	2001	2002
Number	17	9	9

Greenhouse Gas Emissions

kilotonnes	2000	2001	2002
CO_2 equivalents	30.6	34.2	37.2

Annual Average Effluent Discharge Quality

mg/L	2000	2001	2002
Cyanide	0.043	0.062	0.016
Copper	0.045	0.029	0.033
Zinc	0.030	0.019	0.012

Energy Consumption

terajoules	2000	2001	2002
Fuel	464	508	554
Hydroelectricity	888	949	1,036
Total	1,351	1,457	1,590

Production

000 ounces	2000	2001	2002
Williams	414	446	405
David Bell	196	169	133
Total	610	615	538

Carbon Energy Intensity in Product

	2000	2001	2002
GJ / oz (gold)	0.76	0.83	1.03

Elkview Mine

• Coal (100%)

Reportable Spills

	2000	2001	2002
Number	71	38	22

Permit Compliance

	2000	2001	2002
# of non-compliances	18	17	19

Ambient Air Quality: Particulate (Geometric Mean)

µg/m^3	2000	2001	2002
Michel Hotel	17	17	20
Whispering Winds Trailer Park	16	18	24
Sparwood Municipal Office	35	24	30

Cumulative Reclamation Progress

hectares	2000	2001	2002
To be reclaimed*	2,905	2,812	2,466
Reclaimed*	438	531	758

* Reconciled in 2002.

Greenhouse Gas Emissions

kilotonnes	2000	2001	2002
CO_2 equivalents	221.0	277.5	260.2

Energy Consumption

terajoules	2000	2001	2002
Fuel	2,543	3,125	2,719
Hydroelectricity	371	465	480
Total	2,914	3,590	3,199

Carbon Energy Intensity in Product

	2000	2001	2002
GJ / t (coal)	0.63	0.57	0.49

Production

000 tonnes	2000	2001	2002
Coal	4,063	5,517	5,547

Bullmoose Mine

• Coal (61%)

Reportable Spills

	2000	2001	2002
Number	9	2	4

Discharge to South Bullmoose Creek Annual Average Water Quality

mg/L	2000	2001	2002
Nitrate	0.24	0.20	0.24
Total Suspended Solids	9	11	19

Annual Average Ambient Air Conditions: Particulate

$\mu g/m^3$	2000	2001	2002
Mine Site	37.0	40.2	40.2
Rail Loadout	9.8	14.3	16.5

Cumulative Reclamation Progress

hectares	2000	2001	2002
To be reclaimed	459	424	364
Reclaimed	427	462	522

Energy Consumption

terajoules	2000	2001	2002
Fuel	777	938	1,004
Hydroelectricity	186	153	182
Total	963	1,091	1,186

Greenhouse Gas Emissions

kilotonnes	2000	2001	2002
CO_2 equivalents	73.1	90.2	80.2

Carbon Energy Intensity in Product

	2000	2001	2002
GJ / t (coal)	0.68	0.58	0.54

Production

000 tonnes	2000	2001	2002
Coal	1,416	1,894	2,203

Trail Metallurgical Operations

Reportable Spills / Incidents

	2000	2001	2002
Number	22	17	13

Greenhouse Gas Emissions

kilotonnes	2000	2001	2002
CO_2 equivalents	309	214	313

Permit Compliance Number of Excursions

	2000	2001	2002
Air	20	9	3
Effluent	10	9	2

Energy Consumption

terajoules	2000	2001	2002
Fuel	4,224	3,037	4,109
Hydroelectricity	10,139	7,248	10,139
Total	14,363	10,285	14,248

Metals Released in Effluent

tonnes	2000	2001	2002
Cadmium	0.28	0.18	0.16
Lead	2.81	1.73	1.76
Zinc	31.1	18.4	20.5

Carbon Energy Intensity in Product

	2000	2001	2002
GJ / t (zinc & lead)	11.6	13.6	11.8

Metals Released in Air Emissions

tonnes*	2000	2001	2002
Cadmium	0.18	0.09	0.07
Lead	6.29	4.22	1.95
Zinc	10.5	9.1	4.5

* Released from permitted sources.

Production

tonnes	2000	2001	2002
Zinc	272,900	168,100	269,000
Lead	91,300	55,200	80,700
Total	364,200	223,300	349,700

Average Ambient Air Quality

$\mu g/m^3$	2000	2001	2002
Lead	0.26	0.11	0.16
Zinc	0.74	0.33	0.50

Cajamarquilla Zinc Refinery

Regulatory Compliance

	2000	2001	2002
# of non-compliances	14	1	0

Greenhouse Gas Emissions

kilotonnes	2000	2001	2002
CO_2 equivalents	6.9	9.3	3.8

Annual Average SO2 Emission Concentrations

ppm	2000	2001	2002
Sulphur Dioxide	647	566	611

Energy Consumption

terajoules	2000	2001	2002
Fuel	90	123	49
Hydroelectricity	1,853	1,853	1,426
Total	1,943	1,973	1,475

Ambient SO2 Conditions

$\mu g/m^3$	2000	2001	2002
Radio Observatory	0.055	0.059	0.027

Carbon Energy Intensity in Product

	2000	2001	2002
GJ / t (zinc)	0.74	1.00	0.53

Metals Released in Effluent

tonnes	2000	2001	2002
Zinc	0.81	0.26	0.13
Lead	0.009	0.002	0.001
Cadmium	0.009	0.002	0.002

Production

tonnes	2000	2001	2002
Zinc	121,400	122,100	92,900

Quintette Mine

• Coal (100%)

Reportable Spills

	2000	2001	2002
Number	11	2	0

Permit Compliance

	2000	2001	2002
# of non-compliances	4	3	9

Cumulative Reclamation Progress

hectares	2000	2001	2002
To be reclaimed	1,718	913	555
Reclaimed	1,514	2,323	2,653

* Reclamation figures reconciled in 2002.

Energy Consumption

terajoules	2000	2001	2002
Fuel	945	86	13
Hydroelectricity	235	41	24
Total	1,180	127	37

Greenhouse Gas Emissions

kilotonnes	2000	2001	2002
CO_2 equivalents	103.9	5.8	0.9

Production

000 tonnes	2000	2001	2002
Coal	1,405	Mine closed	

Sullivan Mine

• Base Metals - zinc & lead (100%)

Metals Released In Effluent

tonnes	2000	2001	2002
Lead	0.17	0.11	0.005
Zinc	1.50	1.22	0.465

Greenhouse Gas Emissions

kilotonnes	2000	2001	2002
CO_2 equivalents	20.7	16.6	4.3

St. Mary River Annual Average Zinc Concentrations

mg/L	2000	2001	2002
Upstream	0.003	0.003	0.006
Downstream	0.014	0.009	0.025

Energy Consumption

terajoules	2000	2001	2002
Fuel	387	311	2
Hydroelectricity[1]	-	-	-
Total	387	311	2

1 – Power is supplied by Trail and is accounted for under Trail.

Cumulative Reclamation Progress

hectares	2000	2001	2002
To be reclaimed	588.1	538.8	446.8
Reclaimed	491.5	550.7	642.7

Carbon Energy Intensity in Product

	2000	2001	2002
GJ / t (zinc & lead)	3.08	2.98	-

Production (metal contained in concentrate)

tonnes	2000	2001	2002
Zinc	92,620	72,640	Mine Closed
Lead	33,140	31,780	
Total	125,760	104,420	

Appendix - Acronyms

ARD – Acid Rock Drainage
BCM – Bank Cubic Metre
CERMC – Corporate Environment & Risk Management Committee
CFM – Cubic Feet per Minute
CMA – Compañía Minera Antamina S.A.
COA – Certificate of Approval
COI – Communities of Interest
DJSI – Dow Jones Sustainability Index
ECH&S – Environmental, Community, Health & Safety
EHS – Environment, Health & Safety
EIS – Environmental Impact Statement
EMIS – Environmental Management Information System
EMS – Environmental Management System
EPA – Environment Protection Agency
ERA – Environmental Risk Assessment
ESI – Expanded Site Investigation
GHG – Greenhouse Gas
GIS – Geographic Information System
LTI – Lost Time Incident
MAC – Mining Association of Canada
MEND - Mine Environment Neutral Drainage
MISA - Municipal Industrial Strategy for Abatement
NABCI – North American Bird Conservation Initiative
NANA – Northwest Alaska Native Association
NEPA - National Environmental Policy Act
NGO - Non-Governmental Organizations
OHSAS – Occupational Health and Safety Association Standards
PDAC – Prospectors and Developers Association
PM_{10} – Particulate Matter (less than 10 microns)
PS^2 – Product Stewardship System
TDS – Total Dissolved Solids
THEC - Trail Health and Environment Committee
TSM – Towards Sustainable Mining
VCR – Voluntary Challenge & Registry
WCB – Workers' Compensation Board

Unit Definitions & Conversion Factors

t	tonnes (1,000 kg)
kt	kilotonnes (1,000 tonnes)
mg	milligram (0.01 g)
µg	microgram (0.000001 g)
ppm	parts per million
L	litre
m^3	cubic metre (1,000 L)
GJ	gigajoule (109 joules)
TJ	terajoule (1012 joules)
kWh	kilowatthour (0.0036 GJ)

Greenhouse Gas Conversion Factors for Fuel

	CO_2	CH_4	N_2O	GJ
Diesel	2730 g/L	0.12 g/L	0.1 g/L	38.68 GJ/m^3
Gasoline	2360 g/L	0.19 g/L	0.39 g/L	34.66 GJ/m^3
Natural Gas	1880 g/m3	0.048 g/m3	0.02 g/m3	0.03723 GJ/m^3
Propane	1530 g/L	0.03 g/L		25.53 GJ/m^3
Heavy Fuel Oil	3090 g/L	0.12 g/L	0.013 g/L	38.68 GJ/m^3
Coal	2110 g/kg	0.015 g/kg	0.05 g/kg	30.5 GJ/t
Coke	2480 g/kg	0.12 g/kg		28.83 GJ/t

Source: Mining Association of Canada

Carbon Dioxide Equivalents (CO2e)

A measure of Global Warming Potential

1 tonne carbon dioxide (CO_2)	1 tonne CO_2e
1 tonne methane (CH_4)	21 tonnes CO_2e
1 tonne nitrous oxide (N_2O)	310 tonnes CO_2e

Source: Government of Canada