



Taking the next step



Table of Contents

6

- 2 CEO Message
- 4 Company Profile
- 5 Worldwide Presence
- Value Creation and Protection**
- 7 Thinking Broadly About Issues and Impacts
- 9 Key Alcan Sustainability Issues
- 14 Engaging and Partnering with Stakeholders
- 16 Integrating Sustainability into Business Decisions and Processes



17

21

- Managing for Sustainability**
- 18 Sustainability Framework
- 18 Alcan Integrated Management System (AIMS)
- 19 Maximizing Value
- 19 EHS FIRST
- 20 Continuous Improvement
- Performance Report – Alcan Inc.**
- 22 Community Investment Program
- 22 Alcan Prize for Sustainability
- 23 Performance Data
- Performance Report – Business Groups**
- 32 Bauxite and Alumina
- 38 Primary Metal
- 48 Rolled Products Americas and Asia
- 54 Rolled Products Europe
- 60 Engineered Products
- 66 Packaging
- 72 Glossary
- 73 GRI Index
- Tell Us What You Think

31

About

this report

This print version of the 2004 Alcan Corporate Sustainability Report is a summary of the Web-based report released in November 2004 available on www.alcan.com. This is the third annual Corporate Sustainability Report produced by Alcan.

This report covers performance data from calendar year 2003 and also includes references to certain key initiatives through mid-2004. Examples from Pechiney, acquired by Alcan Inc. in December 2003, have been incorporated wherever possible. With reference to *EHS FIRST* performance, the information is shown separately for the former Alcan and Pechiney portfolios of operations recognizing that they operated as separate companies in 2003.

The performance data reflects Alcan and Pechiney operations worldwide, except where noted. In the case of joint ventures, the performance data is adjusted to reflect Alcan's level of participation in the venture. The manner in which it is adjusted is noted in the data, as there is variation in the methods that are used. Any restatements to data reported in previous years are discussed in notes to data charts. All financial data is reported in US dollars.

This report follows the guidelines set out in the Global Reporting Initiative (GRI), to the extent that we have felt it possible to do so. All information in this report has been reviewed at senior levels and by the relevant functional specialists. Alcan undertakes a variety of audit and assurance activities on data and information that is used in this report – as is done in many businesses – including financial audits, and EHS performance, management system and compliance audits. Both internal and external parties conduct and/or participate in these activities. When using internal personnel, independence is achieved by including participants from other businesses in the company – providing a degree of separation of interest.

Tell Us What You Think

We welcome your feedback on this report. A brief survey is available at the end of this report and online in the Web version, or simply send your comments to:

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message

When we published our first Corporate Sustainability Report in 2002, we made a formal commitment to “doing the right thing” for all our stakeholders. This was not a new direction for the Company, but it set the stage for comprehensive and company-wide sustainability progress that today is directly linked to our governing objective of Maximizing Value. We have made great strides in establishing a sustainable business model at Alcan that complements our focus on Maximizing Value. It helps us manage for value and sustainable growth.

Our definition of “doing the right thing” is also evolving. It is no longer enough for companies to do “less bad” by reducing their environmental footprint. At Alcan, we are **Taking the Next Step** by focusing our corporate sustainability framework on “doing more good”. Whether it’s through the design and application of innovative products or by building long-term partnerships through our stakeholder engagement efforts, we are working to integrate sustainability into all aspects of our business.

In 2003, we illustrated this commitment in a number of ways, including the formation of a cross functional, senior level Sustainability Steering Team to guide our efforts. We also joined the United Nation’s Global Compact, which brings companies together with UN agencies, labour and civil society to support ten principles in the areas of human rights, labour, the environment, and anti-corruption.

Furthermore, we realigned our corporate Community Investment Program towards sustainability-related initiatives, and we introduced the Alcan Prize for Sustainability, an annual US\$1 million award to a not-for-profit, non-governmental, or civil society organization working to make the world a better place. We have received nearly 500 applications from 79 countries for this prize, which are now being reviewed by an independent panel of experts convened with the help of our managing partner, the Prince of Wales International Business Leaders Forum.

Alcan was also selected as a member of the Dow Jones Sustainability World Index for the fourth time in five years. The Index recognized Alcan as leading the aluminum industry. As our efforts are acknowledged, it has become very clear to me that our governing objective of Maximizing Value does more than increase profits and economic growth. It also maximizes the value we create for society. Altogether this has a positive long-term impact on our shareholder value.

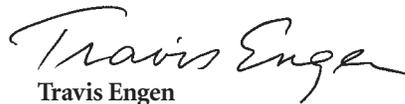


Integrating sustainability into our business is not an easy path to take – it requires a senior-level commitment, the understanding, resourcefulness and dedication of our employees, and a consistent and long-term approach to partnering with our stakeholders. Our sustainability framework is firmly entrenched and supported at all levels of the organization through the three components of Alcan’s Integrated Management System (AIMS): Maximizing Value, Continuous Improvement, and our commitment to environment, health and safety excellence through *EHS FIRST*.

Value creation, informed by our sustainability business model, drove our investment decisions in 2003 such as the agreement to acquire VAW’s packaging business, the acquisition of Baltek with its balsa plantations in Ecuador and the successful completion of our purchase of Pechiney. The growth and changes in our portfolio of businesses inevitably present sustainability challenges. For example, because of the Pechiney combination and other restructuring, some employees have lost jobs. We are doing all we can to support these employees through the transition. As we pursue opportunities in new regions such as China, we see great promise and also challenges in applying our sustainability business model to rapidly changing and industrializing areas. Wherever and whenever these challenges arise, we try to manage them responsibly. In many cases we have exceeded expectations, in others we still have work to do.

No nation, company or individual has the right to create wealth at any cost. Corporations throughout the world have a unique role to play and an inescapable duty to the larger community to wisely manage their resources, ensure the health and safety of their workers and communities and, through their products and services, contribute to the improved well-being of our society.

We are not simply “talking the talk” – we are on the fast track to “operationalize” sustainability throughout Alcan for the benefit of current and future generations and the company, today and tomorrow.



Travis Engen
President and CEO
Alcan Inc.
November 2004

Profile

Alcan is a multinational, market-driven global leader in aluminum and packaging with predominant positions in the major market regions of the Americas, Europe and Asia. With the head office in Montreal, Canada, Alcan has over 300 operating locations distributed among six specialized business groups: Bauxite and Alumina, Primary Metal, Rolled Products Americas and Asia, Rolled Products Europe, Engineered Products, and Packaging.

Alcan is the world's technology leader in primary aluminum and the second-largest producer, in addition to being the leading manufacturer of rolled aluminum products and having predominant global positions in packaging, value-added engineered products and composites. Key market sectors include aerospace, building and construction, electrical, transportation, automotive and beverage cans. As a full-service provider in most packaging sectors, Alcan is ranked first worldwide in food flexible, pharmaceutical and cosmetics packaging and second in tobacco packaging. Alcan is also one of the world's leading metal traders and a global leader in aluminum recycling.

Alcan is a public company traded on the Toronto and New York Stock Exchanges with pro-forma 2003 revenues of \$25.7 billion and some 88,000 employees in over 60 countries and regions around the globe.

Consult Alcan Facts 2004 or the www.alcan.com for more details about Alcan Inc., including maps of locations and business group profiles.

Pechiney Acquisition

Alcan's commitment to Maximizing Value applies to existing operations as well as to new investments such as the late 2003 acquisition of Pechiney, the global aluminum and packaging producer based in France. At the time of acquisition, Pechiney represented some \$12 billion in annual revenue and brought approximately \$10 billion of asset value to Alcan. The combined company's pro-forma 2003 revenues were \$25.7 billion with some 88,000 employees in over 60 countries and regions around the globe.



The Pechiney acquisition has positioned Alcan as a leading producer of bauxite, alumina and primary aluminum and the world leader in core smelter technology. We have also secured our entry into the aerospace sector for engineered and fabricated products, enhanced our presence in the rolled products industry in Europe and gained a global leadership position in flexible, cosmetics and pharmaceutical packaging. The Pechiney acquisition is also important in that it will generate annual cost savings and benefits.

At the close of 2003, integration efforts began with over 100 internal teams dedicated to drawing out the best of both companies. Concurrently, work began on the Social Plan as required in France to ensure a stable transition for employees. Alcan has clearly demonstrated its ability to maintain operating focus while undertaking a major acquisition. The emerging best practices and associated opportunities are expected to result in a proposed synergy value of approximately \$360 million – more than \$100 million over the original projections. These synergies are being achieved by dedicated, motivated and talented employees, who do things better and more efficiently, who offer innovative new solutions to customers, and whose capabilities are supported and developed through integrated training and leadership programs.

Worldwide Presence

Capital assets (net in millions of US\$)
Employees (number at year-end)

NORTH AMERICA

Capital assets 7,534
Employees 26,100

EUROPE

Capital assets 9,306
Employees 46,100

ASIA/PACIFIC AND ALL OTHERS

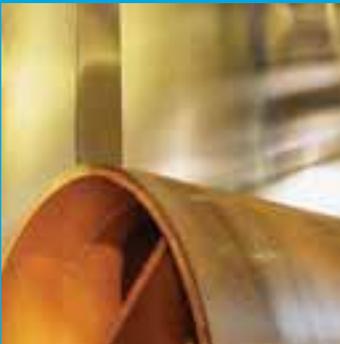
Capital assets 3,298
Employees 13,800

SOUTH AMERICA

Capital assets 782
Employees 3,900

Plans for Rolled Products Spin-off

With the conclusion of the Pechiney acquisition in late 2003, Alcan's senior management team has continued exploring how to best maximize total value for all stakeholders, and in particular, how to address a key challenge of regulatory issues related to the acquisition. On May 18, 2004, Alcan announced the decision to create a new rolled products company. The new company, to be named Novelis, will be completely separate from Alcan with 13,600 employees, start-up revenues of over \$6 billion and leading market positions in rolled aluminum products on four continents.



The spin-off will include virtually all of Alcan's rolled products businesses held prior to the Pechiney transaction. These assets represent best-in-class manufacturing, intellectual property, rolling and recycling technology, and R&D. Due to the close ties in Brazil between Alcan's rolled products group and its bauxite, alumina and primary metal facilities, the latter operations will also be included in the spin-off.

The transaction creating the new rolled products company is expected to be completed by the end of 2004 at which time Alcan will have 75,000 employees in 58 countries and regions, with annual revenues of approximately US\$20 billion.

Value Creation and Protection

Maximizing Total Value

At Alcan, our governing objective is Maximizing Value. A traditional business perspective says that by maximizing shareholder value, companies also contribute to social and broader economic value. They also use financial, human and technological resources to address environmental impacts. Throughout Alcan's history, which now spans more than a century, we have increasingly searched for ways to conduct business in a socially responsible manner while creating superior

shareholder value. And our efforts in this area are receiving more attention throughout the company than ever before.

Over the last several years, we have applied a sustainability perspective to the concept of value. Increasingly, we see that Maximizing Value creates value for all stakeholders, not only our shareholders. By taking this approach, we find we are able to explore a wider variety of types of value, as well as what different stakeholders consider to be of "value". We believe this expanded notion of value offers Alcan the opportunity to create more value for all our stakeholders – including our shareholders.

During 2003 and the first part of 2004, under the guidance of our Sustainability Steering Team, we assembled a range of Alcan people and outside experts to explore how to put this type of sustainability-driven approach to value creation into practice. The conclusion is a three-pronged, simultaneous approach to sustainability:

- **Think broadly about issues and impacts**
- **Engage and partner**
- **Integrate sustainability into our business decisions and processes**

Think broadly about issues and impacts

As we develop our sustainability approach, we are examining issues that affect us directly (such as environmental emissions from our facilities) and those that shape the world in which we operate (such as the benefits and impacts of our products).

The following process flow diagrams identify major environmental, health, safety and community issues associated with our operations.

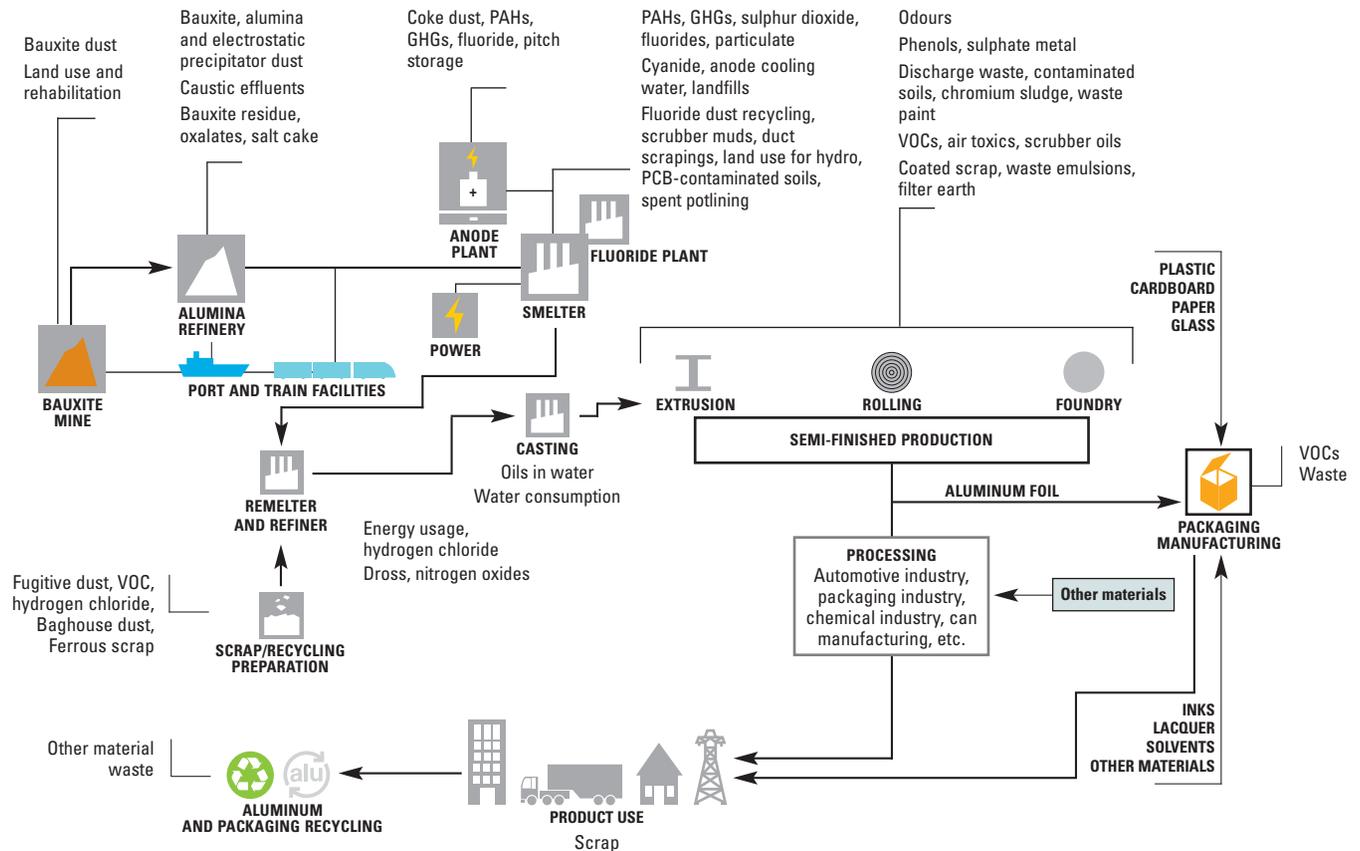
Aside from the issues identified in the process flow diagram, there are also important issues – with positive and

negative impacts – associated with our products. Aluminum’s properties of strength, light weight and recyclability have proved valuable in aerospace, packaging, construction and other industries. Automobile manufacturers increasingly are turning to aluminum to improve both the safety and fuel economy of their vehicles. For example, for every kilogram of aluminum substituted for steel in a typical automobile, some 14-20 kilograms of greenhouse gas emissions are avoided during its use. A challenge to our industry, however, is that

aluminum used in some other applications can be difficult to recover, resulting in a loss of the material and its embodied energy.

Beyond the issues directly related to our processes and products, we face a range of social responsibility issues associated with our operations. For example, as we expand our presence in China, we must address issues concerning human rights, labour standards, intellectual property and access to energy and natural resources.

ENVIRONMENTAL RELEASES



SOME WASTE AND/OR REUSABLE BY-PRODUCTS ARE GENERATED BY OUR FACILITIES.

This revised chart provides an overview of major issues and is not intended to be a comprehensive list.

Key Alcan Sustainability Issues

Issue	Short or long term?	Business groups most affected*	Stakeholders most affected/involved*
1 Energy	Both	Bauxite and Alumina, Primary Metal, Rolled Products, Engineered Products	Investors, customers, local communities
2 Climate Change	Increasingly important	Bauxite and Alumina, Primary Metal, Rolled Products, Engineered Products	All
3 Natural Resource Management	Both	Bauxite and Alumina, Primary Metal	Investors, communities,
4 Community development	Both	Bauxite and Alumina, Primary Metal	Communities, government, NGOs
5 Well-being	Increasingly important in future	All	Employees, communities, customers
6 Environmental Releases	Both	Bauxite and Alumina, Primary Metal, Rolled Products, Engineered Products	Communities, government
7 Industry Shifts	Both	Primary Metal, Rolled Products, Engineered Products, Packaging	Investors, suppliers, customers
8 Lifecycle Product Stewardship	Emerging issue	Rolled Products, Engineered Products, Packaging	Suppliers, customers

* These issues have been identified as being important company-wide – across all business groups – and for our various stakeholders. The third and fourth columns show those business groups and stakeholders where we feel the issue has the highest impact. Analyzing our issues provides useful insight into our challenges and opportunities, and supports our efforts to approach sustainability systematically throughout our business.

Energy

Energy has been a key issue for Alcan historically and is expected to remain so in the short and long term. Access to reliable energy sources and the ability to establish long-term contract prices for energy are fundamental to several of our businesses, particularly the energy-intensive Primary Metal group. With investments in new technologies and processes, aluminum producers have reduced the energy required to make aluminum: the International Aluminum Institute reports that primary energy requirements per tonne of aluminum produced have decreased by one third since the 1950s and by one third again since 1990.

The cost of energy is a major factor affecting our competitiveness, however, our access to low-cost clean hydropower provides Alcan with a competitive advantage.

Compared to making aluminum from ore, recycling aluminum cuts energy requirements by 95%. Alcan operates an extensive global network of recycling facilities and programs that allow our business groups to source recycled aluminum internally. Many of these facilities will be part of the new company, Novelis, when it is launched in 2005. This will not change Alcan's overall support for recycling, but will involve finding new opportunities to support recycling and overall lifecycle and product stewardship objectives in our business.

Energy has strong interconnections to other key Alcan issues, including competitiveness, climate change, natural resource management and community issues.



Climate Change

Climate change is a vital issue for Alcan, as it is for society, particularly over the long term. Many greenhouse gas emissions generated in the aluminum industry are related to energy production. The large proportion of hydropower in Alcan's energy mix serves to lower our greenhouse gas emissions compared to what they would be if we relied more heavily on fossil fuels.

The aluminum smelting process also results in emissions of perfluorocarbons (PFC) through the "anode effect," essentially a process inefficiency that, until recently, was considered unavoidable. One kilogram of PFCs has the same greenhouse gas effect as 6,770 kilograms of CO₂, making PFCs extremely potent greenhouse gases. Through technological and operational controls, we have reduced PFC emissions by 70% overall compared to 1990 levels for all Alcan and Pechiney smelters. The use of the Alcan-developed low-tar pitch in certain locations, as well as improved process control, have significantly reduced anode effects, and we are also researching innovations that could ultimately eliminate this source of PFCs.

Our TARGET program sets Company-wide goals for reducing greenhouse gases from our activities in all business groups. The program is designed to accommodate economic growth, embed an emissions reduction philosophy throughout the Company and optimize long-term, cost-effective reductions and the ongoing reporting of greenhouse gas emissions.

In the third year of this ambitious program, following earlier emission reductions that were achieved before our TARGET program was implemented, Alcan reduced its GHG emissions by 300,000 tonnes. This is more than double the established objective. Pechiney reduced its direct GHG emissions by 650,000 tonnes, exceeding its annual reduction target by 100,000 tonnes. Over the same period, both companies met all their reduction objectives against voluntary and mandatory national targets.

A significant opportunity exists for our industry to contribute globally to the reduction of greenhouse gas emissions through the increased use of aluminum in transportation applications. By considering the whole lifecycle of the product – including use and

recycling and not just production, a full picture of the product system's interaction with the environment can be gained. Increasing the end-of-life recycling rate of our products is another way to cut the lifecycle greenhouse gas emissions associated with our products.

As climate change increasingly drives the strategies of our suppliers and customers, we see the potential for new opportunities to work together to help reduce greenhouse gas emissions in our respective value chains and in the life cycles of our products.



Natural Resource Management

Aside from energy, natural resource management includes water, land, biodiversity, mineral reserves and others. Protecting these resources, ensuring access to them and managing costs associated with them are key to our business success.

Our approach to protecting biodiversity in the operation of our facilities or in the rehabilitation of disturbed lands and closure of facilities includes assessing the biological resources and developing plans to conserve and restore these resources. We engage with stakeholders and seek to use the best scientific information available to manage our activities.

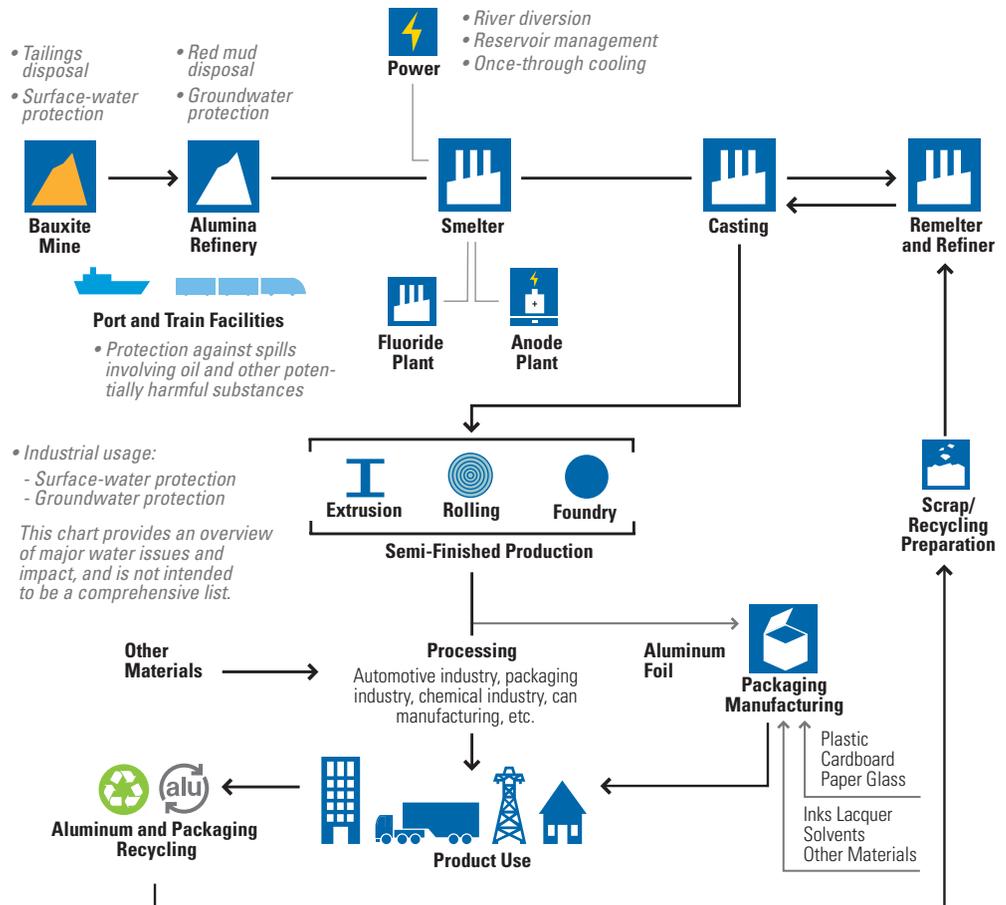
Water provides the power for most of our aluminum smelters, however, there are a range of social and environmental issues associated with hydropower use. These include water rights, community impact, reservoir levels, shoreline erosion, changing stream flow rates and temperatures, and impact on downstream habitats. Water is also an indispensable input to many of our manufacturing processes (see water process flow chart opposite).

Our use of water for power and in our processes has a range of impacts on the quality of the water, natural water cycles and its availability for other uses. We expect the local, regional and global significance of water issues to increase. Currently, 2.3 billion people live in water-stressed areas. This number is projected to increase by more than one billion people by 2025.

We have a responsibility to manage water and other natural resources with care. Sound stewardship of these resources is a form of public trust, and how well we meet our responsibilities affects our licence to operate and our corporate reputation.



Our Aluminum Life Cycle: Key Water Issues and Impact at Alcan





Community Development

Community development includes our contributions to local, regional and national economies and relationships with people in the communities in which we operate as well as our impact on them. It also includes the investment we make in our business operations, local infrastructure and services to the community as well our support of local charities, disaster relief and community events.

This has traditionally been an important issue for Alcan – vital to our license to operate – and is expected to remain so. We strive to be a respected and valued member of these communities. This commitment is reflected in our behaviour as an employer and a neighbour with long-term interests in the region's prosperity.

As businesses adapt to new market opportunities, technological developments and stakeholder concerns, change is the only constant. How a company manages the impacts of change on stakeholders is an important issue for preserving sound relationships in the long term. Three current issues for Alcan are the changing nature of our operations in the Saguenay–Lac-Saint-Jean area of Quebec, Canada, the impact on employees resulting from the acquisition of Pechiney and Alcan's efforts in the Utkal, India bauxite mine project.

Protection of the B.C. Fishery

In British Columbia, Alcan operates a smelter and a hydropower generation facility. The Company aims to exercise its water rights in a sustainable manner and in a way that takes into account the interests of a variety of stakeholders. To illustrate this commitment, Alcan undertakes a number of activities, including operating community offices close to the watershed in order to provide easy access for our downstream partners. The Company also worked with many others to form the Nechako Watershed Council – a forum to discuss issues on a regular basis regarding the Nechako River.

Alcan also participates on a tripartite committee with the British Columbia provincial government and the federal government to discuss, study and review issues related to the conservation and preservation of the salmon stocks on the Nechako River.

A key goal of the Nechako Watershed Council consultative forum is the protection of the Nechako River white sturgeon, a species of fish that inhabits the waters of the Nechako Watershed. There are strong concerns over the potential extinction of this genetically unique species found only in this particular watershed.

Alcan will work with governments and stakeholders to find a mutually acceptable and effective solution to the situation of the white sturgeon population.

To support this challenge, Alcan has conducted some of its own research of the white sturgeon stocks, including a river geomorphology study. Alcan also provides some annual support to the Nechako River White Sturgeon Recovery Initiative in which the Company participates.



Well-Being

Well being is a broad concept that operates at many levels and embraces both our direct and indirect effects. It includes the health and safety of our employees and the people living in the communities where we operate. It also includes the work life of our employees and the positive changes we can make in our communities and for our customers. Our *EHS FIRST* initiative is a key mechanism to ensure best practices in environment, health and safety.

Well-being also encompasses global social issues such as income distribution and access to clean water, health care, and a livelihood. We cannot address these issues alone, but in concert with governments and NGOs, we can contribute to solutions. Because well-being is a universal human aspiration, thinking about our role in promoting it informs us not only of our obligations, but also of the opportunities that exist in meeting unmet needs.



Environmental Releases

Continuing to reduce our environmental footprint includes our responsibility for managing our releases to air, land and water. The diverse operations of our business groups give rise to differing challenges, which are outlined in the Business Group section of this report. Many of the releases from our facilities are subject to government regulation.

With *EHS FIRST*, all sites are requested to introduce a standardized approach to the management of environmental releases and to minimize environmental impact, material losses and operational costs.

Industry Shifts

In the short and long term, we can expect – and must successfully anticipate – shifts in consumer preferences, markets and technologies. We have the opportunity to innovate to meet emerging needs and be on the leading edge of change.

Our Research and Development expertise is a prime factor in responding quickly to industry shifts. Alcan's global Research and Technology network is comprised of research laboratories, applied engineering centres and plant technical departments covering all major markets and regions. In 2003, Alcan invested \$140 million in research and technology.



Lifecycle Product Stewardship

Lifecycle product stewardship encompasses a range of issues including choosing materials and processes, ensuring safe consumer use of our products and planning for the recovery or safe disposal of materials at the end of the product's life.

One important aspect of product stewardship is the promotion of aluminum recycling. Aluminum can be recycled over and over again without loss of its useful properties. The high value of aluminum scrap is a key incentive and major economic impetus for recycling. Global aluminum recycling rates are high at approximately 90% for transport and construction applications and over 60% for beverage cans. The growing markets for aluminum are supplied by both primary and recycled metal sources. Increasing demand for aluminum, however, and the long lifetime of many products mean that, for the foreseeable future, the overall volume of primary metal produced from bauxite will continue to be

substantially greater than the volume of recycled metal recovered from discarded end-use products.

Designing products for efficient production and recycling helps reduce impact throughout their life cycle. At Alcan, product stewardship approaches are used to gain a holistic view of products from a life cycle perspective. This includes emissions to air, water and soil, as well as resource depletion that occurs outside Alcan's sites, with a special focus on those operations that can be controlled or influenced by Alcan. This allows us to identify the overall environmental impact of products and to target significant improvements.

Product development often requires a collaborative approach with customers and suppliers. Thus, product stewardship can be the basis for working with stakeholders on shared sustainability concerns.

Engaging and partnering with stakeholders

We understand the value of good stakeholder relationships and the potential costs of falling short of stakeholder expectations. In a very real sense, sound stakeholder relationships are the foundation of our license to operate.

Alcan engages with stakeholders in a variety of ways. We have made extensive resources available to our managers, including a handbook on stakeholder engagement to support them in early and effective relationship development in the communities in which they operate.

We have a number of stakeholders – those who are impacted, or believe they are impacted by Alcan's operations – in the categories listed above.

The following sections describe some of the range of interaction we have with them. Our business groups have specific stakeholders directly related to their operations and business issues. Refer to the Web version of this report at www.alcan.com for more details.

Employees

A prerequisite to being among the top-ranking industrial companies in the world is to recruit and retain the best people possible. Through the Alcan Talent Management System, we ensure that our employees are supported in their efforts with the appropriate tools and information to reach their full potential and grow with the organization.

The most accurate measure of how well we are doing comes from our Global Employee Survey. This annual survey assesses employee perceptions of Alcan's performance and is an important communications tool as action plans are developed. The following key areas are covered in the survey: corporate sustainability, *EHS FIRST*, our values and principles, communications, reputation, innovation/improvement,

work/life balance, development opportunities, recognition, leadership and Maximizing Value. The 2002 survey established a baseline against which 2003 responses were compared.

In 2003, some 30,000 employees participated (a 57% response rate). The findings are representative of each business group and geographic area. At 88%, corporate sustainability received the highest proportion of favourable ratings and the biggest increase from the previous year's rating of 77%. Notably, performance ratings improved in every category. Several areas, however, continued to command attention including leadership, recognition, values and principles, and communication. Action plans to improve the value of the Alcan Employee Value Proposition were presented to the Executive Committee in early 2004.

We recognize that fulfilling our commitment to sustainability requires that we become increasingly systematic in:

- Engaging globally and nationally as well as locally;
- Playing a constructive role in addressing the sustainability issues of our industry;
- Forming and sustaining effective partnerships on the broadening range of issues we care about, including working with our customers and suppliers to advance sustainability innovations; and
- Bringing the perspectives and insights we gain from stakeholder engagement into our business decision-making processes.

As a partial response to the relatively low ratings for employee recognition in 2002, Alcan initiated the Nathanael V. Davis Award as an annual program to recognize exemplary individual or team performance. This award is the highest corporate recognition that an Alcan employee can receive and pays tribute to outstanding effort, achievement, contribution and involvement either at Alcan or within the community. In addition to a trophy, each winner (individual or team) receives a US\$25,000 prize, with each team member receiving no less than \$5,000.



Investors

We interact with investors, shareholders and analysts in traditional ways, including providing written reports, conference call briefings and holding an Annual General Meeting.

We have also engaged socially responsible investment firms to analyze our sustainability performance. We have provided a range of information to these organizations, resulting in recognition of our sustainability approach and performance by several organizations.



Customers

The nature of the relationship with our customers varies by business group and product. Some of our products – alumina, for example – are commodities that do not necessarily require a close relationship between supplier and customer. At the other end of the spectrum, our Packaging group works closely with customers to ensure that packaging solutions meet an ever-expanding, product-specific set of performance criteria. Refer to the Business Group section for additional examples of customer engagement.

Suppliers

Like other companies, we face challenges in ensuring that our suppliers follow the socially responsible practices that we demand of ourselves. As an integrated company, to some extent we serve as our own supply chain, helping to ensure consistency of practices across our value chain.

External suppliers are requested to adhere to our *Worldwide Code of Employee and Business Conduct*. The comprehensive Code covers a range of issues such as human rights, ethical behaviour, political activity, and government and community relations. The goal is to avoid real or perceived conflicts of interest and to maintain appropriate standards for business behaviours throughout our supply chain.

NGOs, Governments and Local Communities

We engage with local communities in several ways. When planning a new project, we consult with local officials and interested parties to ensure that the project is welcomed and contributes positively to the community. Some of our ongoing operations have formal mechanisms for stakeholder consultation. We also engage extensively with communities when there are major changes or closure of our operations.

Key External Engagements

Alcan's external engagement efforts are broad-based. For details on the Company's involvement with the stakeholders listed below, please refer to the Web version of this report at www.alcan.com.

External Commitments

• Broad-based

- United Nations Global Compact
- OECD guidelines for multinational enterprises
- International Chamber of Commerce Business Charter for Sustainable Development

• Greenhouse gas emission reduction

- French AERES (Association des entreprises pour la réduction des gaz à effet de serre – Association of companies for the reduction of greenhouse gases)
- Quebec government's CO₂ voluntary agreements with the aluminum sector
- U.S. Climate Leaders Program and the Voluntary Aluminum Industrial Partnership (VAIP)

Promoting Sustainability Across Industries

- World Business Council for Sustainable Development
- World Economic Forum
- World Environment Centre
- International Business Leaders Forum
- Global Reporting Initiative
- Commonwealth Business Council's Working Group on Business in Society
- Expert Advisory Panels on Sustainable Development for Industry Canada and Natural Resources Canada
- Organization for International Standardization (ISO) Advisory Group on Corporate Social Responsibility, Environmental Management Systems Standards (TC 207), Greenhouse Gas Initiative

Promoting Sustainability in our Industry

- European Aluminium Association: Sustainable Development Indicators Project, Lifecycle Analysis Project and Aluminium for Future Generations Programme (Europe)
- International Aluminum Institute: Sustainable Development Task Force and Indicators Work Group

Global Compact

In June 2004, Alcan joined the United Nation's Global Compact – a voluntary international initiative for businesses, launched by the United Nations in 1999 to promote the development of a more sustainable and inclusive global economy.

This group aligns corporations, UN agencies, labour organizations and representatives from the civil society around ten universal principles related to human rights, labour practices, environmental standards and the fight against corruption.

Alcan is focused on integrating sustainability into its business. As part of the Global Compact, we commit ourselves to respect the ten principles, to communicate both internally and externally on our membership, and to share experiences on CSR practices with the other members. Our commitment is reinforced by the fact that these principles are already well integrated into our values and Worldwide Code of Employee and Business Conduct.

By joining the Global Compact, Alcan also endorses Pechiney's membership heritage. In 2003, Pechiney presented a case study at the International Learning Forum of Belo Horizonte, on the fight against HIV/AIDS in Alucam, one of our plants located in Cameroon.

In our 2005 Corporate Sustainability Report, we will present a detailed description of how we are supporting the ten principles. For more information : www.unglobalcompact.org.

Integrating Sustainability into Business Decisions and Processes

The challenge of integrating sustainability into core business processes occurs at two levels. The corporate level is where overall policies and strategic direction are set and capital is allocated. It is at the business group level where revenue is generated and where impact on communities and the environment are the most immediate, reflecting the diverse activities, challenges and opportunities of the different businesses.

Sustainability Steering Team

In late 2003 Alcan formed a Sustainability Steering Team (SST). The SST reports to the Executive Committee and includes senior representatives of key corporate functions and several of Alcan's business groups. Three of Alcan's business groups have appointed sustainability champions who work with the SST and their business groups to address key issues, identify needs and opportunities related to implementing relevant aspects of sustainability in their business and undertake key sustainability-related initiatives.

The SST is responsible for ensuring Alcan's leadership position in sustainability by integrating sustainability into Alcan's business strategy and culture, linking business objectives with improved performance in social, economic and EHS aspects,

and supporting the creation of greater value for Alcan's stakeholders.

In April 2004, the SST sponsored a "direction setting session" attended by more than 40 people. The group consisted of representatives from a range of Alcan functions and business groups, as well as three business unit presidents. The group also included participants who provided perspectives from major Alcan customers, non-government organizations (NGOs) and academia.

The direction setting session helped to broaden and deepen our understanding of sustainability at Alcan through discussion of Alcan's key sustainability issues and the value that the Company seeks to create in the world. The session also identified the next steps at the SST and business group level to further the process of integrating sustainability into the business.

Business groups are developing goals and strategies that address their key sustainability issues, and are working to include sustainability considerations in their 2005 business planning process.

sur la
durabilité

Gestion axée sur la durabilité

L'engagement d'Alcan en matière de durabilité est une priorité constante aux échelons les plus élevés de la Société. Conformément aux dispositions de la Loi canadienne sur les sociétés par actions (le siège social d'Alcan est à Montréal, au Canada), le Conseil d'administration d'Alcan s'assure que la Société est gérée dans l'intérêt de l'ensemble de ses actionnaires, tout en tenant compte des intérêts des autres parties prenantes. Cela signifie notamment que la durabilité est prise en considération dans toutes les décisions d'investissement.

«Il n'y a aucun doute dans mon esprit sur le fait que la durabilité est synonyme de bonne stratégie d'affaires. Elle crée de la valeur aujourd'hui et la préserve pour demain. Grâce à elle, nous devenons un meilleur employeur, nous représentons un meilleur investissement, un meilleur voisin et une meilleure entreprise avec des produits à valeur ajoutée supérieure.»

Travis Engen,
chef de la direction, conférence GLOBE,
mars 2004

Gouvernance d'entreprise

Le Conseil d'administration s'est engagé à respecter les pratiques de gouvernance d'entreprise les plus rigoureuses qui soient, car elles sont essentielles à la réussite de la Société et à l'accroissement de la valeur offerte aux actionnaires. Le Conseil nomme les membres des différents comités, y compris du Comité de gouvernance d'entreprise, formé d'administrateurs indépendants (non membres de la direction d'Alcan), et du Comité sur l'environnement, la santé et la sécurité. Reportez-vous à la version Web du rapport à www.alcan.com pour plus d'information sur l'approche de gouvernance d'entreprise utilisée par Alcan.

«La durabilité est devenue un principe fondamental de l'exploitation d'Alcan. Une entreprise ne peut prétendre à la durabilité si elle n'est pas économiquement viable. Et dans le même ordre d'idées, aucune société ne peut être économiquement viable au XXI^e siècle si elle n'assume pas ses responsabilités environnementales et sociales.»

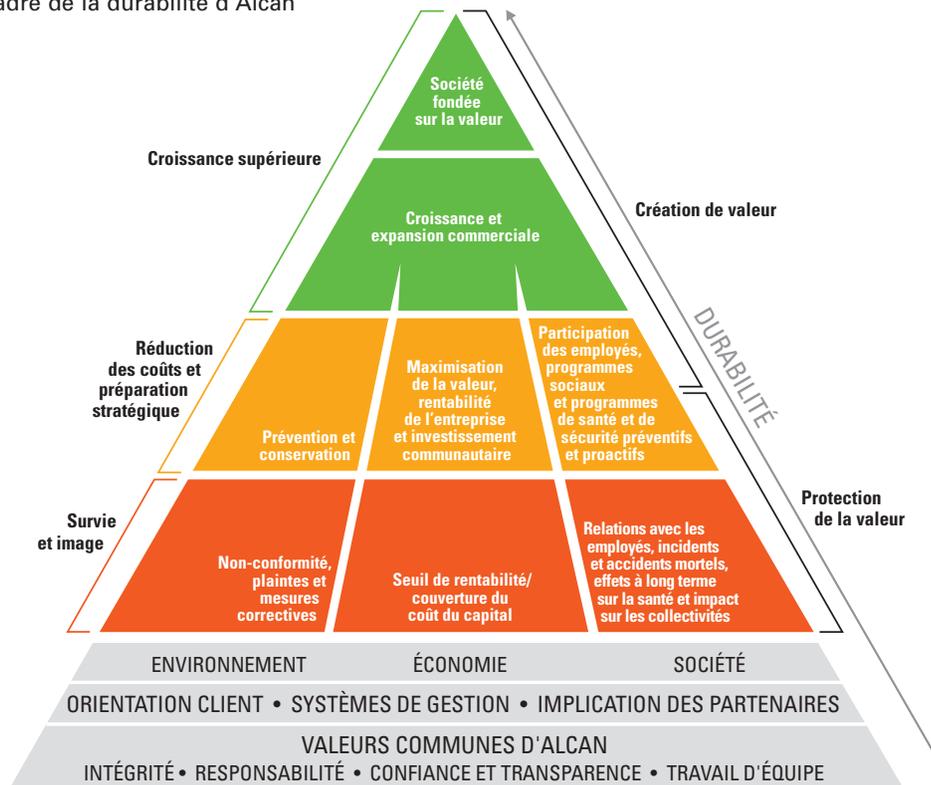
Yves Fortier,
président du Conseil, Alcan Inc.,
à l'assemblée annuelle des actionnaires
d'Alcan 2004

Cadre de la durabilité d'Alcan

Le cadre ci-dessous représente visuellement l'état actuel de notre réflexion sur la durabilité. Nos valeurs, notre orientation client, nos systèmes de gestion et nos efforts d'implication de nos parties prenantes constituent l'assise nécessaire pour protéger notre valeur à brève échéance et pour identifier les occasions de création de valeur à long terme.

- Les initiatives de la Société et des groupes d'exploitation intègrent davantage les trois aspects de la durabilité plutôt que des actions indépendantes par rapport à des enjeux environnementaux, sociaux ou économiques;
- Avec la Maximisation de la valeur comme objectif directeur, toutes les décisions d'Alcan tiennent d'abord compte de la création de valeur plutôt que de simplement viser la protection de la valeur (diminution et gestion des risques);
- En gardant en tête son objectif fondamental d'amélioration de la durabilité, Alcan s'appuie sur les efforts investis et les réalisations accomplies en vue d'aller plus loin et «faire encore mieux» en mettant l'accent sur la création de valeur totale plutôt que de «faire moins pire», en réduisant ses diverses incidences.

Cadre de la durabilité d'Alcan



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Système de gestion intégrée d'Alcan

Afin d'appuyer davantage sa recherche de la durabilité, Alcan a mis en place, en 2003, son système de gestion intégrée. Constitué de trois composantes principales – la Maximisation de la valeur, *ESS EN TÊTE* et l'amélioration continue –, le système de gestion intégrée est un moyen d'assurer que tous les établissements, peu importe leur emplacement géographique, accordent une importance égale à la création de valeur, à l'amélioration continue ainsi qu'à l'environnement, à la santé et à la sécurité.

Ce système sert de lien entre les trois initiatives clés et rappelle l'importance de gérer les activités en fonction de la valeur pour toutes les parties prenantes. La durabilité est une partie intégrante de la gestion axée sur la valeur – c'est une vision fondamentale du rôle d'Alcan dans le monde, qui guide son processus décisionnel.

Maximisation de la valeur

La Maximisation de la valeur est devenue l'objectif directeur d'Alcan en 2001; elle est à la base de toutes les décisions d'investissement stratégiques, qu'il s'agisse d'investir dans une usine d'électrolyse de classe mondiale en Chine ou de procéder à la distribution de la majorité des usines de produits laminés pour former une nouvelle entreprise. La Maximisation de la valeur, dont l'objectif est de doubler la valeur offerte aux actionnaires tous les cinq ans, représente une façon disciplinée de mettre l'accent sur les actions et les investissements qui créent le plus de valeur.

Outre l'acquisition de Pechiney à la fin de l'année 2003, les autres initiatives créatrices de valeur menées durant l'année sont notamment :

- l'intégration des établissements de VAW FlexPac par le groupe Emballages;
- l'acquisition de Baltek et d'Uniwood/Fome-Cor par le groupe Produits usinés;
- l'augmentation de la participation dans Aluminium Company of Asia (Alcom);
- la construction d'une nouvelle usine, au Canada, qui produira des structures d'aluminium pour l'industrie automobile;
- l'avancement du projet d'expansion d'une usine d'alumine en Australie;
- l'annonce de la construction d'une nouvelle usine de traitement des brasques usées au Québec (Canada) – un investissement qui pourrait atteindre 150 M\$.

La Maximisation de la valeur ne repose toutefois pas uniquement sur les nouvelles entreprises. À titre d'objectif directeur de la Société, elle guide les gestionnaires d'Alcan dans la réalisation de leurs objectifs, qui passe par la mise en œuvre d'initiatives selon la discipline financière adoptée au cours des dernières années. Consultez la section sur les groupes d'exploitation dans le présent rapport pour connaître d'autres exemples de Maximisation de la valeur.

ESS EN TÊTE

Par suite de la recommandation du Conseil ESS d'Alcan en 2002 d'instaurer un système de gestion ESS intégrée pour compléter la politique ESS de la Société, le Comité exécutif d'Alcan a parrainé la mise en œuvre d'ESS EN TÊTE en 2003.

ESS EN TÊTE réunit les systèmes de gestion de l'environnement, de la santé et de la sécurité des groupes d'exploitation d'Alcan dans un seul cadre et une seule discipline qui s'appuient sur la meilleure pratique reconnue.

La première phase d'ESS EN TÊTE a été lancée au cours de l'année 2003 pour atteindre les objectifs suivants dans l'ensemble de la Société :

- Zéro accident
- Chaque année, des taux précis de blessures / maladies entraînant des jours de travail perdus et de cas consignables sont établis

pour chaque groupe d'exploitation afin de mesurer notre progression vers l'objectif «zéro accident».

- Certification ISO 14001 et OHSAS 18001 d'ici 2004

Afin d'assurer l'utilisation des meilleures pratiques, ESS EN TÊTE a permis d'instaurer des directives sur les enjeux ESS prioritaires qui doivent obligatoirement être respectées dans l'ensemble de la Société. En 2003, six de ces directives ont été entièrement appliquées et des plans d'action ont été préparés en 2004 pour réduire les écarts dans les autres secteurs prioritaires.

Chez Alcan, les risques les plus sérieux pour l'ESS sont les suivants : contrôle des sources d'énergie dangereuse, entrée dans les espaces clos, équipements de levage, équipements mobiles, gestion des déchets et gestion des entrepreneurs. L'analyse des écarts permet de déterminer



les priorités, tandis que les audits internes et externes fournissent des éléments à l'appui des principaux enjeux ESS ou de la révision de ces enjeux.

Avec *ESS EN TÊTE*, une nouvelle priorité est accordée à l'environnement, à la santé et à la sécurité à l'échelle de la Société, des bureaux du siège social jusqu'aux usines. Forte de cet engagement indéfectible à l'échelle de la Société, Alcan vise à devenir un chef de file dans l'industrie, reconnu pour son excellence en environnement, santé et sécurité. *ESS EN TÊTE* consolide les meilleures pratiques de nos groupes d'exploitation et est conforme à la norme environnementale ISO 14001 mondialement reconnue et à la norme internationale de certification OHSAS 18001 portant sur la santé et la sécurité.

À ce jour, tous les établissements d'Alcan (à l'exclusion de ceux de Pechiney) sont en bonne voie d'atteindre l'objectif de conformité totale d'ici la fin de l'année 2004 : environ 60 % des établissements détenaient la certification ISO en 2003 et 44 %, la certification OHSAS. Les établissements acquis récemment auront deux ans pour y parvenir. En fait, à la suite de l'intégration, plusieurs des meilleures pratiques ESS de Pechiney seront ajoutées au programme *ESS EN TÊTE* dans le cadre du processus d'amélioration continue d'Alcan.

ESS EN TÊTE est une priorité majeure d'Alcan et le premier point à l'ordre du jour de chaque réunion. Un système de gestion ESS d'envergure internationale assure le maintien à long terme du permis d'exploitation et de croissance de la Société et positionne Alcan comme chef de file reconnu dans l'industrie pour son excellence en environnement, en santé et en sécurité.

Amélioration continue

En 2003, Alcan a structuré plusieurs initiatives d'amélioration continue (AC) existantes en les regroupant en un seul programme dans le but d'améliorer sa position concurrentielle et son efficacité. Avec l'acquisition de Pechiney, le processus d'AC a été encore renforcé grâce à l'approbation par le Comité exécutif d'Alcan d'un nouveau cadre de l'AC qui associe les connaissances et l'expertise des spécialistes en amélioration continue des deux entreprises.

Le système d'amélioration continue d'Alcan intègre deux approches complémentaires : la production épurée, dont l'objectif est de réduire le gaspillage et d'accélérer les processus, et Six Sigma, qui vise l'amélioration du rendement selon des critères cruciaux pour le client. Depuis que les mêmes outils d'AC sont à la disposition de toute la Société, le cadre de l'AC offre une grande souplesse à chaque établissement, qui peut choisir les méthodes d'amélioration convenant le mieux à sa situation.

L'amélioration continue constitue le troisième élément du système de gestion intégrée d'Alcan – les deux premiers étant la Maximisation de la valeur et *ESS EN TÊTE*. L'objectif est d'élaborer un langage et une «boîte à outils» communs qui font appel à une approche de résolution de problèmes rigoureuse fondée sur des faits. La réussite du programme dépend de l'autonomie qu'auront acquise les employés par une formation intensive, l'introduction de nouvelles techniques et compétences, le partage des meilleures pratiques et le transfert de connaissances.

Tous les employés d'Alcan, des équipes de soutien fonctionnel au personnel de production, seront impliqués dans le processus d'amélioration continue. Chaque groupe d'exploitation a nommé un directeur de l'AC responsable de l'ensemble des programmes d'AC du groupe et de la coordination d'une équipe de champions de l'AC. Quatre-vingts ceintures noires, qui ont commencé leur formation à la mi-octobre 2003, constituent le noyau du programme et travaillent à temps plein sur les projets d'AC. Les initiatives *ESS EN TÊTE* considérées comme projets d'AC sont hautement prioritaires.

L'engagement de la Société envers l'amélioration continue se manifeste par la structure mise en place : d'ici deux ans, la Société emploiera 300 ceintures noires à temps plein et environ 2 000 ceintures vertes, qui conserveront leur poste actuel et travailleront en parallèle à des projets d'amélioration au quotidien.

Performance

Report **Alcan Inc.**

Community Investment Program
Alcan Prize for Sustainability
Performance Data



Community Investment Program

We recognize that our corporate and ethical business responsibilities include investing in the communities around us to enhance their economic, environmental and social well-being. Just as Alcan's operations contribute to the quality of life in our host communities, the Company's long-term success depends on community support for our operations, products and services.

Integrating sustainability into our business culture and practices prompted our decision to adopt sustainability as the platform for donations and sponsorships under

our Community Investment Program. By aligning our community investments with this fundamental principle, we are able to more accurately reflect our corporate priorities, generate a positive impact in an area we truly care about, and help return to our children a world that is better than the one we borrowed.

The Alcan Prize for Sustainability is an excellent illustration of our recent decision to adopt sustainability as the platform for donations and sponsorships under our corporate Community Investment Program.

Top Honours for Sustainability

Alcan's sustainability efforts were recognized externally by a variety of organizations in 2003 for our corporate governance practices and our commitment to sustainability including:

- A gold award from Corporate Knights, a group that acts as a bridge between corporate Canada and environmental and social stakeholders.
- GovernanceMetrics International, an independent ratings agency, reviewed the governance practices of some 1,600 global companies. Alcan was one of only 17 companies to receive a "ten" rating, the top possible score.
- Alcan was again selected to be a component of the Dow Jones Sustainability World Index (DJSI World), consistently outperforming other companies in our sector in the economic, environment and social dimensions of sustainability.
- We maintained our placement (since 2001) on the FTSE4GOOD global index – companies included in the Index are committed to environmental sustainability, developing positive relationships with stakeholders and supporting universal human rights.
- Alcan held the top spot for the metals industry on FORTUNE magazine's 2004 list of the World's Most Admired Companies.
- Ford honoured Alcan with its 2003 World Environmental Leadership Award for superior performance based on quality, cost and delivery.



Alcan Prize for Sustainability

On January 22, 2004, Travis Engen, President and CEO, announced the creation of the Alcan Prize for Sustainability – an annual US\$1 million award to recognize not-for-profit, non-governmental or civil society organizations for outstanding contributions to the cause of global sustainability.



The ultimate goal of the Alcan Prize for Sustainability is to recognize the critical role of the not-for-profit sector in promoting and implementing economic, environmental and social sustainability.

Each year's winner will be selected by an international judging panel of distinguished individuals who are recognized for their significant contributions to sustainability around the world. In the interest of credibility and objectivity, Alcan has partnered with the Prince of Wales International Business Leaders Forum who will manage the day-to-day administration of the program. For additional information refer to www.alcanprizeforsustainability.com.

Economic¹

Impact by Country

Average number of employees (excluding Pechiney)
(in thousands - unaudited)

	2003
Canada	11
United States	8
Brazil	3
France	2
United Kingdom	4
Germany	7
Switzerland	3
Other Europe	5
Australia	1
Asia and other Pacific	2
All other	1
Total	47

Capital expenditures and business acquisitions, by country
(in millions of US\$)*

	2003	2002
Canada	286	477
United States	928	94
Brazil	68	60
France	1,610	14
United Kingdom	134	70
Germany	178	70
Switzerland	30	43
Other Europe	650	70
Australia	414	40
Asia and other Pacific	181	33
All other	178	2
Total	4,657	973

Payroll/Benefits (excluding Pechiney)
Year ended December 31, 2003
(in millions of US\$)

	2003
Canada	748
United States	555
Brazil	49
United Kingdom	281
Germany	458
Switzerland	288
Other Europe	352
Australia	76
Asia and other Pacific	64
All other	10
Total	2,882

* The allocation of the purchase price for Pechiney by geographic area is tentative. The final valuation will be completed in 2004 and accordingly, the fair values could be modified for property, plant and equipment, intangible assets and goodwill.

Financial Performance*

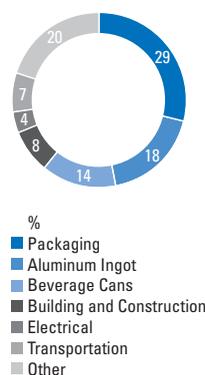
Business group profit (BGP)

	2003
Bauxite and Alumina	191
Primary Metal	815
Rolled Products	
Americas and Asia	344
Rolled Products Europe	212
Engineered Products	92
Packaging	354
Equity-accounted for joint ventures impact	(147)
Adjustment for mark-to-market of derivatives	129
BGP Sub-total	1,990

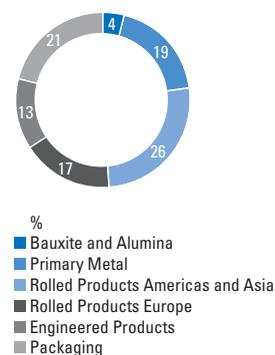
* Additional financial data is available in the Web version of this report at www.alcan.com or by referring to the 2003 Alcan Inc. Annual Report.

Revenues by Sector

Revenues by Market - 2003



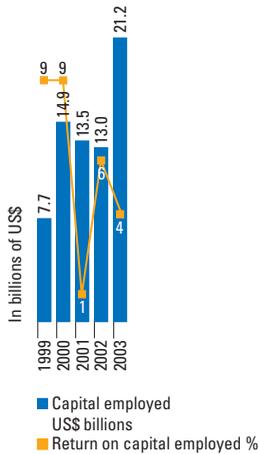
Revenues by Business Group - 2003



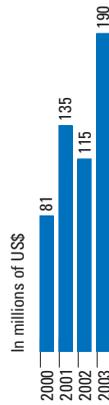
¹ On January 1, 2004, the Company adopted U.S. GAAP as its primary reporting standard for presentation of its consolidated financial statements and restated historical consolidated financial data, as described and presented in the Form 8-K filed with the U.S. Securities and Exchange Commission on June 14, 2004.

Financial Metrics

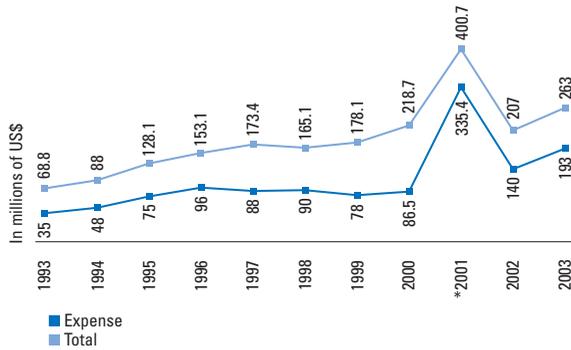
Return on capital employed – five years series



Research and development investments



Environmental Protection Financial Requirements



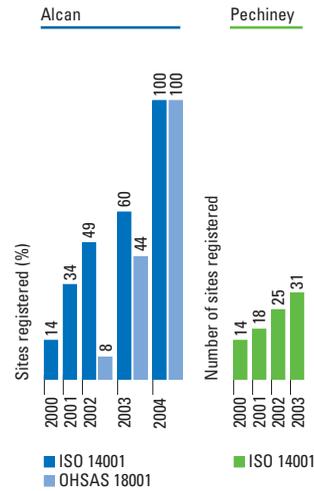
* In 2001, the Company increased its environmental provisions to cover treatment costs for stored spent potlining (SPL) in Quebec and British Columbia, Canada, as well as to cover remediation costs relating to bauxite residue disposal at other sites in Canada and the U.K.

EHS FIRST

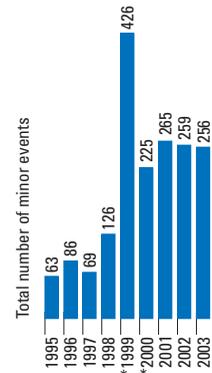
Management Systems

As a fundamental element of *EHS FIRST*, all Alcan sites are required to become certified to ISO 14001 and OSHAS 18001 by the end of 2004. Pechiney sites have until April 2006 to comply. All newly acquired sites have two years to fulfil these requirements.

Registered Management Systems ISO 14001/OSHAS 18001



Environmental Events



ISO

Alcan Inc. at 60%. Implementation of ISO is part of 2003 objectives and targets; goal is that 100% of our facilities will be registered by the end of 2004. This objective excludes newly acquired sites, which have two years to implement EHS Management Systems.

Pechiney had 31 of its sites certified at the end of 2003. This represents more than 55% of insured assets. The end of the first quarter of 2006 is their 100% target deadline.

OSHAS

Alcan Inc. is 44% registered – 81 out of 184 sites. Implementation of OSHAS is part of 2003 objectives and targets; goal is that 100% of our facilities will be registered by the end of 2004. This objective excludes newly acquired sites, which have two years to implement EHS Management Systems.

Minor environmental incident result in minor or no harm or injury to any person, minor or no harm to wildlife, or insignificant damage to habitat. The impacts, if any, are temporary in nature, with total restoration occurring in a short period of time.

Major environmental incident are incidents which result in harm or injury to a person, harm to wildlife, or significant and long lasting damage to habitat.

* Definition of a minor event was changed in 1999.

** Integration of Alcan and algroup facilities in 2000 affected data quality in that year.

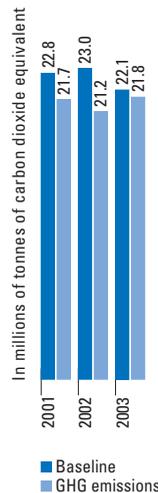
Emissions, Air – Climate Change

The greenhouse gas emission reduction programs at Alcan and Pechiney were set up differently but had comparable ambitious targets. Due to the different program structures, results can not just be added and compared. Both programs started in 2001 and the data is based on a standard measurement and monitoring approach in both cases.

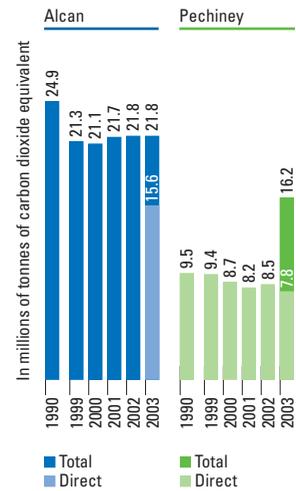
- Alcan committed to reduce from 2001 to 2005 the total direct and indirect greenhouse gas emissions each year by 0.5% compared to a two-year rolling baseline.
- Pechiney, on the other hand, had an umbrella commitment to reduce by 2012 its direct emissions by 15% compared to 1990, while aiming at doubling its aluminium production.

Both programs adopted by Alcan and Pechiney show that the greenhouse gas challenge is among the most important strategic initiatives. Since 1990 Alcan has reduced the absolute direct and indirect GHG emissions by more than 3 million tonnes of CO₂e. Pechiney direct GHG emissions have been reduced by 1.7 million tonnes of CO₂e in the same period. From 1990 Pechiney increased its primary aluminium production by 0.3 million tonnes up to 1.2 million tonnes.

Greenhouse Gas Emissions versus Baseline



Greenhouse Gas Emissions 1990-2003* Direct and Indirect



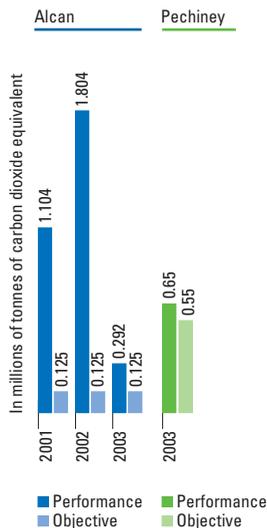
Base year emissions are adjusted for acquisition and divestiture, as well as material changes in equipment utilization and installed capacity.

Alcan
Emissions growth at Alcan from 1999 to 2003 is due primarily to the start-up of new production, as well as the restart of idled capacity in the primary metals business group.

Pechiney
At Pechiney, the closure of old technology and of improvement in process central significantly reduced direct emissions since 1990.

* Demonstrates Alcan emission performance, adjusted for acquisition and divestiture – based on 2003 holdings reflected in each year.

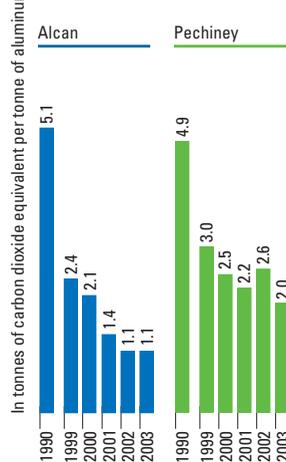
Reductions Realized versus Reduction Objectives



Alcan
Demonstrates reductions from baseline versus reduction objectives. Performance represents the difference between baseline and actual performance for each year.

Pechiney
Demonstrates absolute reductions. Contrary to Alcan, Pechiney reductions are not adjusted for closure or capacity changes.

Perfluorocarbon (PFC) Emissions

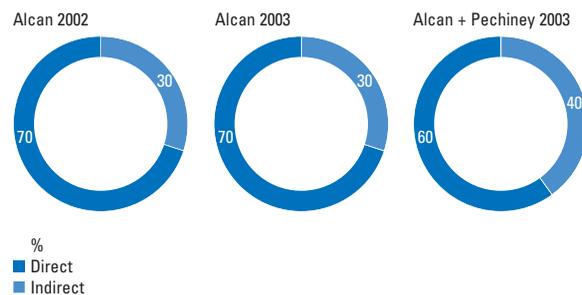


Alcan
Reduction of PFC emissions, a significant greenhouse gas, contributed greatly to Alcan's successful TARGET program.

Pechiney
At Pechiney, the reduction of PFC emissions was also its most important contribution to the Pechiney GHG program.

At both Alcan and Pechiney, improvements in smelting process control technology and the introduction of new state-of-the-art capacity have significantly reduced the occurrence of anode effects (process inefficiency) which contributed to PFC emissions.

Direct versus Indirect Greenhouse Gas Emissions 2003



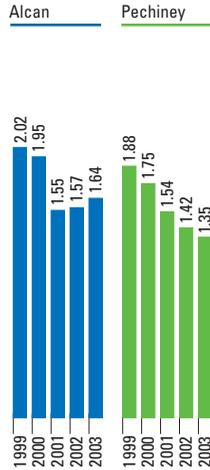
Direct emissions are from fuel consumption and plant processes, while indirect emissions are from the use of purchased electricity and estimated for the transportation of raw materials and products.

Emissions, Air – Business Group

Alcan operates very different industrial processes, which means different air emissions are monitored, depending on the business group.

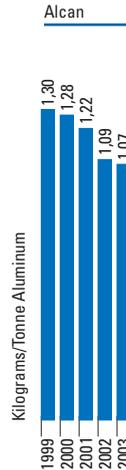
For our primary aluminum operations, fluoride, PAH and dust are relevant emissions. At Pechiney, dust was considered to be a relevant metric for Bauxite and Alumina and Ferroalloys as well.

Primary Metal Fluoride Emissions



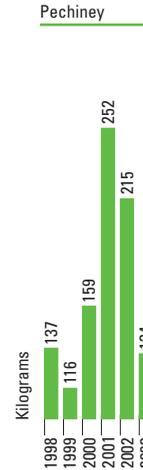
The improvements related above are a combined result of investments in state-of-the-art technology and in new capacity installations as well as process improvements at existing operations.

Primary Metal Polycyclic Aromatic Hydrocarbon (PAH) Emissions

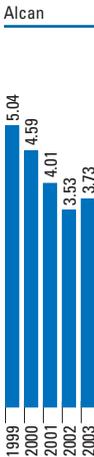


PAH reductions in 2002 and 2003 were primarily a result of the introduction of Alcan-developed low-tar pitch.

Primary Metal BAP Emissions



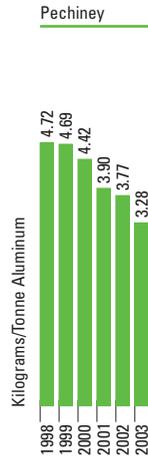
Primary Metal Dust* Emissions



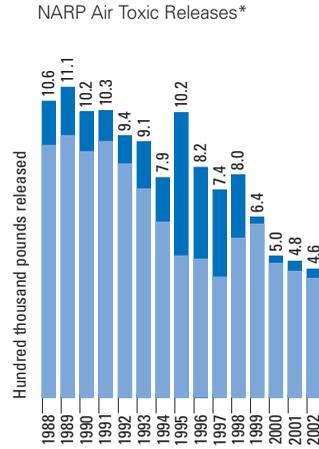
The improvements related above are a combined result of investments in state-of-the-art technology and in new capacity installations as well as process improvements at existing operations.

* PM10 – Particulate matter smaller than 10 microns

Aluminum and Alumina Dust Emissions



North America Rolled Products Hazardous Air Releases (lbs/yr)

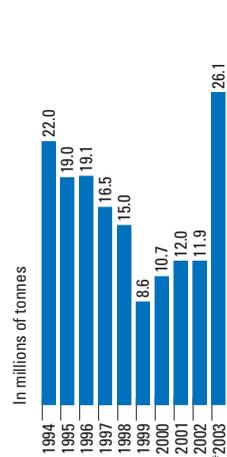


The positive downward trend is a combination of new technological processes and improved systems controls. Major efforts continue towards further reductions.

* The data for this chart is current as of our publication date. The 2003 data will be available in 2005.

** Fugitive releases are emissions not associated with a specific process.

Alcan Packaging Volatile Organic Compound (VOC) Emissions



The increase in 2003 is due to the addition of VAW.

* Excluding Pechiney

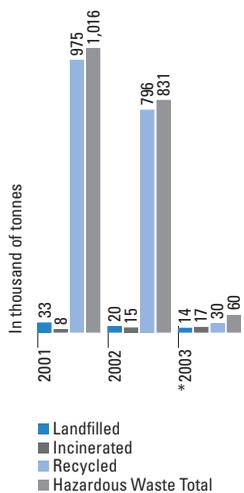
Emissions, Land

Alcan operates very different industrial processes, which results in different wastes being monitored, depending on the business group. For example, the Bauxite and Alumina group and the Primary Metal group monitor bauxite residue and spent potlining respectively.

As data is rolled up to the Alcan corporate level, the waste is summarised as hazardous and non-hazardous according to local legislation and categorised as to whether it is recycled, land-filled or incinerated.

Due to very different national laws on waste, the same waste can be declared as hazardous or non-hazardous in different countries. As there are always changes to local legislation, it makes it difficult to have consistent and comparable data over time.

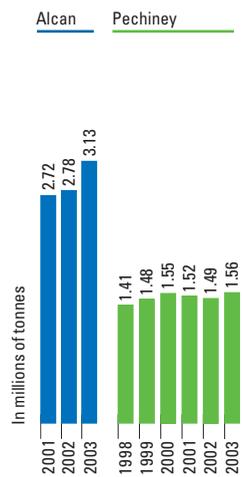
Hazardous Waste



Alcan closely monitors hazardous waste levels throughout its operations. Data for 2003 shows a large decrease due to residue disposal pond returned supernatant liquor at the Gove refinery, in Australia. The liquor has been declassified as hazardous waste.

* Bauxite residue excluded in 2003

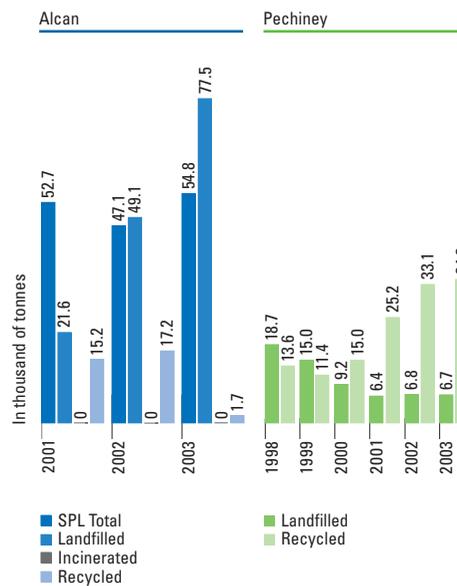
Bauxite Residue Disposal*



The increased red mud production in 2002 is due to an increase in production capacity.

* Excludes valorised residues.

Spent Potlining

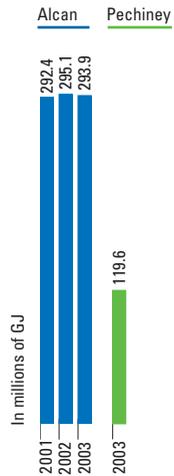


The volume of Spent potlining (SPL) processed in any given year may exceed that generated due to the disposal/treatment of SPL stored from previous years. Offsite treatment of SPL from Canadian operations resulted in increased volumes of landfilled and recycled Spent potlining in 2003.

Resource Stewardship

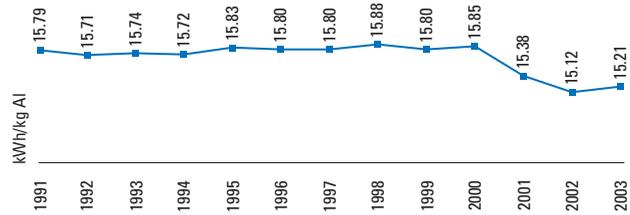
At Alcan, energy, water and land are the most significant resources used. Resource stewardship is a key issue for the Bauxite and Alumina and Primary Metal groups, while energy and water use is a significant issue in many of our downstream operations.

Total Energy Consumption



Alcan – Historical Energy Consumption

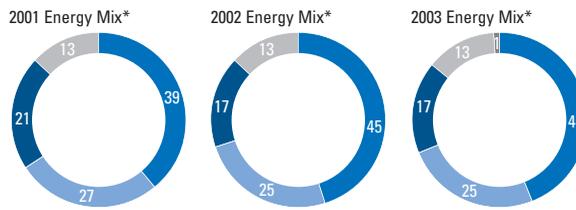
Alcan smelters



Despite increased capacity, energy consumption is decreasing due to improved efficiency, especially as a result of the 400,000-tonne capacity Alma smelter in Quebec where more energy-efficient potlines replaced older technology at the closed Isle-Maligne smelter in 2001.

Energy Mix

Alcan

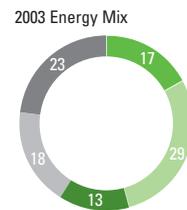


%
 ■ Renewable
 ■ Coal
 ■ Petroleum
 ■ Natural Gas
 ■ Nuclear

Alcan owns or purchases a large portion of its energy from clean, renewable hydroelectric sources.

* Alcan owned and non-Alcan sources

Pechiney

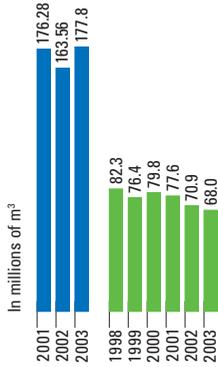


%
 ■ Renewable
 ■ Coal
 ■ Petroleum
 ■ Natural Gas
 ■ Nuclear

Primary and Bauxite facilities only

Total Water Use

Alcan Pechiney

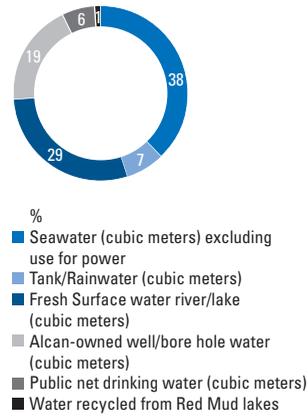


Alcan
These numbers represent Alcan's total process water use excluding water use for power generation.

We have readjusted 2001 and 2002 figures to be in line with our reporting of water use in 2003. Data for 2003 includes amounts for a significant project in a Norwegian plant and is under review, confirmation of data will come with 2004 data. As a result of drought conditions in 2002, internal water recycling capacity was reduced and required intake of additional process water (versus re-use of on-site water, e.g.: ponds, etc.).

Pechiney
Excludes sea water and water used for power generation.

Water Consumption by Source 2003



Customer and Post Consumer Recycled Aluminum



The decrease in 2001, 2002 and 2003 relative to prior years, is due to increased primary production.

Health and Safety

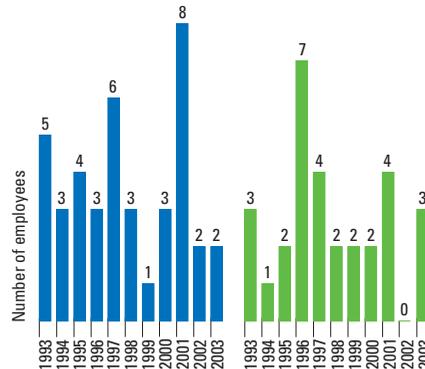
Challenging safety objectives were set for 2003 as we strive for zero on-site accidents.

Despite minor differences in safety definitions and reporting methods between Alcan and Pechiney, we have not seen a negative impact on our overall performance with the consolidation of our data. Alcan Inc. objectives for 2004 remain unchanged, and are applicable to all ex-Pechiney sites.

Our overall performance has improved. But, where improvement counts the most we have still a way to go. In 2003, five Alcan and Pechiney employees lost their lives while working in our facilities. In addition, an external contractor fatality occurred at our joint venture Alouette construction project – where Alcan is a minority owner.

Number of Fatalities

Alcan Pechiney

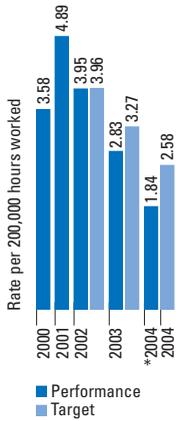


With the implementation of *EHS FIRST*, Alcan expects to reverse this trend. Everyone is expected to return home safe and sound at the end of each day. Alcan will only be able to eliminate fatalities by learning from all accidents and incidents and by ensuring that the conditions that lead to these accidents are eliminated.

Detailed in-depth investigation into the root causes of the accidents are carried out systematically when an incident occurs and systems are now being elaborated to ensure that the remedial actions are implemented throughout the Company.

All accidents are avoidable, by reducing the risks, being vigilant and making the right choices, our goal of achieving zero accidents can become a reality.

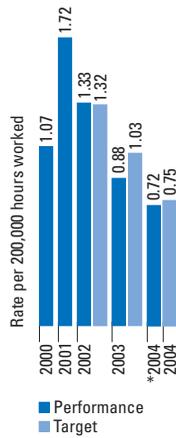
Recordable Case Rate (RCR)



Data from the former algroup included as of 2000.
Data from the former Pechiney included as of 2004.

* Q2 2004 ytd

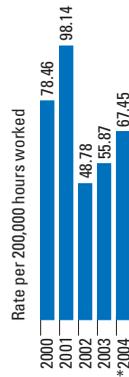
Lost Time Injury/Illness Rate (LTII)



Data from the former algroup included as of 2000.
Data from the former Pechiney included as of 2004.

* Q2 2004 ytd

Days Lost Rate

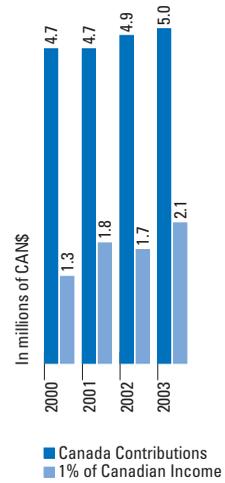


Data from the former algroup included as of 2000.
Data from the former Pechiney included as of 2004.

* Q2 2004 ytd

Social

Community Investment* Canadian Donations and Sponsorships



* One example of Alcan's community involvement is in Canada where the Company participates in the Imagine Program of the Canadian Centre for Philanthropy. Under Imagine, Alcan has committed to contribute at least 1% of pre-tax Canadian profits in the form of donations and sponsorships within Canada. The above chart illustrates how Alcan's participation significantly exceeds Imagine program guidelines.

Donations and Sponsorships Worldwide*



* Excluding Pechiney

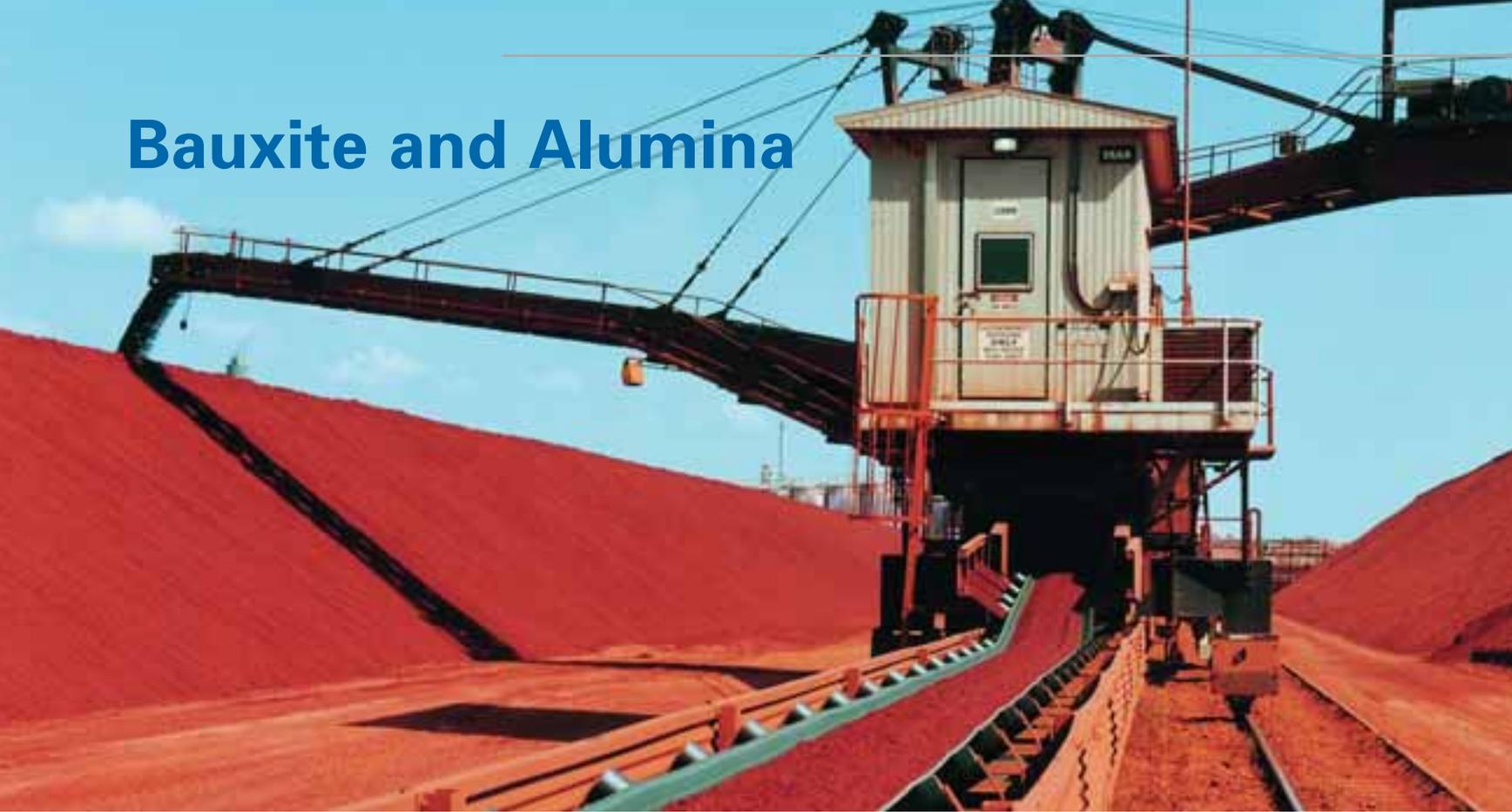
Performance

Report Business Groups

Bauxite and Alumina
Primary Metal
Rolled Products Americas and Asia
Rolled Products Europe
Engineered Products
Packaging

Consult Alcan Facts 2004 or the Web version of this report at www.alcan.com for more information on Alcan Business Groups.

Bauxite and Alumina



“Bauxite and Alumina’s operations are focused on maximizing sustainability. To us, sustainability means finding new ways to manage our resources more efficiently, to make our workplace safer, to enhance the skills of our employees and to work more effectively in our host communities. We believe that, in the long term, this approach positions us for enduring growth and helps us anticipate and prepare for the forces that will shape our future.”

Michael Hanley, President and Chief Executive Officer, Alcan Bauxite and Alumina

Alcan’s Bauxite and Alumina group (B&A) represents a global network of bauxite mines and alumina refineries, supplying Alcan’s Primary Metal group and external customers with smelter-grade alumina in addition to producing specialty aluminas for third parties.

	Bauxite and Alumina Profile
Products/Services	Bauxite, smelter-grade and specialty aluminas
Number and type of facilities (including partial holdings)	8 bauxite mines and deposits 7 alumina refineries 7 specialty alumina plants Global transportation network
Markets served	Smelter-grade alumina and specialty-grade alumina for a variety of applications
Major customers	Alcan Primary Metal, LME
% 2003 revenues	4
Number of employees	Approximately 5,000

Sustainability has long been an integral part of the Bauxite and Alumina culture, from the rehabilitation of former bauxite mine sites to stakeholder engagement efforts and ensuring a sustainable future for the communities where the group operates.

The life cycle of a mining and processing operation affects local communities. In the early stages of a mining operation, jobs are created in the construction and operation of new facilities and associated infrastructure. When this investment occurs in relatively remote areas, it can result in significant growth and change to local communities. Our management of the cycle of investment, growth and eventual mine closure is a key sustainability challenge for the Company as well as our host communities. In some cases, construction of a new facility requires relocation of people living in the area to be developed.

For example, in Orissa, India, Alcan is a minority shareholder in the proposed Utkal bauxite mine and alumina refinery project, where approximately 150 families would be affected by construction of an alumina refinery. As part of Indian law, but negotiated via a stakeholder consultation process, all project-affected

people would be eligible for benefits stemming from a mutually agreed upon rehabilitation and resettlement package. In this case, the project would also include a newly constructed residential worker community equipped with schooling, medical and water treatment facilities. These actions, among others, reinforce Alcan's commitment to ensuring that any project going forward meets the test of broad community support.

The key environmental management challenges for the Bauxite and Alumina group are air emissions, groundwater protection, rehabilitation of mining and residue disposal areas, safeguarding the marine environment and waste management. The Company's efforts at the Gove bauxite and alumina complex in Northern Australia illustrate the multiple facets of this group-wide, sustainability-driven focus on Maximizing Value for all stakeholders.

Key issues in Bauxite and Alumina

- **Natural Resource Management:** As in any mining activity, rehabilitation of closed mining sites to allow productive human or natural use is a key goal for B&A. To gain access to land, mineral and other resources in the future, we must demonstrate responsible stewardship of the resources we currently use. Another area of focus is monitoring the impact on the marine environment as a result of shipping and alumina processing activities.
- **Community Development:** With many of the group's operations located in remote areas, the impact of our installations can present new opportunities for local communities including jobs, skills development and infrastructure construction such as ports, roads and medical facilities.
- **Well-being:** Dust control is a key issue in bauxite mining and alumina processing as it can potentially impact employee health, as well as communities, through airborne particulate.
- **Environmental Releases:** The bauxite refining process generates large quantities of waste, including bauxite residue, which must be managed properly. Bauxite residue is the mixture of water and inert residues (including iron oxide, which results in the red colour) that remain after the alumina is extracted from the bauxite. Even though it is a natural by-product, limited storage space for the bauxite residue has heightened the need to develop sustainable alternatives for its disposal.

EHS FIRST Performance

In 2003, motivated by the company-wide *EHS FIRST* initiative, an intensive training program involving all activities was launched within the B&A group. One of the first steps was to conduct a comprehensive review of EHS management procedures against the *EHS FIRST* standards to determine where procedures needed to be strengthened.

The group demonstrated a continuing positive trend towards reducing its Recordable Case Rate in 2003 and the Lost Time Due to Injuries and Illness Rate was excellent at a level of some 45% below the target. No major environmental incidents were recorded during the year. Minor environmental incidents were somewhat higher than the year before. Actions taken, however, have resulted in a significant improvement in the first nine months of 2004.

All alumina facilities are now ISO 14001 certified and three are registered for OHSAS 18001. The remaining three – Brockville, Ghana and Gove – are aiming for registration in 2004, well ahead of the Alcan goal to have all Company sites (including Pechiney) certified to OHSAS 18001 by mid-2006 (see the CSR Web site for a list of plant certifications).

Key EHS FIRST performance data

Indicator	Measurement unit	2002	2003
Recordable Case Rate	Per 200,000 hours worked	4.34	3.96
Lost Time Due to Injuries and Illness	Per 200,000 hours worked	1.36	0.65
Energy Consumption Renewable	kWh Gigajoule	2,021,876.2	20,802,816
Non-renewable Energy Sources	Gigajoule	12,146,438	32,322,989
Water Consumption	m ³	See table below	
Air Emissions (based on equivalent consumption) Greenhouse Gas	Tonnes	2,150,323	2,337,359
Minor Environmental Incidents		24	17
Waste (based on equivalent consumption)	Tonnes	See table below	

Water Consumption in Bauxite and Alumina

Indicator	Measurement	2002	2003
Seawater (cubic meters)	m ³	47,450,000	44,890,000
Tank/Rainwater	m ³	0	0
Fresh Surface Water River/Lake	m ³	11,681,443.7	13,373,082
Well/Borehole Water	m ³	5,825,390	6,044,000
Public Net Drinking Water	m ³	2,492,737.6	2,738,647
Water Recycled from Bauxite Residue Lakes	m ³	Data not available	1,614,287

Waste at Bauxite and Alumina

Indicator	Measurement	2002	2003
Land-filled	Metric Tonnes	3,391,490 Bauxite residue included	159,056 Bauxite residue excluded
Incinerated	Metric Tonnes	454.3	1,867
Recycled	Metric Tonnes	22,083	33,600
Bauxite Residue	Metric Tonnes		3,131,208

Continuous Improvement

A key aspect of B&A's commitment to Alcan's Continuous Improvement initiative launched in 2003 was in the area of improved EHS performance.

For example at Gove, Kaizen exercises were launched to eliminate or reduce dust in the ship loader, control spillage from the emergency plant feed system and reduce safety hazards at the crusher. Improvement efforts on the ship loader and conveyor system resulted in maintenance adjustments that reduced emissions of alumina dust, while four new high-volume dust samplers were installed to supplement the two already operating. Furthermore, engineering and design work was undertaken at the mine crusher to improve the efficiency of the dust extraction system and to establish the timeframe and capital required to implement the new processes.

In addition, a project to supply natural gas to Gove moved ahead in 2003. A Heads of Agreement was signed, consultations took place with the Northern Land Council and Aboriginal traditional landowners, and survey work and preparations for an environmental impact assessment were undertaken. If implemented, this project would result in the elimination of fuel oil as an energy source and significant associated reductions in GHG emissions.

With the sharing of best practices within the group, all the efforts described above are typical of Continuous Improvement efforts at other Bauxite and Alumina installations. Sustainability is mainly assured during the Control phase of the CI process, which assures that standard operating procedures are developed and documented, people involved are trained, performance is tracked and future improvement options are identified.

Maximizing Value

As with all Alcan business groups, Bauxite and Alumina demonstrated its commitment to the governing objective of Maximizing Value through its business actions and showed improved performance for 2003.

Maximizing Value with Bauxaline®

Several viable commercial applications for "bauxite residue" came to fruition in 2003 at the Gardanne facility in France. The alumina operation produces approximately 400,000 tonnes of bauxite residue each year. With storage at capacity and a need to develop sustainable disposal or reuse alternatives, a project to develop practical uses for bauxite residue was initiated in 1990.

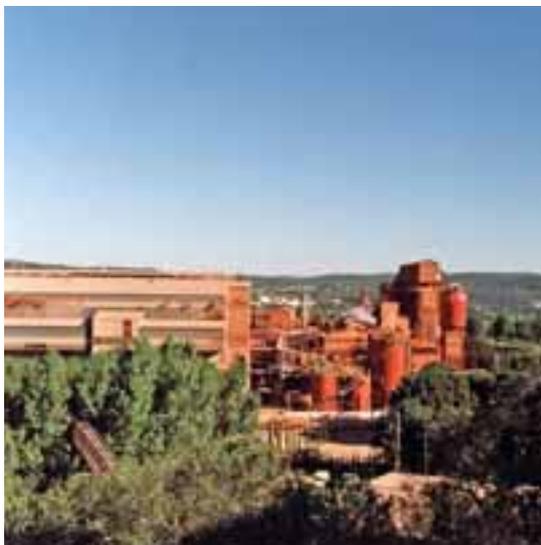
Two initiatives were launched in parallel: the first was to make use of all available opportunities for safe bauxite residue disposal, and the second, more important endeavour, was to maximize the residue's physical properties. By 1999, the efforts of the research and development team at Gardanne, in association with several laboratories and industrial groups, resulted in the development of Bauxaline®, a by-product with numerous commercial possibilities.

Smaller applications were developed for use such as colourants in plastics or cements and even in the creation of artificial reefs. Larger quantities, with the addition of ash, could be used in road embankments and sub grades and also in artificial soil production when mixed with town

waste. By 2003, other creative uses were discovered such as using a layer of Bauxaline® as ground cover to protect and rehabilitate waste dumps at three landfill sites in France.

In addition, one of the most promising applications is with the cement industry where tests at four large cement factories in Greece confirmed that using Bauxaline® made economic sense, even with treatment and handling costs included.

Although the economic benefits are small, the environmental and social benefits of Bauxaline® make the effort worthwhile, and the by-product is an excellent example of Maximizing Value for all stakeholders.



Burntisland Development Trust

Community Engagement

As a business group that conducts mining activities in primarily remote regions, the Bauxite and Alumina group is committed to working closely with external stakeholders, and especially local communities, to undertake initiatives that will contribute to social and economic sustainability and reduce its environmental footprint.

With the closure of the Burntisland (U.K.) alumina facility during 2003, Alcan engaged an external firm for asbestos removal, dismantling and removal of equipment, and the demolition of all buildings, structures and roadways. The demolition firm operates in conformity with regulations and norms as specified by the Health and Safety Executive, the Scottish Environment Protection Agency, the local Fife Council and Alcan-specific criteria. Alcan's intention is to remediate the site to residential standards so that it can be used for future development.

Similar to the Company's earlier efforts at Kinlochleven in Scotland, the groundwork was also undertaken for the establishment of a £1 million trust fund. This Burntisland Development Trust is a three-year program offering grant assistance to sustainable economic and environmental initiatives that will bring benefit to the local communities such as Burntisland and Fife.

Criteria for the funding under the Development Trust include: employment and economic development, education and training, improvements to the physical environment, health and safety initiatives, and community projects. The Trust will welcome applications from individuals, community groups and organizations that can demonstrate how their project will offset the effects of the Alcan closure.

Energy Use and Emissions Reduction

The high level of engagement with stakeholders by the B&A group has an ongoing impact on changes to operating and maintenance practices that will provide environmental benefits.

The group has had considerable success at protecting groundwater and in the remediation of bauxite residue either as a reusable by-product or in land rehabilitation as described elsewhere in this report.

Bauxite and Alumina represents 16% of Alcan's total greenhouse gas emissions and 22% of Alcan's direct GHG emissions. As a result of the Company's effort to reduce greenhouse gas emissions (TARGET), energy efficiency is taken into account with any new investment. On a per-tonne-of-alumina-produced basis, in 2003 the overall GHG rate remained stable at around one tonne of CO₂e per tonne of alumina produced. In total, the group reduced its GHG emissions in 2003 by 35,000 tonnes, which represents 12% of Alcan's reduction.

Reducing Air Emissions at Gove

Successful air emission reductions were achieved throughout the B&A group, such as at Alcan Gove in Australia where emissions include dust and gases from power generation, calcination and the production process.

The most significant air emission sources are the power station and the kilns, which use fuel oil as their energy source and produce carbon dioxide (CO₂) and sulphur dioxide (SO₂). Alcan Gove is engaged in long- and short-term initiatives to improve air emissions, including a proposal to switch to natural gas as the refinery's energy source.

In 2003, there was ongoing improvement in CO₂ emissions per tonne of alumina produced, where the operation generated 0.762 tonnes of CO₂ for each tonne of production – a reduction of 17 kg of CO₂ per tonne. Ambient sulphur dioxide emissions at Gove, totaling 29,000 tonnes in 2003, are measured at a sampling point near the refinery gatehouse. This data showed there were only five days during 2003 when the 24-hour average SO₂ concentrations exceeded the standard of 80 parts per billion as set down in the National Environment Protection Council (Air Quality) Measure. A temporary monitoring station was also estab-

lished at Drimmie Head, 3.5 km from the refinery, to measure ambient sulphur dioxide concentrations. Sulphur dioxide concentrations were measured against standards set down in the Queensland Environmental Protection (Air) Policy 1997 and the National Environment Protection Council (Air Quality) Measure. During a four-month monitoring period, there was only one ten-minute period where emissions exceeded the Queensland standard (250 parts per billion).

Furthermore, a Continuous Improvement project in the power station achieved a significant reduction in particulate emissions. The project

improved the maintenance of the atomizers, which spray fuel oil in microfine droplets into the burning chambers. The finer the spray, the more completely the fuel is combusted, leaving fewer residues to be emitted as particulate. Emission tests in May showed there had been reductions of over 50% in particulate emissions since the changes.



Sustainability Examples

The following additional examples of our sustainable approach at Bauxite and Alumina can be found in their entirety in the online version of the Alcan Corporate Sustainability Report.

Sustainability at Gove



A site-specific EHS plan was initiated in 2003 at Gove in Australia with goals that included ISO 14001 certification, pre-certification for OHSAS 18001, and new targets for improved hygiene, safer work habits and better housekeeping. The plan also called for a reduction in minor environmental incidents and a reduction of non-process waste sent to landfill sites.

Work also included mine site rehabilitation and revegetation trials at the Residue Disposal Area.



Ghana Medical Program

At the Ghana Bauxite Company (Alcan owns 80%), the Company operates a hospital and clinic that is complete with two doctors, nurses and associated medical support staff and equipment.

The facility provides a 24-hour health service to the main workforce as well as to their dependants and members of the surrounding communities.



Managing Bauxite Residue at Vaudreuil

Recognizing the ever-growing amount of bauxite residue in storage and the ever-increasing height of the containment dikes that surround it, employees at the B&A group's Vaudreuil refinery in Quebec devised a unique waste-saving solution.

Reducing Atmospheric Emissions at Gardanne



The Gardanne plant in France has maintained efforts over the last decade to reduce the atmospheric emissions linked to its industrial activity. By modernizing equipment and by efficient maintenance to ensure that this equipment is in good working order, a constant reduction in greenhouse gas and other atmospheric emissions has been achieved.

Primary Metal



“Sustainability is at the heart of the Primary Metal group in all regions. As we have progressively implemented a sustainability approach in our facilities, we have taken into account the needs and interests of all our various stakeholders in our decision-making process and in our day-to-day operations.”

Cynthia Carroll, President and Chief Executive Officer, Alcan Primary Metal

Alcan, the second-largest primary aluminum producer in the world, manufactures commercial-grade ingot for sale on the London Metal Exchange in addition to developing value-added products for customers in the transportation, building and construction, consumer goods and machinery markets. The Primary Metal group includes all Alcan’s aluminum smelting facilities and power generation installations as well as anode production facilities in the Netherlands and Canada and aluminum fluoride plants in Sweden and Canada.

	Primary Metal Profile
Products/Services	Aluminum sheet ingot, extrusion billet, wire rod and foundry ingot, engineering services, trading operations, port and railway facilities, Electro metallurgy, ECL, R&D, technology sales, coke calcination, anodes
Number and type of facilities (including partial holdings)	26 aluminum smelters 12 power generation plants
Markets served	Consumer goods, transportation, building and construction, machinery end markets, aluminum producers (smelter technology)
Major customers	Alcan Rolled Products
% 2003 revenues	19
Number of employees	Approximately 20,000



First and foremost, aluminum smelting is an energy intensive process requiring large amounts of electricity. Hydropower is Alcan's preferred source of energy since it is renewable, non-polluting and cost effective in regions like Canada where the Company has approximately 44% of its smelting capacity and an extensive owned hydroelectric power network. Operating hydropower facilities, however, does have related environmental and social issues, including water rights, reservoir levels, community impact, shoreline erosion, changing stream flow rates and temperatures, and impact on downstream habitats.

For example, the Nechako watershed in British Columbia is the area impacted by the Nechako Reservoir, created in the 1950s to supply water for the Kemano power station. Kemano, in turn, feeds the Kitimat smelter. Alcan and 23 other stakeholders formed the Nechako Watershed Council to identify, analyze and address issues relating to the watershed.

Alcan is also a member of Canadian Business for Social Responsibility (CBSR), a national organization based in British Columbia. Our involvement with this group, which started in early 2003, has furthered our understanding of the value of social responsibility and how we might best apply these concepts in our operations around the globe. For example, in cooperation with CBSR, Alcan took the lead in organizing and hosting the first-ever corporate conference on the business case for sustainability.

Whether it's managing watersheds in Canada, working with school children in Brazil, or developing smelting operations in China, the Primary Metal group continues its long tradition of working with stakeholders such as employee groups, communities, government agencies and non-governmental organizations to achieve common goals. Community and societal concerns are high on the agenda as evidenced in Quebec by a partnership agreement that was signed with the Regional Council for the Environment and Sustainable Development in the Saguenay-Lac-Saint-Jean region (CREDD) specifically for the protection of designated species.

Key issues in Primary Metal

- **Energy Consumption:** Aluminum smelting is an energy-intensive industry. Alcan has an extensive owned hydroelectric power network that is renewable, cost effective and non-polluting. In locations where hydroelectric power is not feasible, coal-fired and thermal sources are used.
 - **Climate Change:** The Primary Metal Group is the business group responsible for the largest quantity of greenhouse gas emissions, primarily CO₂ and PFCs.
 - **Natural Resources:** Our group's primary impact on natural resources arises from operating hydroelectric generating facilities and associated dams and reservoirs, often in remote areas. These projects have a range of impacts (both positive and negative) on water levels, the quantity and quality of water in impoundments and streams, fish and other wildlife habitat, recreational activities and other economic uses of water resources. Our facilities also have local impact on land use.
 - **Community Development:** Alcan's smelting activities have often been the catalyst for community growth in remote areas, representing a major employer in the area. In the case of a smelter closure, the group works in close cooperation with local stakeholders to evaluate the best opportunities to minimize impact on employees and the community's continued survival.
 - **Well-being:** Employee and community health and safety is a key concern in the Primary Metal group, considering the environmental releases associated with the smelting process and the risks of working in an industrial environment.
 - **Environmental Releases:** Smelters generate air, water and land emissions that can be minimized with appropriate equipment and processes. For example, the storage, disposal and treatment of spent potlining (SPL), a waste residue of the smelting process, has long been a critical environmental issue for the industry. Over a five- to eight-year period, various chemicals accumulate in the lining of the pots used to produce aluminum. When the lining is replaced, the removed material (SPL) must be treated or stored according to government regulations.
- Polycyclic Aromatic Hydrocarbons (PAH) represent another possible source of environmental emissions, especially in Söderberg smelters with horizontal stud technology. Some PAH compounds have carcinogenic potential when present in high concentrations.

EHS FIRST **Performance**

Alcan's Primary Metal group has continued to make steady progress in reducing the Lost Time Injury and Illness rate and Recordable Case rate. The group finished the year with better than planned results – and a significant improvement over 2002. There were also no major environmental incidents in 2003.

Implementation of the company-wide *EHS FIRST* program was a group priority in 2003 with the gap analysis and development of plant action plans being completed by the end of the year. EHS training was provided to senior-level personnel and EHS professionals.

Alcan operations in Brazil illustrate the early impact of this Company-wide commitment to EHS. For example, the first results of *EHS FIRST* in Brazil show a 50% reduction in Recordable Cases at the Aratu smelter and a 28% reduction at Ouro Preto. Aside from the group's commitment to *EHS FIRST*, these results are also attributed to the changed employee attitudes and behaviours following the introduction of Behaviour Based Safety (BBS) in 2000. Several risk factors have been eliminated as a result of the efforts of the BBS teams.



Key EHS FIRST performance data

Indicator	Measurement unit	2002	2003
Recordable Case Rate	Per 200,000 hours worked	4.37	3.34
Lost Time Due to Injuries and Illness	Per 200,000 hours worked	1.03	0.76
Energy Consumption	kWh	Alcan: 15.12 kWh/kg al Pechiney: 14.441 kWh/kg al	Alcan: 15.21 kWh/kg al Pechiney: 14.5 kWh/kg al
Water Consumption	m ³	70.6	85.0 (includes a significant contribution related to the installation of new wet scrubber at the Norway smelter)
Air Emissions (based on equivalent consumption)	Tonnes	See page 43	See page 43
Water Emissions (based on equivalent consumption)	Tonnes	Currently not available globally	Currently not available globally
Minor Environmental Incident Rate	Absolute total number incidents in the year	187	193
Waste Production (excluding SPL and dross)	Tonnes	Alcan: 531,096 Pechiney: 62,033 Total (Non Hazardous + Hazardous) excludes SPL, dross, and skimmings	Alcan: 354,176 Pechiney: 54,555 Total (Non Hazardous + Hazardous) excludes SPL, dross, and skimmings
Noise Exposure	dbA	Currently not available globally	Currently not available globally

Primary Metal also continued efforts towards OHSAS 18001 certification of its plants. From five sites at the start of the year, all wholly owned facilities had achieved OHSAS 18001 and underwent an EHS audit by year-end. Furthermore, all of these plants were ISO 14001 certified. The two remaining partially owned facilities, which have already earned ISO 14001 designations, were scheduled to complete certification audits for the OHSAS 18001 standard in early 2004. The goal is to have 100% of all sites (including former Pechiney sites) OHSAS 18001 certified by mid-2006.

The Primary Metal group works closely with government in all jurisdictions to ensure that our operations are in compliance with local regulations. In Quebec for example, at Grande-Baie Works, an environmental monitoring protocol was signed in 2003 with the provincial Ministry of the Environment (MENV). Jointly developed, the protocol covers all emissions and discharges as well as appropriate government authorizations needed to obtain and retain our license to operate.

Water Consumption

	Measurement Unit	2001	2002	2003
Primary Metal	m ³	62,054,140	70,648,492	85,045,726
Pechiney*	m ³	19,912,000	19,014,670	16,095,448
Total	m ³	81,971,693	86,006,251	95,151,714

* Does not include consumption from Ferro-Alloy sites

Waste

	Measurement Unit	Land-filled 2002	2003	Incinerated 2003	2002	Recycled 2003	2002
Primary Metal	Metric Tonnes	405,228	163,302	15,441	10,533	230,560	182,528
Pechiney*	Metric Tonnes	25,779	21,706	0	0	36,254	32,849
Total	Metric Tonnes	431,007	185,008	15,441	10,533	266,814	215,377

* Does not include data from Ferro-Alloy sites

Maximizing Value

Plans to further facilitate Maximizing Value in 2004 in the Primary Metal group include a \$350 million (Alcan's share) expansion of the 40%-owned Alouette smelter in Quebec and moving ahead with a definitive joint venture agreement that gives Alcan a 50% stake in a planned pre-bake smelter in China. Furthermore, the Company recently announced plans to build a facility incorporating patented Alcan technology for the treatment of spent potlining, a waste by-product of the smelting process.

Managing Spent Potlining

The Quebec aluminum industry alone generates some 50,000 tonnes of spent potlining each year, half of which comes from Alcan.

Alcan's Arvida Research and Development Centre in Quebec, Canada, developed and tested a spent potlining treatment process known as the Low Caustic Leaching and Liming process (LCLL). The process, which combines a series of processes already used by Alcan, treats the waste material efficiently while also recycling it by creating usable by-products.

In 2002, with several options now available for treating SPL, the Primary Metal group formed a multi-disciplinary team to evaluate potlining management practices in the aluminum industry around the world. The team selected LCLL and, in October 2003, Alcan announced its intent to construct a spent potlining treatment facility based on our in-house developed process.

With the new 80,000 tonne-per-year facility, Alcan will create some 50 direct jobs in the region. At the end of 2003, work began on obtaining the neces-

sary government authorizations and laying the groundwork for public consultations and an awareness campaign.

In Brazil, where a smaller amount of SPL is generated, a new initiative was introduced in 2003 where the waste material is used in the cement industry. This environmentally stable solution has resulted in the processing of some 15,000 tonnes of SPL generated between 1999-2003, depleting the SPL stockpile to zero.

The treatment of SPL is a strong example of Alcan's voluntary commitment to sustainability. The new SPL Treatment Centre in Quebec also now provides a global solution that can be applied industry-wide. It eliminates the need to store a potentially hazardous material, removes a local concern wherever SPL is stored, and has improved employment opportunities in the community.



Community Engagement

From its beginnings over 100 years ago with the start-up of smelting and power operations in Canada, the Primary Metal group has a long history of community engagement efforts. Similarly today, in Brazil, where the group is investing in hydropower generation facilities (power plants and two projects developed by the Aratu plant), parallel social actions have been triggered to minimize any impact and also create new opportunities for the local population.

Looking to the Future in Saguenay–Lac-Saint-Jean

In 2003, Alcan announced the planned closure of the Arvida smelter, part of a long-term plan to phase out the use of Söderberg technology in favour of modern, environmentally advanced smelting technologies. Concurrently, Alcan launched a strategy for the diversification of the Saguenay–Lac-Saint-Jean industrial base. The focus was on the output of value-added products and the delivery of services related to the aluminum industry, instead of relying only on the production of primary metal.

The strategy is built on:

- Technological transfers within Alcan.
- Continuous development of the region's capabilities in research, technology and engineering.
- Growth of local companies and suppliers associated with the production of primary aluminum.
- Support for the local entrepreneurs who get involved in aluminum fabrication.

As part of the strategy, Alcan initiated the creation of a committee of regional stakeholders in support of industrial diversification. With a mandate to promote a business-friendly climate and the necessary infrastructures to attract new investment, the committee evaluates and selects ideas, technologies and projects that will lead to a successful diversification program.

Examples of Alcan's diversification from primary smelting operations include:

- The announcement in September 2003 of the construction of a new fabrication plant in the Saguenay region that will produce structural aluminum components for the automotive industry.
- In October 2003, the Company unveiled plans to build a spent potlining treatment plant based on the LCLL process developed by our Arvida Research and Development Centre (ARDC).
- The creation of an Alcan Office of Economic Diversification to provide a focus on consistent and strategic support to the local economies in which we operate.

Continuous Improvement

The Alcan Continuous Improvement initiative for the Primary Metal group is an important tool to assure customer satisfaction and to improve EHS, financial and process tools to satisfy all stakeholders. Senior-level communications related to sustainability began in 2003 along with extensive CI training.

Employee commitment to Continuous Improvement at the Ouro Preto smelter in Brazil was the key factor behind a 20% reduction in the emission of particulate materials. Employee efforts included improving operations control to reduce anode effect frequency and duration, increasing efficiency in the wet scrubbers, and improving pot sealing and smelter pot maintenance. Changes to alumina specifications and the initial introduction of dry scrubbers were also part of the improvement initiative. The dry scrubbers further contribute to the elimination of dust levels in the historic city of Ouro Preto.

Energy Use and Emissions Reduction

Significant effort is devoted to monitoring and reducing emissions to air, land and water in the group. Emissions tracked regularly include: greenhouse gases (CO₂-equivalent), energy consumption, waste and scrap generation/disposal and water consumption.

Primary Metal is the business group responsible for the largest quantity of Alcan's total greenhouse gas emissions (GHG). Under the Company's TARGET program, the group contributed significantly to the overall achievements with GHG reductions totaling 300,000 tonnes for Alcan Inc. in 2003 (direct and indirect emissions).

For example, while increasing aluminum production by 10%, Alcan's two smelters in the U.K. at Lynemouth and Lochaber have reduced GHG emissions by 21% since 1990, as compared to a U.K. Kyoto agreement target of 12.5%. One innovative solution introduced on a pilot basis uses various biomass materials such as sawdust, wood pellets and olive residues in the coal-fired power station at Lynemouth. Burning

1.5% biomass by heat saves 41,250 tonnes of GHGs annually based on current production levels. Alcan is also considering wind power as another option for reducing GHGs at the Lynemouth smelter.

In addition, the introduction of larger anodes at Lynemouth and Lochaber allows the plants to now operate at higher amperage and increased levels of energy efficiency. Higher amperage gives more molten metal production with reduced CO₂ emissions per tonne of metal produced. Lynemouth's coal-fired power station can also switch to lower sulphur fuel to minimize levels of sulphur dioxide releases resulting from coal in periods of increased risk to local air quality. Lynemouth's efforts are regarded as best practice by the U.K.'s industry regulators.

In Canada, Alcan signed a specific voluntary agreement with the Quebec Ministry of the Environment in late 2002. This agreement, which runs until 2007, relates to the responsible management of GHG emissions from Alcan's Quebec facilities.



A GHG reduction objective of an average 160,000 tonnes for the 1999-2003 period was established, based on the 1999 level of emissions and on the metal production capacity that same year. Alcan recorded a reduction above the objective, exceeding the target by an average of 60,000 tonnes, based on 1999 levels.

In France, in April 2003, the French association AERES (Association of companies for the reduction of greenhouse gases) also approved the French part of Pechiney's global Greenhouse Gas Reduction Programme. This details the Partnership for Climate Action (PCA) commitments for the next five years related to Pechiney's French sites that have the highest level of GHG emissions (22 sites). Pechiney's commitment was to reduce its direct emissions by 23% from 2003-2004, based on the reference year 1990 (3,912 Kt/year of CO₂ equivalent), and by 33% for the period 2005-2007.

At the Dunkerque smelter (France), a better process control at the anode baking furnace was implemented in 2003. Through the efforts of employees in operations and process control, an improved quality of baked anodes has reduced anode effects and operation costs.

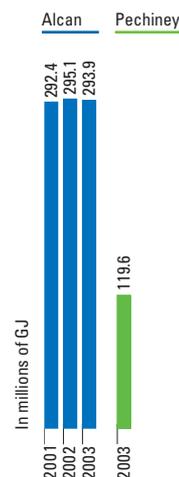
Furthermore, this action will reduce the number of environmental non-compliance incidents where the accidental shutdown of emissions treatment equipment may cause atmospheric releases. Results are promising. In 2002, 50 accidental shutdowns accounted for 118 hours of downtime and the accidental air release of

6,500 grams of BaP (a component of PAH). In the first eight months of 2004, the Dunkerque smelter has faced less than ten events at the anode baking furnace and accidental air releases of 1,500 grams of BaP – significant improvement in both areas.

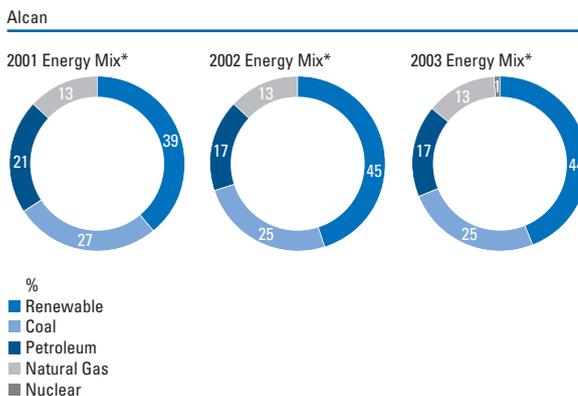
At Vlissingen, Pechiney Nederland, a modernization project improved production by 25% while also reducing GHGs from 1.7 million tonnes to 500,000 tonnes.

In other resource-driven areas, the group reduced its total energy consumption by some 6% based on equivalent output (GJ per tonne of aluminum decreased from 4.166 in 2002 to 3.914 in 2003).

Total Energy Consumption

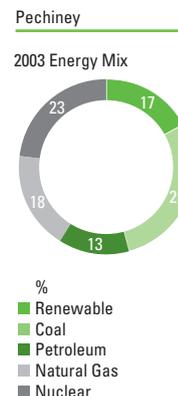


Energy Mix



Alcan owns or purchases a large portion of its energy from clean, renewable hydroelectric sources.

* Alcan owned and non-Alcan sources



Primary and Bauxite facilities only

Sustainability Examples

The following additional examples of our sustainable approach at Primary Metal can be found in their entirety in the online version of the Alcan Corporate Sustainability Report.

Fighting HIV/AIDS

A proactive Alcan program in Cameroon (Africa) to combat the threat of HIV/AIDS has had a positive impact with the ALUCAM population (families included), which now shows a 4% prevalence towards AIDS as opposed to the average 12% in the general population. The company has also recently extended the program to surrounding communities, first targeting the schools, clubs, associations and other companies.



Water Recycling at Alma

The new Alma Smelter, which has been in full operation since the fall of 2001, has committed to recycle the same volume of water as that which comes out of the water treatment centre that serves its Casting Centre.



The Alesa “Blue Box”

Alcan Alesa Engineering Ltd. in Zurich and Alcan Alesa Technologies Ltd. in Montreal, provide tailor-made solutions to the aluminum smelter industry worldwide.

The most recent development holds promise for improved industry sustainability in that it helps to stabilize the electrolysis process (especially the composition of the electrolyte) in a smelter.

Collaboration on Community Training at Sebree

In the US, at Primary Metal’s Sebree facility, Alcan became fully involved in the development of a community business and industry training program that was funded with a \$3 million grant from the U.S. Department of Labor.

Links with First Nations

In Canada, Alcan has developed strong cooperation with aboriginal people in the areas where it has operations including a framework agreement with the *Conseil des Montagnais du Lac-Saint-Jean* in Quebec and unique stewardship initiatives with First Nations communities in British Columbia.



New Storage Site in Cameroon

A new smelting residue storage area in Cameroon is viewed as a best practice model, with a storage capacity of 40 years under present operating conditions. The site meets international standards and increases Alucam employee awareness towards Environment, Health and Safety best practices.

Enhancing Biological Diversity

At Grande-Baie Works in Canada, a five-year biodiversity and development plan has been underway since the year 2000 with the aim to promote biodiversity and public awareness on the protection of the environment and preservation of fauna and flora. In Iceland, ISAL sponsors “Open Woodlands,” a three-year project between Alcan Iceland and the Icelandic Forestry Association.

Reducing Air Emissions at Rotterdam

Alcan, in partnership with Hydro and Soeral, has produced prebake anodes for smelters at Aluchemie (Aluminium and Chemicals Rotterdam) in Rotterdam, Netherlands since 1964.

In 2002, an experimental technique called the RTO (regenerative thermal oxidation) was introduced aimed at improving emissions performance. The new application was permanently put in place December 2003, and the emissions are expected to be at least 90% lower – a dramatic improvement.



Reducing GHG Emissions in France

In France, the former Pechiney smelter located at Saint-Jean de Maurienne has been working for many years on the reduction of GHG emissions, particularly PFCs. In addition to improving operation practices in order to reduce the frequency and the duration of anode effects, the plant has replaced two out-of-date potline control systems.



Low Tar Pitch Further Reduces PAH Emissions

A new low-PAH pitch has greatly reduced PAH emissions from Alcan's smelters in Quebec. Additional reduction of PAH emissions are to be expected in Quebec with the permanent closure of Söderberg potlines at Arvida Works in 2004.

Söderberg Smelters in Quebec

In Canada, Söderberg technology is used in some of Alcan's older smelters. Following the Company's announcement in January 2004 to permanently close the last four Söderberg potlines at Arvida Works, only two smelters remain with this technology, namely the Beauharnois and Shawinigan smelters in Quebec.



Community Initiatives at Tomago Smelter

The Tomago Smelter (Alcan joint venture) in Australia is surrounded by a considerable number of natural habitats. Tomago Aluminium's Environmental Management Programs include the fundamental objective to protect the area's flora and fauna, as the health of many species of vegetation is sensitive to even low levels of fluoride emissions. To ensure that all needs were identified, the program team worked closely with local communities and other stakeholders.

Building Habitat Homes in the U.S.



In November 2003, employees from Alcan's Sebree smelter in the US joined two other organizations (USWA Local 9443 and Weyerhaeuser) to officially dedicate their first Habitat for Humanity house in Henderson, Kentucky. In addition to company contributions, many Alcan employees participated in an aluminum can collection program called "Can Do" to raise money for the house.

Rolled Products Americas and Asia

“Beyond manufacturing and putting together a really effective corporation, sustainability is a cause that has economic benefits for the Company and social and environmental benefits for people around the world.”

Martha Brooks, President and Chief Executive Officer, Alcan Rolled Products Americas and Asia

Through an extensive network of rolled products facilities in North and South America and Asia, the Rolled Products Americas and Asia group manufactures aluminum sheet and light gauge products including can stock, automotive sheet and industrial products. In addition, the group holds executive management responsibility for Alcan’s global can sheet business and operates extensive used beverage can recycling facilities in North and South America.

	Rolled Products Americas and Asia Profile
Products/Services	Can stock, automotive sheet and light gauge rolled aluminum; recycling services
Number and type of facilities (including partial holdings)	17 total plants 5 plants with recycling capabilities: 2 dedicated plus 3 others with scrap recycling capabilities
Markets served	Beverage, automotive, transportation, durable goods, building and construction industries
Major customers	Ford, GM, Anheuser-Busch
% 2003 revenues	26
Number of employees	Approximately 5,600

From its leading EHS performance among Alcan business groups to working with school children in Brazil, Rolled Products Americas and Asia continued to work with all key stakeholders in 2003 and early 2004, including employees and their representatives, local communities, environmental agencies, trade associations, and local, state and national authorities. The goal in all engagement efforts is to seek innovative and sustainable solutions as illustrated in the following example.

Alu-core® Project

When a US-based customer suggested that the Company replace the fibre core used for coiling aluminum can sheet, the Rolled Products Americas and Asia plants immediately began analyzing the options. The goal was to develop a recyclable core that was a cost effective, safe and more environmentally friendly alternative.

Aluminum cores, available in Europe thanks to the Alu-core® technology developed by Alcan's Ohle Works in Germany, were introduced at the Nörf rolling facility in the late 1990s and have proven to be a very successful innovation. A team was organized to assess if the Alu-core® technology could be utilized in the North American production processes. Benefiting from the cooperative input from Ohle and Nörf (Germany), Oswego (New York), and Logan (Kentucky), the team concluded that it was feasible to satisfy

North American safety standards with some modifications in equipment design. The Alu-core® solution would deliver on the dual issue of recyclability and cost. Customer acceptance was key as the new cores required changes to their handling procedures once the cores were designated as scrap.

The Oswego and Logan teams modified the Alu-core® technology to eliminate the need to roll down can sheet scrap to the appropriate gauge to make the cores. Now the cores are made directly from the can sheet stock and process scrap, thus saving costs, GHG emissions and other by-products from the primary aluminum smelters and hundreds of tonnes of natural resources. This solution also eliminated the generation of waste cardboard, thus saving on landfill space and time. A dedicated infrastructure was put in place

to handle the entire process from materials handling of the starter stock to the final crimping and taping.

Customers were extremely receptive as the aluminum cores could now be compacted and returned with other aluminum scrap, eliminating the need for a special core return arrangement or disposal of the previous fibre cores. In addition, the new cores are approximately 1/3 the weight of the fibre cores, facilitating handling safety and minimizing shipping weight. They also do not absorb humidity, resolving a long-standing product quality issue.

With an initial project development cost of \$336,000, the Alu-core® technology provides annual savings to Alcan of approximately \$500,000 per year, based on current can sheet production estimates. All quali-

fied Oswego and Logan customers are now receiving coils on aluminum cores for can body stock. The same technology was introduced in 2004 at the Pinda rolling complex in Brazil where now all our can body stock customers are receiving coils on aluminum cores. The group is also presently investigating the possibility of extending the technology to other customers (other than can stock). Initial feedback from Industrial Products customers has been very favourable.

The Alu-core® project exhibits all the criteria of sustainability. It is typical of the thinking throughout Alcan as how the sharing of best practices and cooperative customer engagement efforts result in innovative solutions when focused simultaneously on economic, environmental, employee and community issues.

Key issues in Rolled Products Americas and Asia

- **Energy:** Necessary to run our rolling operations. On a lifecycle basis, however, energy consumption incurred in the smelter system can be reduced by as much as 95% whenever recycled material is used in place of primary aluminum as source material for our rolled products production.
- **Community Development:** We impact communities in many ways, including our minimization of environmental releases such as Volatile Organic Compounds, reduced clutter and landfill space, and also in the economic value that UBC (used beverage can) recycling provides to community and charity groups.
- **Industry Shifts:** Changing consumer preference must be monitored closely in cooperation with our customers and suppliers in order to rapidly respond with quality product innovations.
- **Product Stewardship:** Society benefits from the increased energy efficiency of our products in the use phase. Aluminum is infinitely recyclable so we have encouraged and/or implemented many recycling programs around the globe.



EHS FIRST Performance

Rolled Products Americas and Asia combined the effective implementation of EHS FIRST with a well-entrenched level of employee involvement to further improve its EHS performance in 2003. Not only did the group exceed targets, the EHS performance at Rolled Products Americas and Asia was well above the Alcan-wide average with several individual plant milestones being recorded throughout the year.

For example, six plants in North America operated for two years or more without a Lost Time Accident. Furthermore, the Pinda plant in Brazil achieved the best fire prevention and safety performance in the industry.

As a group, continued progress was made in further reducing the Lost Time Injury and Illness rate and Recordable Case rate, finishing the year with better-than-planned results – and an improvement over 2002. Most importantly, zero fatalities were recorded in 2003. The number of “serious” injuries, however, increased to seven compared to two the previous year. Eleven of the group’s fifteen facilities improved the Recordable Case rate and six of the sites have operated for more than one year without a Lost Time Injury or Illness.

In North American operations, work-related lacerations amounted to approximately 35% of all recordable injuries. Although these are generally minor in nature, eliminating this type of injury was viewed as a high priority in terms of instilling the highest possible safety standards. Upon analysis of the data in the group’s Accident Incident database, several site-specific initiatives were put in place to reduce or eliminate laceration injuries. As a result, laceration injuries in 2003 dropped by more than 50% compared to the previous year. RPAA laceration rates in 2004 indicate that progress made in 2003 has been maintained with only 16 cases by the end of the third quarter 2004.

As with all Alcan business groups, implementation of the Company-wide EHS FIRST program was a priority in 2003. All program expectations were achieved including internal pre-certification, leadership training, gap analysis, and the implementation of key EHS directives such as the new Alcan-wide crane safety program in addition to confined space and mobile equipment policies.

A Mobile Equipment Call to Action was launched in 2003 at Rolled Products Americas and Asia that required all site managers to personally lead their management teams through a discussion of the issues and to complete a site-specific action plan to address the risks to both operators and people nearby. These action

plans were completed by all facilities by the end of 2003. In early 2004, the sharing of best practices and discussion of the various action plans was conducted at the group level with all site managers participating.

All manufacturing sites are registered for OHSAS 18001 and ISO 14001 as of the first quarter of 2004. Mayfield Heights (Ohio) was the first Alcan corporate office to be registered for the ISO and OHSAS standards. In Korea, the Ulsan and Yeongju plants were among the first in the world to simultaneously achieve ISO 14001, OHSAS 18001 and ISO 9001 certification.

In addition, the group’s focus on Behaviour Based Safety was also implemented in ten of the 15 facilities.

There were no major environmental incidents in 2003; 24 minor environmental incidents were reported and eight ongoing cases of non-compliance (OCNC) were resolved. One reason for this improvement in ongoing non-compliance cases is the group’s new directive for management of OCNCs. Improved vigilance and follow-up, among other adjustments, have resulted in the reduction of OCNCs from thirteen in 2002 to six in 2003 and the goal is to reduce this to one in 2004.

Key EHS FIRST performance data

Indicator	Measurement unit	2002	2003
Recordable Case Rate	Per 200,000 hours worked	2.01	1.37
Lost Time Due to Injuries and Illness	Per 200,000 hours worked	0.35	0.25
Energy Consumption	Gigajoules per tonne	8.52	6.02
Water Consumption	m ³ /tonne	1.93	1.83
Air Emissions (VOCs) (based on equivalent consumption)	Tonnes/tonne	.000514	.000317
Minor Environmental Incident Rate	Per 200,000 hours worked	0.63	0.35
Waste (based on equivalent consumption)	Kg/tonne	22.66	10.78

Waste Reductions in RPAA

RPAA has developed a list of key waste and water consumption indicators that are standardized to production so that internal benchmarking can be performed. Benchmarking results are used as part of the management review process to identify opportunities to improve performance. A number of strategic initiatives and CI projects have been developed in response to this benchmarking activity. The table below containing the critical environmental metrics in RPAA shows significant progress in all areas from 2001 to 2003.

Description	2001 (kg/tonne)	2002 (kg/tonne)	2003 (kg/tonne)	2003 Range (kg/tonne)
Dross	26.27	26.63	26.73	13.27 - 34.73
Hot Mill Waste Oil	57.81	51.20	49.78	6.66 - 162.14
Cold Mill Filter Waste	2.11	1.88	1.76	0.65 - 9.39
Water Use	7.27	1.93	1.83	0.33 - 5.91

Note: The waste reduction in 2003 was due to a combination of real performance improvement and changes in regulations, which redefined the waste classification of dross in Asia and Brazil. Water consumption has dramatically improved from 2001 as a baseline. The most significant improvement project that resulted in the improvement in 2002 was the Oswego Cooling Water Recirculation project.

Maximizing Value

Alcan's governing objective of Maximizing Value is a driving force for the Rolled Products Americas and Asia group and also the key reason for the proposed rolled products company spin-off announced for the end of 2004.

Increased production and sustained efforts at Maximizing Value produced strong results for the group in 2004. Efficient system utilization, significant savings in the procurement and supply-chain area and optimization initiatives at the local plant level are all contributing to the improved results.

Warren Coating Line Expansion

After conducting a thorough business review in the context of Maximizing Value, the group identified a major opportunity in increasing the production of can end stock, the coated aluminum sheet used to make the ends of aluminum beverage cans. The availability of coating capacity was the key. Rather than incurring the cost of moving a coating line from Korea to the US or acquiring a coating line from another producer, a decision was made to build upon existing efforts at the Warren plant (Ohio) to speed up the existing can end coating line.

With process enhancements already in place, a team assessed

options to increase the value creation benefits. The first step was to reduce Warren's operating costs, partially achieved with the cooperation of labour representatives to introduce greater work flexibility at the plant. The cost reductions offset the added costs of shipping source material from Alcan's Logan plant in Kentucky. Cooperative efforts of Logan and Warren employees also resulted in improving the machine-processing route between the two plants.

This expansion into a financially attractive market was accomplished with a relatively low capital investment.

Recycling

The Rolled Products Americas and Asia group has been a longtime advocate of the social, environmental and economic benefits of used beverage can (UBC) recycling, first in North America and then in South America. Alcan's aluminum can recycling operations in North America recycled more than 23 billion used beverage cans in 2003 – representing some 45% of all aluminum cans recycled in the U.S.

In Brazil, where the national recycling rate is now at a record level 89%, Alcan facilities recycled 73% of all the cans collected. Most of the successful UBC recycling programs in Brazil are a result of Alcan's involvement and investment in environmental education and the high value of recycled aluminum.

Recycling initiatives in the USA includes Alcan's sponsorship of America Recycles Day, an event started in 1997 to educate and encourage Americans to recycle and buy recyclable products. The Company participates in the Aluminum Cans Build Habitat for Humanity Homes project, and we seek out opportunities to build public awareness that "it pays to recycle aluminum."

Due primarily to developments in legislation and the vision of customers in an increasing number of end-use markets, notably packaging, automotive and building products, the life-cycle benefits of recyclable aluminum are of increasing importance to the overall competitiveness of our material.

Efficiency Improvements for Oswego Remelt Unit

Continuous Improvement

The Alcan Continuous Improvement (CI) initiative for Rolled Products Americas and Asia is an important tool to assure customer satisfaction and to improve EHS, financial and process tools to satisfy all stakeholders.

Senior-level communications related to sustainability began in 2003 along with extensive CI training. Key CI projects for Rolled Products Americas and Asia included: improving operating practices to minimize toxic chemical use, upgrading metering equipment on furnace operations, reducing emissions of volatile organic compounds (VOCs), increasing capacity, lowering cost and increasing safety. These projects alone have resulted in improved performance and have contributed to Alcan's long-term sustainability. By September 2004, we had over 40 "Black Belts" and over 120 "Green Belts" as our CI project leaders.

Oswego Works (New York) initiated a project to improve the efficiency and productivity of the remelt manufacturing unit that processes scrap from group plants, customers and UBCs. The scrap is remelted and returned to ingot form.

The goal was to achieve an 8-10% efficiency improvement over the prior year's peak production performance. This was no small undertaking for a world-class rolling mill operation that is viewed as among the "best of the best." The increased capacity would eliminate or significantly reduce the purchase of sheet ingot from third-party producers.

The project began in December 2002, following a feasibility study conducted by a third party. A special project team worked with every member of the Remelt team in order to harness the collective wisdom and explore opportunities that would establish a new standard of performance. Training about pre-conceived paradigms, productivity project methodology and process mapping was conducted to set the stage for fast paced, shop-floor process change.

The task at hand was not to seek technological solutions, an area where Oswego was already an industry leader, but rather to use the existing resources to reinvent the remelt process. This meant doing things differently – working smarter and leveraging all the resources available. The

concept was to view each Remelt work centre and develop a way to optimize each area and, ultimately, the entire process.

The improvement effort focused on cycle time reductions which meant finding areas of waste, eliminating redundancies and unnecessary steps, and identifying both value added and non-value added areas in each phase of the production process.

The enhancements shifted production from a process made up of a series of sequential steps to a redefined process in which human resources were realigned. The result was an efficient use of production time and a shortened cycle time since certain steps in the process now occur consecutively.

Besides changing work behaviours, the team leaders impressively implemented new automated electronic programs to keep the process within best practice. The automated programs capture and produce data daily for the management team to use as a predictor for the next workday.

Some 80% of Oswego's top 144 productivity records have been broken since the increased productivity project began. Savings were expected to reach \$4 million by year-end accompanied by a substantial reduction in the purchase of outside sheet ingot.

Energy Use and Emissions Reduction

Significant effort is devoted to monitoring and reducing emissions to air, land and water in the group. Emissions of greenhouse gases (CO₂-equivalent), energy consumption, waste and scrap generation/disposal and water consumption are all tracked regularly. Key performance indicators used to measure progress include major environmental incidents, minor environmental incidents, ongoing cases of environmental non-compliance and EHS certification of sites (ISO/EMAS).

Rolled Products Americas and Asia represents 7% of Alcan's total greenhouse gas emissions. At the start of 2003, a goal under the TARGET program was set to reduce CO₂e emissions by 2% on an emissions-per-tonne of production basis – a goal that was exceeded with a 6.15% improvement. Absolute GHG emissions increased only 1.03% from 2002 (17,122 tonnes), a rate well less than half the 2.66% rate of increase in production.

Contributing to the group's TARGET performance was the replacement of a boiler at Kingston Works (Canada), a natural gas efficiency improvement at Berea (USA), a switch to natural gas in Brazil, the elimination of a drying oven at Warren (USA) and increased burner efficiency in our Korean operations. In other resource-driven areas, the group reduced water consumption in its facilities by 5% (2002 baseline) and total energy consumption was reduced by some 29% (2002 baseline) based on equivalent output.

Sustainability Examples

The following additional examples of our sustainable approach at Rolled Products Americas and Asia can be found in their entirety in the online version of the Alcan Corporate Sustainability Report.

Universal Cast – a Sustainable Solution

In April 2004, Alcan Taihan Aluminum (ATA) implemented a \$4.5 million investment for a new Universal Cast Shop in Ulsan Korea. The project (including both new and renovated facilities) was completed in April 2004 and will result in the production of 26,000 tonnes of sheet ingots annually.

Sustainable benefits include enhanced productivity, fuel cost savings, reduced third-party ingot purchases and adaptability to new technologies.

Conversion of Fuel at Yeongju Plant



Under the assessment that the usage of liquefied natural gas (LNG) is more economical, safe, and has the prospect of contributing to regional development, the Rolled Products Americas and Asia plant at Yeongju (Korea) converted all installations that previously used liquefied propane gas to LNG in February of 2003. The economic benefit to Alcan was estimated at \$5 million in 2003 in reduced fuel costs.

North American Toxic Release Reduction

The reduction in toxic air releases has been one of the North American rolling group's top priorities for the last decade. Programs have been implemented to reduce toxic air releases as quantified in the EPA's (US Environmental Protection Agency) Toxic Release Inventory and Canada's NPRI since the late 1980s. The result is a 55% reduction in toxic air releases.



Cold Mill Pressure Filtration Optimization

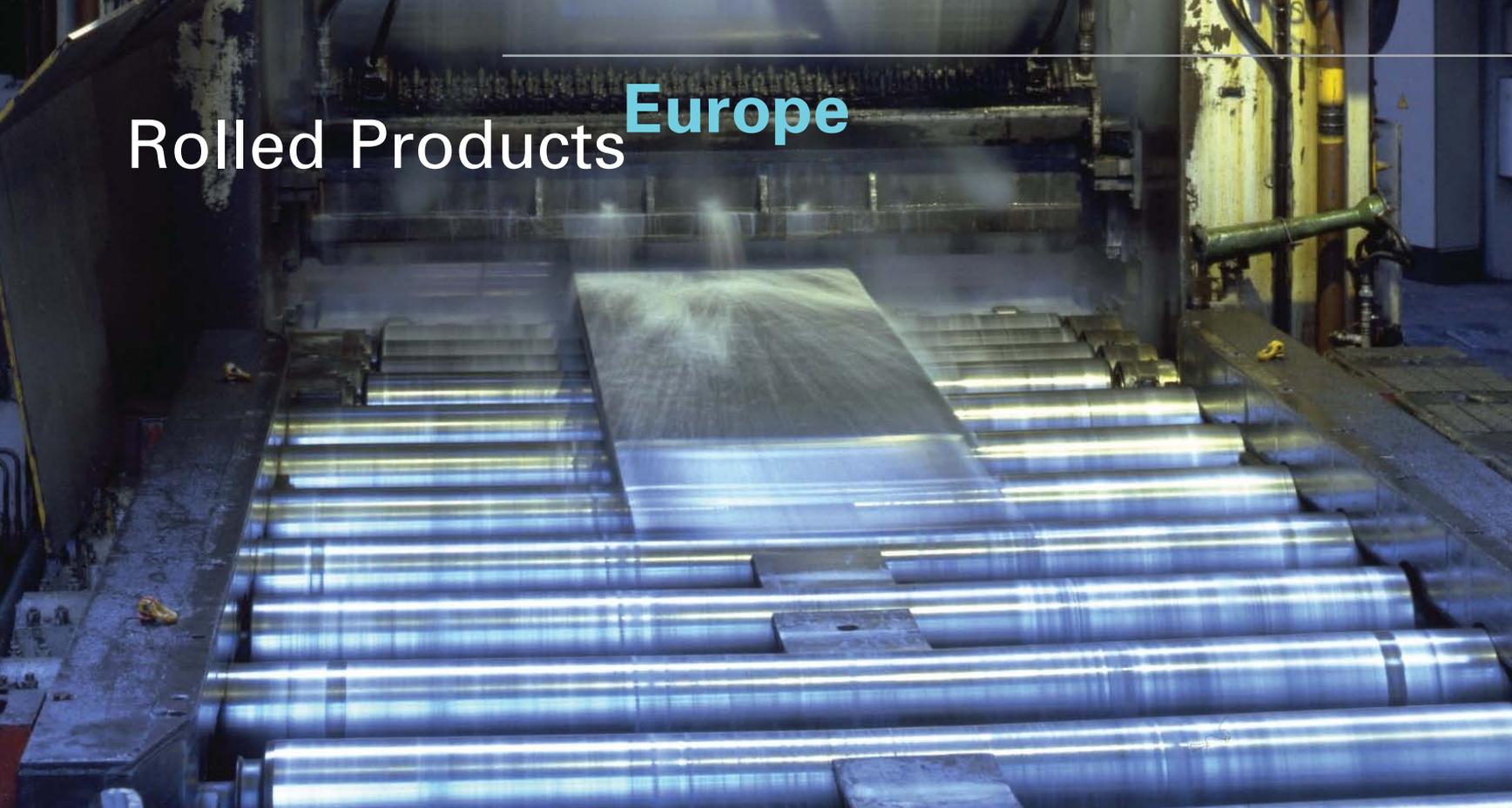
The business risks and environment, health and safety (EHS) concerns associated with the operation of cold mill pressure filtration systems have been a major focus within North American Rolled Products. The EHS risks associated with the operation of pressure filtration systems in our rolling operations are numerous and include landfill issues and health risks associated with waste handling.

Recyclable Wastewater Treatment Centre

With a capacity of 1,000m³ per day, the wastewater treatment centre at the Yeongju plant in Korea currently processes approximately 400m³ per day of wastewater generated from the Remelt and Utility units, which is then reused as the absorbent in the air pollution prevention facilities of the Remelt process.



Rolled Products **Europe**



“For Rolled Products Europe, our commitment to sustainability means creating value by providing our customers with innovative solutions that enable them, in turn, to improve the sustainability of their own products. We are keen to work with customers to help them maximize the total life cycle benefits of aluminum.”

Chris Bark-Jones, President and Chief Executive Officer, Alcan Rolled Products Europe

As Europe’s largest producer of value-added aluminum sheet and plate, the Rolled Products Europe group supplies more than one million tonnes per year of rolled products for a variety of uses, including beverage can production, lithographic plate for the printing industry, foil, tooling plate as well as automotive and building applications.

	Rolled Products Europe Profile
Products/Services	Automotive sheet, lithographic sheet, industrial sheet and plate, can sheet, painted sheet, foil, foilstock and paintstock
Number and type of facilities (including partial holdings)	15 plants 3 recycling facilities
Markets served	Food and beverage packaging industry, automotive, transportation, printing industry, Durable goods, distribution, general engineering, building and construction industries
Major customers	Rexam, Agfa-Gevaert, BMW, Jaguar, Tetra Pak, Alcan Packaging
% 2003 revenues	17
Number of employees	Approximately 6,700

The Rolled Products Europe group continued to work with key stakeholders in 2003, including employees and their representatives, local communities, local, national and European authorities, environmental agencies and trade associations. The goal is to address business group requirements within the context of developing and maintaining stakeholder relationships aimed at long-term sustainability for all parties. For example, recycling is a high value-at-stake issue for the group and all efforts are extended towards utilizing more recycled material in our operations and to identify new ways to maximize the contributions that our products make to sustainability.

The Alcan Global Employee Survey is used at Rolled Products Europe as a significant tool in soliciting and responding to employee views and comments. Throughout 2003, action plans were devised and implemented to follow up on the 2002 survey results. The 2003 survey was also carried out, with a significant year-on-year increase in participation rate demonstrating the value of this initiative to employees.

Other employee engagement efforts in 2003 included extending the Individual Performance and Career Management (IPCM) program to cover all professional levels, while also ensuring that the review and succession planning process was made available at all Rolled Products Europe sites. These actions contribute to an effective employee management and reward system that ensures the retention of talent, skills and performance within the group.

Customer engagement efforts are ongoing at Rolled Products Europe, especially in the automotive sector where ideas may take several years before they reach fruition. With Jaguar, for example, our cooperative partnership resulted in the world's first volume-production vehicle with a unibody structure manufactured predominantly in aluminum sheet. This historic milestone has profound, long-term, social, environmental and economic

The Jaguar Example

Traditionally, the bodies of Jaguar cars have been made of steel. In 2002, Jaguar introduced the aluminum-body XJ series, weighing 295 kg, instead of a steel body weighing 475 kg.

The decision to use aluminum saves about 1,500 litres of gasoline for each vehicle, if a total life cycle driving distance of 200,000 km is assumed. A life cycle assessment which takes into account production, use and recycling shows that, under such standard assumptions, more than four tonnes of greenhouse gas

emissions can be saved per car, i.e. more than 14 kg of GHGs for each kg of aluminum in the car body.

Assuming a production run of 160,000 cars, the decision to use aluminum will result in total greenhouse gas savings of more than 600,000 tonnes. The intensive use of aluminum in cars supports high recycling rates, when the vehicles reach the end of their useful life, which is expected to be close to 100%.



Key issues in Rolled Products Europe

- **Energy:** RPE is Europe's leader in recycling post-use aluminum, preserving natural resources and conserving as much as 95% in energy consumption when recycled material is used in place of primary aluminum.
- **Community Development:** From reducing waste and minimizing environmental releases to being involved in community educational programs, the group is focused on being a welcome partner in the communities where we operate.
- **Industry Shifts:** As consumers demand more environmentally friendly and safe products, we work with our customers and suppliers in collaboration with R&D to develop high quality product innovations.
- **Product Stewardship:** Due primarily to developments in legislation and the vision of customers in an increasing number of end-use markets, notably packaging, automotive and building, the life-cycle benefits of recyclable aluminum are of increasing importance to the overall competitiveness of our material.

EHS FIRST Performance

Rolled Products Europe has continued to make steady progress in reducing its Lost Time Injury and Illness rate and Recordable Case rate and finishing the year with better than planned results – and a significant improvement over 2002.

Despite this, there were two fatalities in Rolled Products Europe during 2003. As a result, a coordinated campaign focusing specifically on the reduction of serious accidents was launched with an ongoing mandate. As part of this accident-prevention focus, follow-ups to action plans were conducted at Norf, Göttingen and Nachterstedt in Germany and plant visits related to the Serious Accident Prevention program were conducted at Pieve, Bresso and Borgofranco in Italy.

Implementation of the Company-wide *EHS FIRST* program was a group priority in 2003, with the gap analysis and development of plant action plans being completed by the end of the year – the first Alcan business group to do so. Over 60% of the programs had also been initiated by year-end.

Recognizing the high risks associated with operating cranes, the group's plants in Germany continued theoretical and practical training for crane operators; at Sierre in Switzerland, a new procedure for cranes and work permits was introduced.

Rolled Products Europe also continued efforts towards OHSAS 18001 certification of its plants. From two sites at the start of the year, the goal was to work towards having eight more sites certified in 2003. At year-end, 13 manufacturing and R&D locations in the group were ISO14001 certified and 12 were OHSAS 18001 certified. The Norf plant in Germany was successfully pre-audited in 2003, with its certification audit taking place in early 2004. The goal is to have 100% of all sites (including former Pechiney sites) OHSAS 18001 certified by mid-2006.

Key *EHS FIRST* performance data

Indicator	Measurement unit	2002	2003
Recordable Case Rate	Per 200,000 hours worked	2.4	1.73
Lost Time Due to Injuries and Illness	Per 200,000 hours worked	1.8	0.93
Energy Consumption	GJ/tonne	7.8*	7.5*
Water Consumption	m ³ /tonne	4.7	4.2
Air Emissions (VOCs and hydrocarbons)	Tonnes	608	564
Water Emissions (based on equivalent consumption)		Not a key metric	
Minor Environmental Incident Rate	Per 200,000 hours worked	0.22	0.15
Waste (hazardous and non-hazardous)	Kg/tonne	48.3	47.9
Noise Exposure		Not a key metric – measured case by case as needed	

* includes Pechiney sites

Note: Norf is a 50%-owned joint venture between Alcan and Hydro Aluminium and, therefore, only 50% of the emissions and resource consumption are considered for this overview.



Recycling

Rolled Products Europe continues its lead role in the industry with regard to recycling post-use aluminum. The group's Used Beverage Can recycling plant and General Products recycling plant at Latchford (U.K.), together with the casting alloys recycling plants at Borgofranco (Italy) and, more recently, Affimet (France) are key drivers in this process.

In addition, the group is an active participant in a range of industry-wide recycling programs across Europe, with aluminum being suitable for collection in a wide variety of initiatives due to its inherent high value and ease of recycling. In Western Europe, the average 2003 recycling rate for aluminum cans was 48%. For aluminum used in the construction of commercial and residential buildings, over 92% is recycled according to a Delft University study in cooperation with the European Aluminium Association.

The U.K. collection and recycling of post-consumer used beverage cans, for example, continues to benefit from Alcan's very proactive approach. In 2003, a 15% year-on-year increase was recorded in the U.K.-collected volume of UBCs recycled back into can sheet ingot. Due primarily to developments in legislation and the vision of customers in an increasing number of end-use markets (notably packaging, automotive and building), the life-cycle benefits of recyclable aluminum are of increasing importance to the overall competitiveness of our material.

Maximizing Value

Pursuit of the company's governing objective of Maximizing Value remained the driving force in Rolled Products Europe and the effort continued to produce stronger results for the group.

Sustained efforts to achieve a higher value portfolio mix while reducing costs were reflected in the group's improved profitability and enhanced overall performance for 2003. Increased levels of system utilization, significant savings in the procurement and supply-chain area and optimization initiatives at the local plant level all contributed to the improved results.

Another positive step is the continuing increase in internal scrap absorption – which is on track to double by 2005, from a 1999 baseline. Recycling internal scrap within the group adds value by complementing the primary metal supply in addition to the major environmental benefit of recovering up to 95% of the energy used to produce primary metal.

Plans to further facilitate Maximizing Value in 2004 include changing from a functional to a business unit structure, i.e. moving away from the traditional manufacturing/sales structure to one that is more closely aligned with markets and customers. The three market-focused business units are: Foil and Technical Products; Litho, Can and Painted Products; and Specialty and General Purpose Products (which includes automotive, plate, shate and general engineering sheet). This restructuring helped the organization to enhance service and customer responsiveness.

Pallet Replacement Scheme

Rolled Products Europe has been selling coils of aluminum litho stock to the US market since 1988. Coil packaging consists mainly of pallets, lids and pads – discussions with two main customers revealed that they were paying a fee to have the coil packaging disposed in landfill sites.

Following joint discussions, Rolled Products Europe introduced multiple-use skids, lids and pads, which are now returned from US and European customers. The US customers are paid a small fee per unit for handling and shipping in addition to saving their costs of disposal.

Since the multi-use packaging can be reused up to 45 times, the environmental benefits are complemented by Alcan saving a proportion of the cost of new pallets, lids and pads. Since initiating the project, we have achieved 100% recycling coverage on pallets, lids and pads for all European accounts. In the US alone, annual savings of this sustainable approach are estimated at \$75,000 for 2003 and \$90,000 for 2004, with more expected as we extend the option to more US customers.

Continuous Improvement

The Alcan Continuous Improvement initiative for Rolled Products Europe is an important tool to assure customer satisfaction and to improve EHS, financial and process tools to satisfy all stakeholders.

Senior-level communications related to sustainability began in 2003 along with extensive CI training. Early CI projects for Rolled Products Europe included "Set-up time reduction at the Göttingen paint-line" and "Reduction in Forklift Truck damage at Rogerstone." In addition to the example below, these projects have contributed to enhancing Alcan's long-term sustainability.

For example, at Norf, the replacement of an exhaust air cleaning system for two cold mills at ALUNÖRF (50/50 Alcan/Hydro joint venture, the world's largest rolling mill) resulted in a 25% reduction in rolling oil emissions and a 30% reduction of both energy use and GHG emissions. Further benefits include a 5% increase in the recovery of rolling oil, a reduction in noise and reduction of droplets of oil in the neighbourhood.

Aside from the environmental and economic benefits, the new air cleaning system provides an improved working environment for employees.

At the Bridgnorth (U.K.) foil and packaging facility, examples of Continuous Improvement efforts in 2003 include initiatives to reduce waste in inks. Project results show clear financial savings and significantly reduced safety and environmental risks. Ink usage (defined by ink applied to saleable product as a percentage of the ink purchased) also improved, reducing waste by over 30%. In a typical month, Bridgnorth uses 23 tonnes of solvent-based ink; with the new procedures in place, the volume of solvent-based inks required to produce equal annual volumes will be reduced by over 20 tonnes.

Energy Use and Emissions Reduction

Significant effort is devoted to monitoring and reducing emissions to air, land and water in the group. Emissions of greenhouse gases (CO₂-equivalent), energy consumption, waste and scrap generation/disposal, and water consumption are all tracked regularly. Key performance indicators used to measure progress include major environmental incidents, minor environmental incidents, new cases of environmental non-compliance and EHS certification of sites (ISO/EMAS).

Rolled Products Europe represents 4% of Alcan's total greenhouse gas emissions and, as part of the Company's TARGET program, the group's GHG reductions totaled approximately 50,000 tonnes in 2003. In other resource-driven areas, the group reduced water consumption in its facilities by 10% and total energy consumption was reduced by some 5% based on equivalent output, not including Pechiney.

With the goal of further reducing our environmental footprint, the group works cooperatively and,

frequently, voluntarily with government authorities. For example, the Rogerstone (U.K.) plant is currently covered by the U.K. Climate Change Levy Agreement whereby the plant, along with others in the aluminum sector, has targets to reduce emissions of CO₂. In exchange for meeting these milestone targets, the plant has an 80% discount from the U.K. Climate Change Levy. Rogerstone successfully met its first milestone target with actions such as switching the energy supply in two remelt furnaces from fuel oil to natural gas.

Research and Development

Research and development efforts at Rolled Products Europe continue to produce innovative product and process solutions that have resulted in enhanced economic, environmental and social benefits.

For example, significant R&D effort is aimed at developing alloys and coatings to provide innovative solutions for our customers. Our work has helped customers and end-users of products containing our aluminum sheet enjoy enhanced product performance and environmental benefits throughout the life cycle. From an economic perspective, the new technologies allow both Alcan and our customers to create additional value.

A Force in Automotive R&D

Rolled Products Europe enjoys a strong position in the automotive sector, a key growth market. The group's automotive applications encompass a wide range of alloys, surface treatments and formats – including laser-cut blanks – that contribute to reduced vehicle weight and enhanced performance.

Alcan's leadership in the important shift to lighter vehicles as a means of reducing GHG emissions was recognized by INDUSTRYWEEK magazine when Alcan's Aluminum Vehicle Technology was selected as one of the Technologies of the Year for 2003.

Aluminum sheet supplied to European automakers by Rolled Products Europe increased by 30% in 2003, with the group also improving its profitability. This was achieved through significant improvements in operational effectiveness and intensive collaboration with customers to develop innovative and sustainable solutions.

For example, Alcan alloys contribute to the overall performance of the new BMW 5 series. The car's front structure, hood and fenders are made mainly from Alcan aluminum. Increased use of aluminum helped to reduce the overall weight of the new line and also allowed designers to achieve the optimal 50:50 distribution between front and rear axles. This makes for superb handling and manoeuvrability.

As well as supplying aluminum sheet, Rolled Products Europe partnered with BMW to develop the special alloy, AC 300HF, that was used in the front structure. This enabled the German automaker to set new body-structure standards for crash performance. Benefits include lower repair costs for minor collisions and enhanced passenger protection, thanks to the alloy's superior energy-absorption qualities.

Sustainability Examples

The following additional examples of our sustainable approach at Rolled Products Europe can be found in their entirety in the online version of the Alcan Corporate Sustainability Report.

Helping Improve the Overall Environmental Performance of Tetra Pak™ Packaging

Alcan's work with Tetra Pak is one example of how our cooperative efforts with customers can help improve the environmental performance of their products. Tetra Pak has worked continuously to enhance the overall performance of its laminated beverage cartons at every step in the chain. The Rolled Products Europe group has worked with its customer to help reduce material use and make their packs even lighter. Lighter packaging uses less material, produces less waste and is more efficient for transport and storage.



Sustainability at Sierre

The Alcan facility at Sierre in Valais, Switzerland, has several initiatives underway that are a benefit to the various stakeholder groups. Projects range from a local street hockey club for children to rehabilitating 15 hectares of former landfills.

Working with the Disabled at Nachterstedt

For over 30 years, the Rolled Products Nachterstedt facility in Germany has been integrating disabled persons into the plant's activities. By working under contract with Lebenshilfe, an institution for mentally handicapped people, our Nachterstedt plant employs approximately 20 disabled persons in various cleaning, packaging and transportation tasks.

Göttingen Combines *EHS FIRST* and Community Involvement

The Göttingen plant in Germany works with a local Gymnasium school providing support in a number of areas, including first aid training.

The plant is also the main sponsor of a local athletic event in Göttingen that attracts more than 2,000 runners and 10,000 spectators.

Engineered Products

“Our commitment to sustainability has an impact on all facets of corporate activity. It not only shapes the way we think and act as managers and employees, but it influences the attitude of our customers alike. As their business partners, we share with them the responsibility towards society and the use of natural resources. Together we strive to protect and preserve an environment to provide future generations with all the options that they need.”

Michel Jacques, President and Chief Executive Officer, Alcan Engineered Products

Alcan’s Engineered Products group is a world leader in engineered aluminum and composite products for a broad range of applications. Alcan takes a multi-material approach in developing innovative solutions for and with our customers, especially those in the mass transportation, automotive, aerospace and marine markets, while also supplying the building, electrical, machinery, display, leisure and wind power industries.

	Engineered Products Profile
Products/Services	Composites, fabricated aluminum products including wire and cable, sales and service
Number and type of facilities (including partial holdings)	49 plants 51 service centres 37 commercial office
Markets served	Automotive, mass transportation, aerospace, construction, display, electro-mechanical, machinery, marine and electrical
Major customers	Airbus, Daimler Chrysler, GM, Bombardier, Siemens, ABB
% 2003 revenues	13
Number of employees	Approximately 12,000

Sustainability is an integral part of the Engineered Products culture, and the group has worked diligently with suppliers and customers to outline the advantageous properties of its materials throughout the product life cycle. Whether it's the cost-effective weight savings and economical recycling advantages of automotive components or the use of renewable balsa wood as the core material for applications including windmill blades, the group's innovative solutions have gained worldwide recognition for their sustainability.

The Product Stewardship approach is used to gain a holistic view of products from a life cycle perspective, i.e. from fabrication, finishing and product use, to recycling and waste treatment. This type of life cycle perspective, with the inclusion of all environmental impacts such as emissions to air, water, and soil, as well as resource consumption, allows for the identification of the overall environmental impacts of products. It is the basis for further economic or social assessments within the sustainability framework.

Complementing the Engineered Products' commitment to Product Stewardship, the group's Research and development efforts will be directed towards new alloys and heat treatment processes to support our new leading position in aerospace. This R&D activity will benefit all sectors but is of significant importance to the aeronautical industry, as it will contribute to further energy and greenhouse gas reductions.

New Automotive Structures Plants in North America

Aluminum automotive bumpers limit vehicle damage related to crashes and contribute to the safety of car passengers – primarily due to the excellent crash performance of specific aluminum alloys. Moreover, considerable weight savings can be achieved, which result in fuel savings. As an example, a life cycle assessment has shown that Opel's decision to use an aluminum bumper instead of a steel bumper with similar crash performance in their Corsa model saved about 150,000 tonnes of greenhouse gas emissions for the whole series.

Within the last decade, Alcan contributed significantly to the development of aluminum bumpers and expanded the production in our German facility in several steps. This effort to serve the growing market for lightweight structural and crash management systems for automakers has been complemented by a \$30 million investment in the construction of two new automotive structure fabricating facilities in North America.

The Company's technologies and products developed in Europe have generated consid-

erable interest from North American automakers and suppliers. With construction starting in 2003, the US-based plant opened in spring 2004 and the Canadian plant will be operational in 2005. Both plants will produce advanced aluminum bumper-beam assemblies in addition to having the flexibility to produce various structural sub-systems such as instrument panel supports, engine cradles and sub frames.

The two facilities provide a strong and responsive supply base for customers due to their location. In the US, the proxim-

ity of the Michigan-based plant to original equipment manufacturers allows for cooperative efforts in product development and component design. In Canada, the new plant in the Saguenay region (Quebec) will have the advantage of being close to the resources and manufacturing expertise associated with Alcan's extensive manufacturing base in that region.

Further information related to the social and environmental advantages of these aluminum bumper systems can be found in the 2003 Corporate Sustainability Report.

Light Weighting the Airbus 380

A new giant aircraft will soon appear in the sky – the Airbus A380, currently under development and construction. It will have a wingspan of 78.5 meters, an empty mass of 300 tonnes, and it will carry up to 555 passengers. In order to master this outstanding technological challenge of construction, Airbus has closely cooperated with the aircraft research team at the Alcan R&D centre at Voreppe, France, as well as with Alcan development teams at Pechiney Rhenalu and Pechiney Aviatube.

New alloys with customized properties were designed by Alcan to meet the specific needs of each lightweight aluminum component of the new aircraft. Due to specific efforts to reduce the environmental impact of the A380, a weight reduction of 10%, or 15 tonnes of aluminum, could be reached through the selection of innovative alloys, new joining techniques, etc. This weight reduction saves 300,000 tonnes of greenhouse gas emissions or 90,000 tonnes of kerosene per aircraft. For an annual production of 48 A380 aircraft per year, total life cycle greenhouse gas savings of almost 15 million tonnes per year would be achieved.

For the next generation of passenger aircraft beyond the A380, a further weight reduction of 20% has already been targeted. Based on our technological expertise and excellent relationship with customers, we are confident that we will make a significant contribution to such a challenging goal.



EHS FIRST Performance

In 2003, motivated by a Company-wide *EHS FIRST* initiative, an intensive training program involving all activities was launched within the Engineered Products group. This initiative reached more than 6,000 employees and was clearly a factor that led to a marked reduction of Recordable Cases of work-related injuries and Lost Time Injuries and Illnesses. The group also conducted an intensive EHS gap analysis at all locations and specific action plans were initiated and others suggested for implementation in 2004.

Progress was also made in further reducing air and water emissions and special attention was devoted to waste management. Furthermore, by the end of 2003, 12 of the Engineered Products sites were OHSAS 18001 certified and another 15 sites will follow this year. The ISO 14001 certification is also on track with 21 sites registered at the end of 2003 and an additional seven sites for 2004. The goal is to have 100% of all Engineered Products sites (including former Pechiney sites) OHSAS 18001 and ISO 14001 certified by mid-2006.

In late 2003, project work started to integrate new Engineered Products colleagues into the *EHS FIRST* component of the Alcan Integrated Management System.

Key issues in Engineered Products

- **Industry Shifts:** Close relationships with customers and suppliers are necessary to ensure that we develop innovative solutions in response to consumer, government and societal needs.
- **Life Cycle Product Stewardship:** Efforts with suppliers and customers continue to emphasize the Product Stewardship Life Cycle Approach to product development at Engineered Products, from reducing source material consumption to reducing GHG emissions related to the use of our products.
- **Environmental Releases:** Continuous Improvement efforts to adapt our production line processes to reduce environmental impact is an ongoing objective, especially in the reuse of scrap in our operations and the minimization of waste.

Key EHS FIRST performance data

Indicator	Measurement unit	2002	2003
Recordable Case Rate	Per 200,000 hours worked	3.70	3.10
Lost Time Due to Injuries and Illness	Per 200,000 hours worked	2.30	1.52
Energy Consumption	GJ	4,705,000	4,665,000
Water Consumption	m ³	7,580,000	7,030,000
Air Emissions (based on equivalent consumption)		Not a key metric for this group	
Water Emissions (based on equivalent consumption)		Not a key metric for this group	
Waste (based on equivalent consumption)	Tonnes	Total: 28,100 Hazardous: 9,300 Non-hazardous: 15,400 Skimmings/Dross: 3,400	Total: 33,300 Hazardous: 4,600 Non-hazardous: 25,400 Skimmings/Dross: 3,300
Noise Exposure		Not a key metric for this group	

Maximizing Value

As with all Alcan business groups, Engineered Products demonstrated its commitment to the governing objective of Maximizing Value through its business actions.

For example, the acquisition of Baltek Corporation in March 2003 demonstrates maximizing value on a number of fronts



Balsa Plantations Maximize Value

The acquisition of Baltek Corporation expanded Engineered Products' offerings and integrated well with existing composite technologies. In addition to being environmentally sustainable – in that balsa is a very fast self-generating species and a naturally renewable resource – Alcan's harvesting of balsa wood does not impact on any rain forest or natural forest environment.

With the gradual disappearance of old-growth balsa, in the early 1970s Baltek began an ambitious program of growing

balsa trees under plantation conditions. With limited scientific data, Baltek's pioneering efforts were aimed at producing its raw material on a sustained yield basis, thus providing economic stability for the company and the region. Early challenges included seed sourcing, site characteristics and insect/disease relationships.

Today, with over 16,000 acres of new growth, Baltek is recognized as the most important contributor to reforestation in Ecuador and is a frequent collaborator

in the exchange of ideas and scientific data with universities and specialized laboratories around the world. Baltek is the world's leading supplier of balsa-based composite core materials and contributes to the group's pursuit of Maximizing Value with products that uniquely complement Alcan's existing structural foam core range, especially in the marine, mass transportation, aerospace and the fast growing wind power markets.

Continuous Improvement

The Alcan Continuous Improvement initiative launched in 2003 in Engineered Products is an important tool to assure customer satisfaction and to improve EHS, financial and process tools to satisfy all stakeholders. With input from the business units, projects are prioritized according to value maximization potential and the relative impact on EHS.

Senior-level communications related to sustainability began in 2003 as well as extensive CI training for team leaders. Key contributions included landfill waste reduction efforts, reduced working capital, improved productivity and increased value creation.

CI Black Belt Project in Singen – Composites

Alcan Composites in Singen, Germany, specializes in the production of aluminum composite panels: Alucobond®, Dibond® and Alucore® – Alcan brand names well known worldwide. These products are mainly used in the field of architecture and display, but also in transport and industrial applications. The composite panels, produced in a continuous production process, consist of two aluminum cover sheets with a polyethylene, mineral, or aluminum honeycomb core. Raw material costs are a significant part of the total cost.

With the CI rollout at Singen, a three-day project selection workshop was held in order to identify the "Highest Value Opportunities." Raw materials costs were identified as an area where improve-

ments could be quickly realized. Consequently, scrap reduction of painted coils was selected as a CI Black Belt Project. All of the scrap streams were identified, allowing measurement of volumes by type of scrap.

With the strict methodology of the CI process, action plans were identified to capture the anticipated improvements. Sustainability is mainly assured during the control phase of the CI process, which assures that standard operating procedures are developed and documented, people involved are trained, performance is tracked and future improvement options are identified.

Annual cost savings as a result of this project are more than \$150,000.

Energy Use and Emissions Reduction

Engineered Products contributes 1% of Alcan's total greenhouse gas emissions – in 2003, the group was responsible for the emission of 278,000 tonnes of greenhouse gases (excluding the Pechiney sites). Out of this total, 33% was emitted directly at the sites, 46% was created by non-Alcan electricity generation and 21% was from external, non-Alcan owned transportation that is used to deliver product to the next point of use or to customers.

The group also reduced the environmental impact of its processes in 2003 through the constant adaptation of production line processes to meet customer needs, the implementation of *EHS FIRST* and the strict discipline of the Alcan Integrated Management System. For example, some 63% of all scrap (including customer-generated scrap returned to Alcan) is now recycled internally by Engineered Products while the balance is recycled externally.

Furthermore, in conjunction with the European Aluminium Association, Engineered Products' Mass Transportation Systems unit is currently working with other European institutions to promote aluminum's contribution to reducing CO₂ emissions in commercial transport. Alcan was among the first institutions to subscribe to the International Public Transportation's charter for sustainable development signed in Madrid in May 2003.

Energy use and emissions reduction can take many forms and the following two examples illustrate this point:

Continuing efforts to reduce waste and scrap within the Engineered Products business group resulted in significant improvements, including a reduction of hazardous waste of more than 50%. For example, the cleaning of extrusion tools after production is generally carried out by immersing the tool in a caustic soda bath (pickling bath). This typically results in the need to recycle a large quantity of heavily contaminated caustic soda.

As a result of concerted efforts, reconditioning of contaminated caustic soda into a value added product – sodium aluminate – has been successfully introduced at the extrusion plants in Sierre (Switzerland) and Singen (Germany). This development is a great step forward by the Extruded Products business unit in regards to both environmental protection and the reduction of manufacturing costs, an outcome of the Company's value maximization agenda.

Since the installation of this process, there has been zero disposal of this hazardous waste.

Improved processes in Engineered Products operations also contributed to reduced water consumption of 7% as compared to the previous year. Examples include:

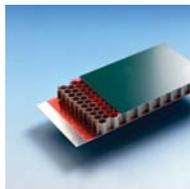
- An 11% reduction in water consumption at the Williamsport cable plant in the US
- Benton composites production in the US reduced water usage by 41% through Continuous Improvement efforts on system maintenance
- Northvale composites in the US reduced water consumption by converting its compressor from water cooled to air cooled
- A 7% reduction in water consumption was achieved in Decin, Czech Republic
- A water reduction study and modification of the anodizing line at St-Florentin, France, resulted in a reduction of consumption from 2,500 m³/day to 1,700 m³/day



Sustainability Examples

The following additional examples of our sustainable approach at Engineered Products can be found in their entirety in the online version of the Alcan Corporate Sustainability Report.

Product Stewardship for Alucore® Honeycomb Applications



The Life Cycle Assessment (LCA) approach, as part of Product Stewardship, has been applied to Alucore®, the aluminum honeycomb panel product manufactured by our Composites plant in Singen, Germany. Markets for this material are mainly the building and transport sectors.

Re-Melting Aerospace Alloy Chips at Issoire



In the aerospace and transportation sector, the construction of a new melting and casting unit in early 2003 at the Issoire facility in France has greatly contributed to the group's long-term sustainability. The new process recuperates alloy chips from both the plant and its customers far more efficiently in terms of environmental protection and the economic use of energy.



Closing the Loop at Alcan Cable

Alcan Cable in North America was the first supplier in the industry to establish a "scrap on wheels" program, which greatly reduced the volume of wooden reels sent to landfills.

Today the unit has looked at the product life cycle aspects of its products and has expanded its recovery efforts to the recycling of scrap conductor cable. Both Alcan Cable and its customers have benefited from reduced operational costs and improved recovery value from scrap materials.

Life Cycle Advantages of Reduced Weight in Airfreight Containers

The life cycle approach is well illustrated in the example of airfreight containers produced in the Singen plant (Germany). Since 1980, the Singen plant has gradually reduced the weight of the containers from 139 kg per unit to 82 kg per unit by using rolled and extruded aluminum products.



CI Black Belt Project in Sierre – Extruded Products



Reducing scrap on one of the extrusion presses at Sierre, Switzerland, was the objective of a Continuous Improvement project launched in December 2003. Three main areas were identified for improvements and tackled separately: machine (press, billet-heating furnace), material (billet quality), production (manual work content). As of mid-2004, Sierre had achieved significant reductions in scrap generation.

Neighbourhood Support at Issoire

The Issoire plant in France launched a community-based sustainability initiative to benefit local schools in the area. As a result of a technological upgrade of the plant's IT system, 80 computers that were no longer needed by Alcan were donated to primary, secondary and high schools in Issoire and the neighbouring villages.

*avec pour les ordinateurs on peut offrir refaire des infrastructures
des ordinateurs de qualité de nos*



Packaging



“Sustainability makes us a stronger company, a more attractive investment, a more solid business partner and a better employer. It allows us to grow our business in a manner that generates real, sustainable value in all dimensions.”

Christel Bories, President and Chief Executive Officer, Alcan Packaging

Alcan is a leading full-service packaging provider, with a worldwide presence in Food Flexible, Pharmaceutical and Medical, Beauty and Personal Care, and Tobacco packaging. At the start of 2003, Alcan Packaging’s growth strategy included investments in Pharmaceutical and Tobacco packaging applications, selective expansion in film-based Flexible Packaging applications and the development of higher value-added applications in Personal Care.

	Packaging Profile
Products/Services	Food Flexible and specialty packaging (collapsible tubes, mascara containers, caps and closures, contract packaging, glass vials, folding cartons...)
Number and type of facilities (including partial holdings)	180 packaging operations
Markets served	Food, Pharmaceutical & Medical, Beauty & Personal Care, Tobacco
Major customers	L’Oreal, P&G, Kraft, Novartis, Philip Morris...
% 2003 revenues	21
Number of employees	Approximately 34,000

A primary aspect of Alcan Packaging's sustainability effort is to permanently search for advanced packaging solutions to satisfy customer needs. In addition, the group supports sustainable product development initiated by our partners. This includes solutions to prevent drug counterfeiting for the pharmaceutical industry, user-friendly packaging and innovations for consumer safety via child-resistant and tamper-evident packaging.

The characteristics of the packaging business are a driving force behind the sustainability path that we have chosen. For example, packaging is an extremely **labour-intensive industry**, with many relatively small manufacturing facilities. In order to serve a global customer base, these operations tend to be **geographically widespread**, necessitating clear communications and strong common management systems.

To meet the needs of this broadly based Packaging team, a cohesive and efficient environment, health and safety program like *EHS FIRST* is a fundamental requirement. With such a labour-intensive business, we recognize the critical need to keep our employees trained in the latest best practices and to invest in the appropriate technology to continue to meet the needs of all stakeholders. For example, in 2003 the Packaging group launched a major training and awareness campaign in environmental, health and safety protection measures for all personnel.

The other characteristics that single out our industry are our **products** and our **processes**. A packaging product is always used in conjunction with a customer's product, whether it's a food, beauty or pharmaceutical product. As a result, our manufacturing lines

must have enough flexibility to meet the expectations of our customers and society. Our manufacturing processes must be ready to respond quickly as customers update their product packaging to reflect continually evolving consumer tastes.

Continuous Improvement is a constant at Alcan Packaging as we advance our position as a global leader. Whether it's waste reduction, seeking out energy-efficient equipment, reducing volatile organic compound emissions, or designing the latest tamper-proof container, the Packaging team is committed to developing sustainable solutions.

We design products to meet our customers' needs, to even anticipate them, while minimizing the environmental impact of the packaging after use. One key challenge we face is to reduce the material content and weight of our packaging, while delivering continuously improving performance. Another is the dual task of identifying as well as eliminating chemical components and additives that are potentially harmful for health and the environment. A third is the ongoing effort to improve recyclability in packaging products and to research solutions to recycle materials.

Key issues in **Packaging**

- **Well-being:** Packaging is a labour-intensive industry requiring a sound employee support system. This includes a comprehensive EHS program that ensures employee health and safety and emphasizes environmental protection.
- **Environmental Releases:** Reducing air emissions, particularly of volatile organic compounds, is important for workplace health and safety and compliance with air emissions requirements. A focus on reducing waste from our processes contributes to conserving resources that go into our packaging and ensures a more cost-effective operation overall.
- **Industry Shifts:** Packaging is an industry in constant change as we assist our customers in adapting to the rapid pace of evolving consumer preferences.
- **Product Stewardship:** As society demands more secure, tamper-proof and resilient packaging, we must meet those needs while remaining focused on minimizing environmental impacts.

EHS FIRST Performance

An ambitious and efficient EHS program was already underway at Alcan Packaging prior to the implementation of the company-wide *EHS FIRST* program in 2003. Total compliance is the goal. The implementation of best practices combined with the introduction of *EHS FIRST* has resulted in excellent performance for the group, continuing the downward trend of the previous year. For example, from 2000 to 2003, Recordable Case rates dropped by more than 50% and Lost Time Due to Injuries and Illness fell by more than 60% in the same period.

In 2003, Alcan Packaging further pursued its strategy to improve EHS performance against baselines established the previous year for each plant. With a pre-Pechiney goal to have all plants OHSAS 18001 and ISO 14001 certified by the end of 2004, the group is well on the way with 60% of all Alcan sites certified as of the end of 2003 (30% with Pechiney plants included). The goal is to have 100% of all Alcan Packaging sites (including former Pechiney sites) OHSAS 18001 and ISO 14001 certified by the end of 2005.

Beyond the requirements of these standards, the Packaging group is equipped with exhaustive and rigorous risk assessment tools that can be used to identify priority actions for environment, health and safety. This way we optimize our financial resources and improve day-to-day plant management.

A rigorous risk assessment process to prioritize EHS actions and initiatives in 2003 was complemented by a major, group-wide training and awareness campaign in environment, health and safety protection issues. By the end of 2004, over 600 operations management personnel will have participated in the three-day EHS training seminars; they will then communicate key messages and information to their teams.

Alcan Packaging also implemented improved performance tracking mechanisms in 2003 to identify areas of improvement and to ensure the accurate and timely measurement of progress in EHS performance. This includes an Intranet-based database that is updated with each plant's performance data at the beginning of each month. In addition, a systematic tracking of chemical substances in use on-site helps to eliminate any environmental or health issues.

A leading factor for employee EHS awareness in Packaging is the group's CLEAN program, in place since 1998. CLEAN contributes to a high operating standard at each facility and reflects the group's commitment to sustainability. In 2003, over 90% of all Packaging sites were certified CLEAN by the EHS audit team status – up from 50% in 2002.

Key *EHS FIRST* performance data

Indicator	Measurement unit	2002 (without VAW) 84 manufacturing plant–16,000 employees	2003 (including VAW, without Pechiney) 90 manufacturing plant–18,000 employees
Recordable Case Rate	Per 200,000 hours worked	5.18	3.15
Lost Time Due to Injuries and Illness	Per 200,000 hours worked	1.38	1.38
Energy Consumption	Million of kWh	1,879	2,628
Water Consumption	Million of m ³	3.1	3.4
Air Emissions (VOC Emissions)	Tonnes	11,045	25,177
Water Emissions		Not considered a key metric	
Minor Environmental Incident Rate		Not considered a key metric	
Waste – Non-hazardous	Tonnes	126,781	149,293'
Noise Exposure: environment > 90 dB(A)	Employees	1111	858

All the manufacturing facilities we acquire are required to comply with Alcan's *EHS FIRST* standards within a two-year timeframe, which will have a positive impact on future EHS performance.

Maximizing Value

The products of Alcan Packaging are, by their very nature, always used in conjunction with a customer's product and contribute to the well-being of society in a variety of ways:

- Effective barrier protection against gas, water and aromas
- Innovative security features
- Consumer protection such as child-resistant and tamper-proof
- Ease of use for seniors or the impaired
- Ease of labelling and brand identification
- Greater shelf life

Maximizing Value with Packaging

Maximizing Value at Alcan Packaging involves finding innovative solutions for customers, reducing the number of materials used in the package, developing the use of recyclable materials, enhancing product recyclability and conducting research and development of packaging products that meet the future needs of our customers and society. This includes minimizing the environmental impact of our packaging, reducing the packaging weight while maintaining performance, and identifying and eliminating, as much as possible, chemical components and additives that are potentially harmful.

N'CRYPT®

Alcan Packaging has worked diligently with partners on developing cost-effective security solutions that eliminate and/or reduce the social, economic and environmental costs associated with the growing problem of drug counterfeiting. Counterfeit drugs are said to represent between 5% - 8% of the global pharmaceutical market, valued at approximately \$450 billion in 2003.

Alcan Packaging's Global Pharmaceutical platform of anti-counterfeit solutions is grouped under the collective heading of N'CRYPT®. This includes technologies such as

fine line print features, special inks and taggants, along with encrypted codes and holograms, that enable our customers to apply both overt and covert solutions in a multi-layered, brand-enhancing manner. The application of N'CRYPT® technology to security packaging has a positive impact on both Alcan's sustainability, and that of our partners.

First and foremost, the security features target the elimination of health risk to consumers who may inadvertently ingest a tampered drug, an occurrence that has resulted in numerous cases of death and injury worldwide.

The presence of an Alcan Packaging security feature helps protect consumers and significantly hinders a counterfeiter's efforts to sell unapproved medications.

Secondly, through the application of N'CRYPT® and other security solutions, the pharmaceutical industry can recoup some of the estimated \$22.5 - \$36 billion in lost revenues due to counterfeit drugs. The successful application of Alcan's N'CRYPT® technology can further help reduce costs incurred by a pharmaceutical company for corporate security, product liability and risk management expenditures linked to the market presence of counterfeit drugs.

Alcan's timely recognition of this market problem and its concerted R&D development efforts since 1997 have positioned Alcan Packaging as the recognized technology leader in the global market. This is particularly relevant in the USA, where the Food and Drug Administration (FDA) has recently issued a report recommending multi-layered solutions to combat counterfeit drugs.

By the end of 2004, in addition to two sites in Europe, Alcan Packaging will have added two N'CRYPT® production sites in North America and China, each operating under a proven robust security process.



Plouhinec Chemical Risk Management

Chemical risk management has been a key issue for several years at the Plouhinec plant in France and has become a growing concern with the implementation of new processes such as varnishing.

The first action was to inventory the chemical products used in each sector (production, finishing, maintenance, etc.). Next, a database of the main information for each product was created (name, supplier, CAS numbers, classification, usage, etc.). This database was used to identify five to ten preparations containing specific substances (glycol ethers and CMRs), to analyze the hazard of these substances and to launch the replacement of undesirable chemical products.

At the same time, a special industrial waste disposal contractor was selected to implement an authorized disposal channel for hazardous waste.

Selective sorting of waste was implemented based on communication, posters and the installation of specific waste bins at collection points.

In addition, a new software tool has improved the product management system and allows for the analysis of substances by CAS number and provides updates on "expired" versions of safety data sheets. This new tool also provides up-to-date information on product health hazards (carcinogenic, mutagenic and reprotoxic characteristics).

Finally, an internal training program was launched about chemical risks for all employees occupying a workstation in regular contact with chemical products.

Continuous Improvement

Due to the evolving nature of the high-end packaging market, Alcan Packaging's manufacturing processes are also constantly changing – providing an opportunity for continuous improvement in our products and processes. In addition, Continuous Improvement projects support the efficiency of our management tools and systems, ensuring a sustainable future.

The Alcan Continuous Improvement initiative for Packaging is an important tool to assure customer satisfaction and to improve EHS, financial and process tools, and performance to satisfy all stakeholders.

With input from the business units, projects are prioritized according to value maximization potential and the relative impact on EHS. For example, a key CI project in 2003 resulted in improved reductions in packaging waste generated during the production process and it also increased recycling levels of used packaging. Furthermore, a new high performance laminate for packaging reduced the packaging weight by some 20%, impacting all three sustainability dimensions.

Senior-level communications related to sustainability began in 2003 with some 90% of the senior management team involved and extensive CI training. Sustainability is mainly assured during the Control phase of the CI process, which assures that standard operating procedures are developed and documented, people involved are trained, performance is tracked and future improvement options are identified. Continuous Improvement projects are gathered in a Web-based tracking tool, for follow-up of projects and learning sharing as well as input for best practices.

Optimizing Water at Dijon



A noise reduction program has been underway for the past few years in Alcan Packaging's Global Tobacco Sector's printing operations. The objective is to significantly reduce noise exposure levels, by 15-20%, to create a safer and more sustainable environment for our employees. On average, noise exposure has been reduced to 80 dBA or less across all Alcan's tobacco packaging sites.

Alcan Packaging uses water in its manufacturing processes. Aware of the need to help conserve water resources, some of our sites have decided voluntarily to seek the means to optimize their consumption. Such is the case in Dijon, France, where our plant uses more than 100,000 m³ of water per year, mainly from the ground.

Tobacco Noise Reduction program



Research and Development

Research and Development efforts at Alcan Packaging continue to produce innovative product solutions and improved processes that have resulted in enhanced economic, environmental and social benefits.

Significant R&D efforts aimed at eliminating solvents in printing, laminating and lacquering have not only reduced volatile organic compounds, but have also reduced the energy needed to dry and cure these coatings. From an economic perspective, these new technologies and processes will require a reduced capital investment for plant infrastructure and also greatly reduce the risk of fire or explosion.

Other R&D projects initiated in 2003 include cost-effective "on-demand" printing technology to produce limited customized orders with the added benefit of reducing waste at all levels. R&D efforts also continued at the plant and lab level to reduce our raw material consumption in areas such as layer reductions in retort pouches and thinner cans and trays.

Energy Use and Emissions Reduction

The constant adaptation of production line processes to meet customer needs, in conjunction with *EHS FIRST* and the strict discipline of the Alcan Integrated Management System, enabled Alcan Packaging to reduce the environmental impact of its processes in 2003.

Alcan Packaging represents 3.5% of Alcan's total greenhouse gas emissions and, as a result of the Company's effort to reduce greenhouse gas emissions (TARGET), energy efficiency is taken into account with any new investment.

Special attention is also paid to VOC (volatile organic compound) emissions by controlling escaped emissions of solvents and by treating solvent-permeated air before discharging it. In 2003, Alcan Packaging developed more efficient processes to reduce solvent consumption by lowering the solvent content in adhesives and inks and by switching to vegetable-based inks in certain cases. These developments compensate for the production increase of three sites, which had no VOC abatement in 2003. When VAW is included, VOC emissions totaled 26,077 tonnes in 2003, 54% of which was contributed by VAW.

Sustainability Examples

The following additional examples of our sustainable approach at Alcan Packaging can be found in their entirety in the online version of the Alcan Corporate Sustainability Report.

At our Pharmaceutical and Personal Care packaging plant in Youngsville, North Carolina (US), a CLEAN audit in early 2004 confirmed that the highest standards were in place for the plant's work environment. This reflects positively on the motivation, job satisfaction and performance of employees, which helps us to meet the needs of our customers.

CLEAN in Youngsville



CERAMIS® Technology



Our environmental footprint has been further reduced with new developments based on our CERAMIS® technology. This transparent ceramic-based packaging barrier that was featured in the 2002 Alcan Corporate Sustainability Report has recently been extended to other types of materials and applications.

Safety for Students in Brazil

A community initiative at Packaging's Cebal do Brazil facility promoted safety to a group of secondary school students. Organized by the Cebal safety leader with the participation of the entire Human Resource team, several safety workshops were presented to 700 students and teachers from a public secondary school close to the plant in Brazil.



Arras Industrial Waste Control

In 2003, an investment of 150,000 euros at Alcan Packaging's Arras plant in France resulted in a new covered shed to store and protect special industrial wastes (SIW). These wastes are dangerous and can impact the environment if accidentally released.



Program for Disabled Workers in France

At Cebal Packaging in France, an initial "Protected Workshop" (employing disabled workers) was opened five years ago with stakeholder and community support to finance the buildings and create a community organization known as Argonne Production, with the mission to help the disabled. The relationship between Cebal Packaging and Argonne Production expanded in 2003, with the start-up of a filling line for plastic tubes supplied by COTUPLAST, a Cebal subsidiary.

Glossary

Bauxite Residue

Also known as “red mud”, this is a slightly alkaline residual slurry following the extraction of alumina in the Bayer process. The residue contains mostly iron and silicon compounds left over from the bauxite.

CI

Alcan’s Continuous Improvement initiative.

CLEAN

An internally audited initiative in our Packaging group to ensure that high operating standards are maintained in all facilities.

CO₂ Equivalent

The integration of all greenhouse gases based on their global warming potential relative to carbon dioxide emissions.

Dross

An aluminum-laden scum that forms on top of molten aluminum.

Effluent

Generally applies to liquid waste discharged as a result of manufacturing operations.

EMAS

European Eco-Management and Auditing Scheme.

Greenhouse Gas (GHG)

Carbon dioxide (CO₂) and other emissions that are believed to contribute to global warming, also known as climate change.

GRI

The Global Reporting Initiative is a multi-stakeholder group focussed on developing and disseminating globally applicable sustainability reporting guidelines.

ISO

International Organization for Standardization.

LCA

Life Cycle Assessments are part of the Product Stewardship process to track the life cycle impact of our products.

LCLL

The Low Caustic Leaching and Liming process developed by Alcan researchers as a means to treat spent potlining.

LME

London Metal Exchange.

NGO

Non-governmental organization stakeholders.

OCNC

Ongoing Cases of Non-Compliance is an inventory of outstanding environmental issues in our business groups.

OECD

Organization for Economic Development and Cooperation.

OHSAS

Occupational Health and Safety Assessment Series.

PAH

Polycyclic Aromatic Hydrocarbons (PAHs) are environmental contaminants that are primarily derived from the incomplete combustion of any organic material, including fossil or synthetic fuels. In the aluminum industry, PAHs are generated in smelters using older Söderberg technology. PAHs are also generated by forest fires, wood heating and incineration.

PFC

Perfluorocarbons (PFCs) include CF₄ and C₂F₆ gases that have a very high CO₂ equivalency and constitute major contributors to greenhouse gas emissions. PFCs generally occur as a result of anode effects in smelting operations.

Pitch

One of the materials from which anodes and cathodes are made. Both an anode and cathode are used in the electrolytic process to make aluminum. Pitch contains high levels of PAHs.

Prebake

Prebaked technology applies to modern anodes used in the smelting process that are “pre-baked” as opposed to being baked during the reduction process as with older Söderberg technology. PAHs are captured in the anode-baking furnace during the baking process.

Red Mud

See bauxite residue.

Scrubber

A device used to treat dust and gas fumes. Dry scrubbers use adsorbents to eliminate certain contaminants, while wet scrubbers treat dust and gas fumes through contact with a liquid.

Söderberg

Reduction cell technology used in the smelting process where the anode is made of a block of paste that bakes as it approaches the reaction zone in the cell.

Spent Potlining

This is the residue lining, made up of bricks and carbon, inside the pots used in aluminum smelting. When the lining deteriorates to the point of being replaced, the material becomes spent potlining (SPL).

UBC

Used (aluminum) Beverage Containers.

United Nation’s Global Compact

This is a voluntary international initiative launched by the United Nations in 1999 that promotes the development of a more sustainable and inclusive global economy.

VAMS

Value Added Manufacturing System.

VOC

Volatile organic compound.

WBCSD

World Business Council for Sustainable Development.

WEF

World Economic Forum.

GRI Index

GRI reference	Content	Pages
Vision and strategy		
1.1	Sustainable development vision and strategy	2-3,6-20,22,33,40,49,56,62,67
1.2	Chief executive statement	2-3,6,14-17,21-30
Profile		
2.1-2.10	Organizational profile	1,4-5,14-16
2.11-2.22	Report scope	1-5
Governance structure		
3.1-3.7	Structure and governance	17-20,24-30
3.9-3.12	Stakeholder engagement	14-16
3.13-3.20	Policies and management systems	4-5,10,13-16,18-20,24-30,34,40-41,50-51,56,62,68
4.1	GRI index	74
Economic performance indicators		
EC1	Customers	23
EC6-EC7	Providers of capital	23
EC10	Public sector	22,30
EC13	Indirect economic impacts	23
Environmental performance indicators		
EN2	Materials	51,57
EN3-EN4,EN17-EN18	Energy	9,28-29,34,37,40-41,45,50-51,53,55-56,58,62,65,68,71
EN5,EN20	Water	11-12,28-29,34,40-41,45,50-51,53,56,62,68,70
EN7,EN25	Biodiversity	11-12
EN8,EN10-EN11,EN30-EN31	Emissions, effluents and waste	10,25-27,34,40-41,50-51,56,62,68
EN14-EN15	Products and services	7-13,51,57
EN35	Overall	24-30
Social performance indicators		
Labour practices and decent work		
LA1,LA4,LA12	Employment	4-5,14,23
LA7-LA8	Health and safety	29-30,45
LA16-LA17	Training and education	4,14
Human rights		
HR1,HR3	Strategy and management	15-17
HR4	Non-discrimination	See Code of Conduct at www.alcan.com
HR5	Freedom of association and collective bargaining	15
HR6	Child labour	15
HR7,HR10	Forced and compulsory labour	15-17
HR12-HR13	Indigenous rights	11-12,45
Society		
SO1,SO4	Community	11-12,14-15,22,36-37,45,59,65
SO2	Bribery and corruption	17
SO3,SO7	Political contributions	17, see Code of Conduct at www.alcan.com
Product responsibility		
PR1	Customer health and safety	13,69

Tell Us What You Think

Thank you for having taken the time to read Alcan's Corporate Sustainability Report. We would be pleased to receive your feedback.

1. How much of the report did you read? All The majority Some

2. Overall, how do you rate the report? Not at all informative/useful 1 2 3 4 5 Extremely informative/useful

3. Please rate the report on the following criteria by circling the number that best corresponds for each:

	Poor	Unsatisfactory	Good	Very good	Excellent
Substance/Content	1	2	3	4	5
Credibility	1	2	3	4	5
Readability/Understanding	1	2	3	4	5
Completeness	1	2	3	4	5
Appearance/Format	1	2	3	4	5

4. What is your opinion on the following sections? Check all that apply.

	Clear	Useful	Interesting
Section 1: CEO Message	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Company Profile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worldwide Presence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 2: Value Creation and Protection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Key Alcan Sustainability Issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Engaging and Partnering with Stakeholders	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 3: Managing for Sustainability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 4: Performance Report – Alcan Inc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Section 4: Performance Reports – Business Groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. As a result of reading the report, do you have a clear and sufficient understanding about Alcan's approach to corporate sustainability?

	Yes	No
Program	<input type="checkbox"/>	<input type="checkbox"/>
Policies	<input type="checkbox"/>	<input type="checkbox"/>
Performance	<input type="checkbox"/>	<input type="checkbox"/>

6. What additional information would you like to see in future reports?

7. All comments are welcome.

8. Are you?

- An Alcan Employee An Alcan Shareholder An Alcan Customer An Alcan Supplier
 A member of: the Community the Government an NGO Academia
 Other (please specify) _____

9. Do you wish to have more information about sustainability at Alcan? If so:

Visit Alcan's Website at www.alcan.com for relevant updates

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