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#### THE ROBERT W. CAMPBELL AWARD

The International Award for Business Excellence through Environmental, Health and Safety Management

### Paving the Way for World Class Performance

Submitted by:

Alcan Inc.

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## ALCAN: CREATING MAXIMUM SUSTAINABLE VALUE

Founded in 1902, Alcan is one of the globe's leading suppliers of bauxite, alumina and aluminum, and a top-ranked provider of engineered and packaging materials. Each of Alcan's four business groups holds predominant market positions in the Americas, Europe and Asia. With some 65,000 employees and its head office in Canada, Alcan is a public company with 2005 revenues of US\$20.3 billion.

Maximizing Value is Alcan's governing objective.

AIMS, the Alcan Integrated Management System, is an enabler of value maximization. AIMS is composed of four pillars: Value-Based Management (VBM), EHS FIRST (Alcan's Environment, Health and Management System), Continuous Improvement (CI) and Our People Advantage.

AIMS is a key competitive differentiator as well as a powerful driver of integration. Recent acquisitions have provided Alcan with the opportunity to increase its EHS knowledge and integrate best practices from external sources. *EHS FIRST* rallies Alcan employees everywhere around common EHS objectives and goals, and paves the way for world-class EHS performance by applying the same high standards across the board.

#### **LEADERSHIP**

Management's commitment and leadership drive efforts to achieve the Company's EHS vision: "to be a recognized leader of environment, health and safety excellence in everything we do and everywhere we operate." Alcan's corporate values and newly updated EHS FIRST Policy support this vision and anchor the Company's EHS FIRST system.

Alcan's senior management team are visible and active EHS leaders and champions at work and in the community. They demonstrate a drive to continually improve EHS performance and allocate sufficient resources to train employees in *EHS FIRST*. Between 2003 and 2005, 13,000 Alcan employees participated in the *EHS FIRST* Leadership Competency Program.

# EHS FIRST: ALCAN'S EHS MANAGEMENT SYSTEM

EHS FIRST is more than a system — it represents an attitude, a mindset and an acceptance of responsibility and accountability to achieve world-class EHS performance at every Alcan facility. World-class performance means attaining zero EHS-related incidents/injuries by promoting and protecting the environment and the health and safety of employees and communities where Alcan operates. It also includes contributing to a better world by playing a leadership role in diverse EHS- and sustainability-related organizations.



EHS FIRST integrates best practices from Alcan and third parties, as well as ISO 14001 and OHSAS 18001 specifications, and spells out the Company's key EHS requirements, roles and responsibilities. Whenever possible, employees are expected to go beyond compliance with these minimum standards.

The four cornerstones of Alcan's *EHS FIRST* system are: 1) management commitment and leadership, 2) line ownership and meaningful employee involvement, 3) an aware, trained and committed workforce, and 4) effective two-way communication (including knowledge growth and best-practice sharing).

New facilities must be fully compliant with *EHS FIRST* within two years of their acquisition or start-up. The *EHS FIRST* manual outlines the key requirements or directives to be implemented at each site. Regular monitoring, measuring and auditing of EHS performance using both leading and lagging indicators are key drivers of success along Alcan's journey of continual EHS improvement.

#### THE EHS FIRST IT SUITE

EHS FIRST incorporates a constantly evolving suite of IT tools for measuring, analyzing and sharing information on EHS performance. These tools allow

information to be shared both vertically and horizontally, permitting sites to compare their performance with peers. The suite serves as the auditable data source for many of the *EHS FIRST* reports. It enables Alcan to readily analyze trends, develop programs to reduce risk, identify key performance indicators and share best practices.

#### EHS RESULTS: CONTINUOUS IMPROVEMENT

Alcan continues to reduce its major EHS risks and improve its performance on key EHS metrics. For a total direct implementation investment of US\$36 million, the *EHS FIRST* system has, to date, delivered a minimum of US\$43 million in benefits, predominantly from safety. The estimated value at stake for environmental and health issues is more than US\$1 billion.

Between 2001 and 2005, Alcan reduced its greenhouse gas emissions by 3.5 million tonnes, perfluorocarbon emissions by 21%, polycyclic aromatic hydrocarbons by 40%, energy used for smelting by 6%, Recordable Case Rate by 70% and Lost-Time Injury/Illness Rate by 68%, as well as achieved 100% ISO 14001/OHSAS 18001 certification of its facilities. Alcan's advanced AP (Aluminium Pechiney) technology is the industry's benchmark in several areas including energy efficiency.



In 2005, 11 new directives were added to *EHS FIRST* to address business group-specific risks. Alcan has experienced a steady decline in fatalities since the introduction of *EHS FIRST*. In 2005, the Company had zero Alcan Injury and Illness Record-keeping System (AIRS) fatalities. Fatalities now trigger company-wide call to actions, including one for mobile equipment/pedestrian safety, working atheight and contractor management.

### LINKAGE BETWEEN EHS AND BUSINESS PERFORMANCE

Alcan knows that it cannot generate maximum sustainable value without being a world-class EHS performer. EHS FIRST is embedded in Alcan's business processes and culture, and is a fundamental component of all strategic planning and decision-making. The synergy and integration between the pillars of AIMS enable Alcan's business management system to generate maximum long-term value.

The Company's goal is not simply to achieve zero, but rather to create sustainable EHS value wherever it operates. *EHS FIRST* has improved productivity by reducing employee absenteeism, streamlining processes and enhancing systems.

#### **CONCLUSION**

The business case for *EHS FIRST* is both compelling and sound. *EHS FIRST* delivers tangible value through reduced accidents, occupational illnesses, environmental incidents, liabilities and insurance premiums. It also lowers overall costs through its focus on excellence and continual improvement, as well as on problemsolving, quality and stakeholder engagement.

Alcan is currently finalizing a strategic plan for the next five years of its *EHS FIRST* journey. This strategic plan will raise the bar, once again, building on lessons learned in the past to deliver world-class EHS performance in the future.

EHS FIRST has proven to be a powerful competitive differentiator and a driver of leadership, integration, engagement and consensus at Alcan sites worldwide. Simply put, EHS FIRST is making Alcan a better employer, investment, neighbour and corporate citizen worldwide.











### **Business Profile**

### ALCAN: CREATING MAXIMUM SUSTAINABLE VALUE

Founded in 1902, Alcan (ISIC 1099, 3341, 3353, 3354, 3355, 7389, 9999, 7495, 2520) is one of the globe's leading suppliers of bauxite, alumina and aluminum, and a top-ranked provider of engineered and packaging materials. Each of Alcan's four business groups holds predominant market positions in the Americas, Europe and Asia.

**Bauxite and Alumina** — Alcan ranks among the globe's top three producers of bauxite and alumina with worldwide activities related to mining and refining bauxite into smelter-grade and specialty aluminas.

**Primary Metal** — Alcan is one of the world's two largest primary aluminum producers with smelters, power facilities, technology and equipment sales centres and engineering operations around the globe.

**Engineered Products** — Alcan Engineered Products provides world-leading fabricated and semi-fabricated lightweight aluminum and composite solutions for the aerospace, mass transportation, automotive and other diverse industries.

**Packaging** — Alcan Packaging ranks among the world's top value-added packaging organizations, with multi-material food, pharmaceutical and medical, beauty and personal care, and tobacco packaging businesses around the globe.

Maximizing Value is Alcan's governing objective. AIMS, the Alcan Integrated Management System, is an enabler of value maximization. It provides a sustainable business model for achieving this objective and ensures all businesses share the same priorities. These priorities are reflected in the four pillars of AIMS: Value-Based Management (VBM), EHS FIRST, Continuous Improvement (CI) and Our People Advantage.

Today, Alcan has some 65,000 employees and approximately 430 facilities, offices and R&D centres in 59 countries and regions. With its head office in Montreal, Canada, Alcan is a public company traded on the Toronto, New York, London, Paris and Swiss stock exchanges with 2005 revenues of \$20.3 billion.

#### ALCAN'S BUSINESS AND EHS CHALLENGES

The diversity of Alcan's activities creates challenges, including different business paradigms, drivers and performance metrics, as well as opportunities, such as leveraging knowledge and best practices between business groups to accelerate sustainable companywide growth. The Company's upstream businesses (Bauxite and Alumina, Primary Metal) and downstream activities (Engineered Products, Packaging) also share many of the same challenges, including access to quality, competitively priced raw materials.









Operating worldwide in both well-established and emerging markets generates its own distinct business challenges, such as language and cultural barriers, political instability, corruption and transparency issues, poverty, disease and human rights violations.

AIMS and EHS FIRST have proven to be key competitive differentiators as well as powerful drivers of integration for Alcan around the world.

The Company has expanded rapidly in recent years, driven by the acquisition of Switzerland-based alusuisse in 2000 and Paris-based Pechiney in 2003. These acquisitions underscored the need for an integrated company-wide management system in all areas, including environment, health and safety (EHS). They also provided Alcan with the opportunity to increase its EHS knowledge and integrate best practices from external sources.

EHS FIRST serves as a unifying force, instilling a proactive, solution-oriented approach to all types of challenges, and rallying Alcan employees everywhere around common EHS objectives and goals. It paves the way for world-class EHS performance by applying the same high standards across the board, regardless of how little local law or regulation may demand. Alcan is also transferring its high EHS standards to other countries where, historically, EHS excellence in the workplace has not been a priority.

### Leadership

"Leadership is the art of inspiring people to surpass what even they believe is possible."

Alcan EHS FIRST Manual

#### **ORGANIZATIONAL LEADERSHIP**

Alcan seeks to build consensus and create passionate and effective leaders at every level of the organization, right down to the shop floor. Effective leadership begins with a commitment to the Company's values of integrity, accountability, trust, transparency and teamwork. It is underpinned by a clear vision to which Alcan's Board of Directors and Executive Committee are actively committed. These committed leaders are responsible for motivating their direct reports to become passionate champions of this vision, who in turn cascade this vision throughout the organization.

EHS FIRST provides an excellent example of Alcan's leadership principles in action. As one of the four cornerstones of EHS FIRST, "management commitment and leadership" drives efforts to achieve

the Company's EHS vision — "to be a recognized leader of environment, health and safety excellence in everything we do and everywhere we operate."

Alcan's corporate values and newly updated EHS FIRST Policy support this vision and anchor the Company's EHS FIRST system.







Alcan's commitment to EHS is reflected in the Company's organizational structure, including the Board of Directors' EHS Committee, the EHS FIRST Council and the vice president of EHS FIRST/
Sustainability who reports directly to the president and CEO. The EHS FIRST Council is replicated at the business group level through an EHS Management Steering Team. Alcan's EHS Committee reports directly to the full Board, and serves to build consensus and commitment to EHS objectives and goals at the highest level of the organization.

#### **CORPORATE CITIZENSHIP**

Alcan seeks to be the best at everything it does, which includes creating sustainable economic, social and environmental value everywhere it operates.

Alcan's corporate values, along with its *Worldwide*Code of Employee and Business Conduct, guide
employees in their dealings with fellow employees,
customers, suppliers and other stakeholders at global,
national, regional and local levels.

In 2003, Alcan officially adopted sustainability as the platform for its Community Investment Program, focusing on projects that contribute to the economic, social and environmental well-being of communities or specific stakeholders. In January 2004, the Company launched the Alcan Prize for Sustainability,

an annual US\$1 million award to recognize outstanding contributions to the cause of global sustainability by not-for-profit, nongovernmental or civil society organizations (see Appendix 1.1).

In EHS, Alcan's corporate citizenship takes many forms, including partnering with the Gladstone City Council in Australia to use the city's treated effluent for the final wash process in alumina refining; operating a fully functional hospital and clinic in Awaso, Ghana for employees, their families and the surrounding community; ensuring the responsible closure of facilities that enable economic diversification in Europe and Canada; and providing HIV/AIDS education and treatment to employees, their families and the surrounding community in Edea, Cameroon. (see Appendix 4.5) These are but a few of the ways Alcan strives to stimulate long-term economic, environmental and social development.

# LEADERSHIP'S ACTIVE AND VISIBLE COMMITMENT TO EHS

Driven by the vision and commitment of then-president and CEO Travis Engen, Alcan took the first steps toward a more concerted and systematic approach to EHS management in 2001. At the rollout of *EHS FIRST* in 2003, Mr. Engen and his









senior management team signed a formal commitment to make EHS an integral part of every job, program and process, to fulfill their EHS obligations, and to be passionate EHS believers and leaders by visibly and actively promoting and driving EHS excellence at work and in the community.

This top-level commitment continues today with Alcan's current president and CEO Richard Evans, one of the original sponsors of EHS FIRST. One of Mr. Evans' first acts as new CEO was to update the Company's EHS Policy, making it more meaningful to employees at every level of the Company.

EHS FIRST leadership competency is integrated into Alcan's Individual Performance and Career Management (IPCM) process. Each professional employee has a formal evaluation at least once a year and is given specific EHS FIRST objectives. Employees' compensation and recognition are partially based on their EHS performance.

"Walking the EHS FIRST talk" means demonstrating higher levels of EHS performance. It means allocating sufficient resources to train employees in EHS FIRST and reinforcing the fact that "no job is so urgent that it can't be done safely and with minimal impact on the environment" and that "prevention is the highest value alternative."

Other examples of Alcan's leadership are senior management's participation in Management Safety Observation Tours (MSOTs) and Hierarchical Safety Inspections (HSIs). In 2004, Alcan's senior management also spearheaded a mobile equipment/pedestrian safety initiative that not only reduced this major risk throughout the Company but also served to streamline processes and improve productivity. Finally, Alcan's senior management requires that all meetings begin with a discussion of EHS FIRST.

### QUALITY OF LABOUR/ MANAGEMENT RELATIONS

Alcan is a member of the UN Global Compact and a supporter of the Global Compact's principles in the areas of human rights and labour. Unions actively participated in the launch and implementation of EHS FIRST, viewing this comprehensive initiative as an effective means of protecting and promoting employee health and safety.

As a fundamental component of employment, each Alcan employee is bound to comply with the Company's Worldwide Code of Employee and Business Conduct, and to actively support the EHS FIRST Policy by adhering to its guiding principles. The Code clearly spells out the responsibility of all employees to promptly report any EHS incidents. An Office of the Ombudsman was created as an independent mechanism for employees to raise EHS concerns.











# EHS FIRST Management System

# AN OVERVIEW OF ALCAN'S EHS MANAGEMENT SYSTEM

A core component of AIMS, *EHS FIRST* ensures that EHS performance is a top priority at all levels of the Company, from corporate offices to the shop floor. *EHS FIRST* is more than a system — it represents an attitude, a mindset and an acceptance of responsibility and accountability to achieve world-class EHS performance at every Alcan facility.

The launch of *EHS FIRST* signalled a significant shift in Alcan's corporate culture as the entire Company committed to a vision of EHS excellence. *EHS FIRST* establishes a common foundation for achieving this vision at all sites. It integrates best practices from Alcan and third parties, as well as ISO 14001 and OHSAS 18001 specifications, and spells out the Company's key EHS requirements, roles and responsibilities.

EHS FIRST is the key to ensuring Alcan reaches its company-wide objective of zero EHS-related incidents. At the facility level, the system enables the consistent application of Alcan's EHS standards and provides shared tools, integrating CI techniques to help the Company achieve its ambitious objectives. EHS FIRST also motivates and empowers people

to generate innovative ideas for reducing the Company's environmental footprint and enhancing the well-being of its employees and communities.

The EHS FIRST model (see Appendix 2.4) identifies the four cornerstones required for the system's successful implementation. The model spirals upwards using Deming's Plan-Do-Check-Act methodology to achieve continual improvement and, ultimately, Alcan's vision of EHS excellence.

# MANAGEMENT AND LEADERSHIP COMMITMENT

One of the four cornerstones of *EHS FIRST*, "management commitment and leadership" is essential to achieving a series of EHS step changes at every level of the organization.

### Management's Responsibility for Leading EHS Improvement Process

While skills and expertise are important, committed action is a fundamental component of success. When managers lead by example, others are sure to follow. In a "Note from Travis" announcing the launch of EHS FIRST, Travis Engen wrote: "Line management is clearly in the driver's seat with EHS professionals assisting from the navigator's seat, but no one is 'just along for the ride' — all of us must be engaged."









"Line ownership and meaningful employee involvement" is the second cornerstone of *EHS FIRST*. Line management is responsible for *EHS FIRST* at the site level. Site managers are expected to take the lead and spearhead major step changes in EHS performance at their facilities. Line managers are expected to "own" the process of continual EHS improvement and to enable their employees to play a meaningful and active role in the process. An *EHS FIRST* Management Steering Team helps guide this process within each business group.

At Alcan, managers are accountable for making sure that everyone in their workplace shares:

- The authority and autonomy to make proactive
   EHS decisions and to act on them in his/her dayto-day work environment;
- The knowledge of EHS procedures, processes, work practices and potential hazards;
- The rewards associated with continual improvement in EHS.

#### **A Clearly Stated EHS Policy**

Alcan rolled out its original EHS Policy in early 2002, which was subsequently updated in April 2006 based on feedback from Alcan executives, as well as an external benchmarking exercise with peer companies. This policy reflects the Company's commitment to adhere to the highest standards in EHS. As

with all Alcan policies, the *EHS FIRST* Policy shapes Alcan's corporate culture, establishes expectations, sets standards, clarifies responsibility, and points employees in the right direction as they transform policy into action (see Appendix 2.2).

#### **Defined EHS Goals and Objectives**

Alcan's overriding objective is to be a recognized leader of EHS excellence. Excellence is defined as achieving zero EHS-related incidents/injuries by promoting and protecting the environment and the health and safety of employees and communities where the Company operates. To achieve world-class EHS performance, Alcan regularly exceeds the requirements of local, regional and national governments around the globe. EHS excellence also includes contributing to a better world by playing a leadership role in diverse EHS- and sustainability-related organizations.

Alcan imposes stringent requirements on its businesses. New facilities must be fully compliant with *EHS FIRST* within two years of their acquisition or start-up. The *EHS FIRST* manual outlines the key requirements or directives to be implemented at each site to ensure continual EHS improvement. Alcan's environmental requirements are outlined









in directives on Greenhouse Gas Management,
Resource Management, Soil and Groundwater
Management, Environmental Releases Management,
Waste Management and Spill Containment
and Countermeasures.

Requirements in occupational health are specified in directives on Health Management, Hearing Conservation and Respiratory Protection. Safety performance objectives are spelled out in directives regarding Hazardous Energy Control, Confined Space Entry, Lifting Equipment, Mobile Equipment/ Pedestrian Safety, Machine Safeguarding, Molten Metal Explosion Prevention, Fall Protection/Working at Height and Hot Work. Directives also exist for Emergency Preparedness and Response, Crisis Management and Fire Loss Prevention, and Legal Investigations and Inspections (see Appendix 2.4).

#### **EHS Performance Measurement System**

At the heart of *EHS FIRST* is an intranet-based Performance Data Management (PDM) System, which standardizes data gathering and reporting at all levels of the organization and at each facility. Alcan launched this centralized company-wide EHS data tracking and reporting system in 2004, building on existing pockets of excellence throughout the

Company. PDM provides Alcan with a company-wide *EHS FIRST* database for analyzing information both vertically and across business groups.

#### **Visible Senior Management Participation**

Alcan's CEO and business group presidents regularly visit sites to discuss *EHS FIRST* issues and progress.

In 2005, there was a marked increase in the participation of senior management in serious event communications, follow-up and other *EHS FIRST* activities.

As an example, the involvement of the Engineered Products' president in *EHS FIRST* Day motivated employees to identify more than 1,000 improvement opportunities.

# Appropriate EHS Training, Authority and Accountability for Managers and Supervisors

An "aware, trained and committed workforce" is the third cornerstone of the *EHS FIRST* system. Between 2003 and 2005, 13,000 Alcan employees participated in a three-pronged Leadership Competency Program composed of Strategic Leadership Training, Site Leadership Training and Strategic Partner Training.

Through these training modules, Alcan managers and supervisors are empowered to embrace and manage change, and to assume full responsibility and accountability for their role in building a strong









and proactive *EHS FIRST* culture at Alcan. Site managers are responsible for assessing their site's training needs and for ensuring employees are adequately trained to drive EHS excellence. Continual coaching, learning and development opportunities are incorporated into the overall *EHS FIRST* Leadership Competency Program.

# **Sufficient Resources for Achievement of Program Objectives**

To date, Alcan has invested US\$36 million to develop implement and maintain its *EHS FIRST* system.

This includes *EHS FIRST* manual development and deployment, the Leadership Competency Program, ISO 14001/OHSAS 18001 implementation guides and certifications, the *EHS FIRST* IT Suite and, among other tools, diverse videos.

As the system evolves, EHS resources continue to grow at all levels of the organization. These resources include the corporate *EHS FIRST* team, the *EHS FIRST* Council, *EHS FIRST* Management Steering Teams and EHS specialists at most sites.

#### **Periodic System Reviews**

Regular assessments of each site's EHS performance are essential to achieving world-class EHS performance. Every Alcan site is required to review and audit its EHS management programs at least once every three years for completeness, applicability, effectiveness and efficiency. Non-conformances must be investigated, an action plan developed and corrective action taken.

The results of these audits are cascaded up to business unit and business group management, and ultimately to the senior management at Alcan Inc. The "learnings" captured from this audit data are being used to help develop a strategic plan for the next five years of *EHS FIRST* at Alcan.

These periodic reviews serve to continually improve the *EHS FIRST* system, with new directives being added and existing ones being modified. For example, Alcan's Mobile Equipment Directive has now evolved into a more proactive and comprehensive Pedestrian Safety Directive.

# EHS Performance Recognized as Key Indicator of Organizational Excellence

The importance of EHS performance as a key indicator of excellence at Alcan is reflected in the fact that *EHS FIRST* constitutes a core component of AIMS.

Alcan knows that it cannot generate maximum sus tainable value without being a world-class EHS

performer. Progress in EHS and sustainability, which are intrinsically linked, is communicated to external stakeholders in the Alcan's annual Sustainability Report available on the Company's website (see Appendix 4.1).











## ORGANIZATIONAL COMMUNICATIONS AND SYSTEM DOCUMENTATION

"Effective two-way communication", the fourth cornerstone of *EHS FIRST*, is essential to fostering a learning culture at Alcan. It enables employees to develop their skills, transfer knowledge and share best practices. *EHS FIRST* requires all site managers to develop, implement and maintain a focused communications program that ensures ongoing employee consultation and involvement. A brief review of the communication effort surrounding *EHS FIRST* underscores the importance of this crucial cornerstone.

The seeds of *EHS FIRST* were planted during a global EHS call-to-action process that included focus groups and feedback from each site. *EHS FIRST* was officially launched by the CEO during his management call. An internal communication was simultaneously sent to Alcan's senior managers and communicators, incorporating various rollout materials and links. A company-wide "Note from Travis" on the new EHS Management System was also issued, along with articles in *Alcan World*, the Company's internal magazine, and in *Spotlight* on the corporate intranet.

Personalized *EHS FIRST* manuals were distributed to all Alcan site managers, line managers and EHS specialists. The manual is printed in English and

French, with an electronic version also available in several other languages. A "toolkit" accompanies the manual and includes videos, a detailed communication plan and other support materials. Posters of the *EHS FIRST* model and the statement of commitment signed by Alcan's senior management were also distributed.

Call-to-action workshops were held with line managers and EHS specialists to discuss the *EHS FIRST* business case, implementation and next steps. Finally, training workshops helped secure buy-in and develop *EHS FIRST* leadership skills.

The success of this ongoing communication effort is reflected in the 2005 Global Employee Survey results shown below:

	2002	2005
Employees with positive		
responses to EHS-related		
questions	69%	84%
Ability to discuss		
AIMS and its components		
Senior management	62%	90%
Mid-management	50%	90%
Shop floor	50%	75%



### ASSESSMENT, AUDITS, EVALUATIONS AND CONTINUOUS IMPROVEMENT

Regular monitoring and measuring of EHS performance helps ensure effective controls, quantify improvement, conduct benchmarking and report on Alcan's *EHS FIRST* performance both internally and externally. Sites are expected to track qualitative and quantitative measures, targeted EHS objectives, as well as proactive and reactive measures of their performance.

Site managers are also responsible for defining, classifying and reporting EHS events according to the Alcan Injury and Illness Record-keeping System (AIRS) Directive and the Classification and Notification of EHS Events Directive. Data collected at the company-wide, business group, business unit and site level is fed into Alcan's intranet-based EHS Performance Data Management System. A number of CI tools are employed to classify, investigate and analyze EHS events and near-misses. Based on this analysis, preventive and corrective actions are implemented to eliminate any non-conformance, minimize risk and improve performance.

Alcan also conducts regular formal audits to support continual learning, improvement and sharing of best practices, as well as to meet corporate due diligence requirements. Each business group has a written

EHS audit program that conforms to the Alcan EHS Auditing Directive. Site managers are expected to develop and implement action plans to address audit findings, while business group management reviews actions plans and their progress.

In addition to the audit program, each business group must conduct and report on an EHS Management Review at least once a year. Another *EHS FIRST* system requirement that drives continual improvement is the EHS Annual Assessment, which must be completed by all sites and address key performance indicators/metrics.

## HAZARD RECOGNITION, EVALUATION AND CONTROL

All Alcan facilities are expected to establish and maintain procedures to continuously identify the environmental aspects and health and safety hazards associated with their activities and, where appropriate, their products and services. Aspect and hazard identification and risk determination methodologies, as defined in the ISO 14001 and OHSAS 18001 guidelines, are used to evaluate the degree of risk and the required control measures. The result is a comprehensive HIRARC and environmental aspect









inventory for each site. Risk and impact control measures are based on the following hierarchy of controls: elimination or substitution at source, engineering, administrative, training and protective devices.

In 2005, Alcan undertook several global initiatives to systematically identify and reduce significant EHS risks:

- Launching a comprehensive system to identify the root causes of serious injuries to reduce their frequency and severity;
- Rolling out a Medical Preparedness and Crisis
   Plan for the whole Company in response to the
   global threat of an Avian Flu pandemic;
- Continuing to focus on climate change, which enabled Alcan to further reduce its emissions footprint;
- Mapping and categorization of all significant risks based on the organization's ability or maturity to manage them.

#### WORKPLACE DESIGN AND ENGINEERING

In Alcan's hierarchy of controls, engineering and workplace design are the second best option for managing identified risks. The Alcan Primary Metal Group recently implemented a new directive to involve EHS specialists in the design, planning and execution of all engineering activities.

An excellent example of workplace design and engineering serving to substantially reduce significant risks is the recent pedestrian safety call to action at Alcan. Pedestrian walkways and barriers were installed in areas of high-potential risk, as well as visual aids to reduce blind spots for both pedestrians and mobile equipment drivers. A radio technology device was also developed to alert pedestrians and drivers in close proximity to each other.

#### **OPERATIONAL EHS PROGRAMS**

EHS FIRST directives and the requirements stipulated in the EHS programs constitute the minimum EHS standards accepted at Alcan. These standards never fall below regulatory requirements and exceed the requirements of ISO 14001 and OHSAS 18001.

Whenever possible, employees are expected to go beyond compliance with these minimum standards.

Alcan's *EHS FIRST* system focuses on external exposures such as those faced by on-site contractors and emergency situations. The Crisis Management Directive and Emergency Preparedness and Response Directive incorporate internal and external communication plans to assist employees in dealing with a broad range of crises and emergency situations. Directives on Contractor EHS Management and Visitor EHS Management protect and promote the health and safety of on-site contractors and their employees, as well as all visitors to Alcan facilities.









# EMPLOYEE EMPOWERMENT AND INVOLVEMENT/MOTIVATION, ATTITUDE AND BEHAVIOUR

As previously mentioned, Alcan line managers are responsible for motivating and engaging their employees in the process of continual EHS improvement by including them in the decision-making process, giving them the authority and autonomy to make proactive EHS decisions, and holding them accountable for EHS results. Adequate and ongoing training is essential to empowering employees and creating an EHS-enabled organization.

Among the many EHS success stories driven by employees going above and beyond the call of duty is the spectacular 80% reduction in GHG emissions over a two-year period at Alcan's Lannemezan smelter in France. These substantial GHG reductions were accompanied by lower power consumption and reduced employee exposure to hot metal.

In February 2006, the "Race Against Waste" team at Alcan Packaging in Dublin, Ireland received a Nathanael V. Davis Award, Alcan's highest corporate recognition, for its recycling achievements both at the plant and in the community. In 2005, the plant reduced landfill by 94.5% compared to 1996, for a total bottom-line impact of €634,000.

With 60% of employees participating in CI projects in 2005, Alcan's Bauxite and Alumina Specialty Aluminas plant in Brockville, Canada achieved a record 11 years without a lost-time incident on December 26, 2005.

#### EMPLOYEE COMPETENCY BUILDING

"Our People Advantage" is a core pillar of AIMS and Alcan's employees are the key to building an EHS-enabled organization. In 2005, Alcan invested approximately \$1 million to develop employee competency in EHS. Line managers are trained to deliver training through a train-the-trainer program, and are given the necessary tools and resources, including refresher training, to ensure employees perform their tasks safely and with as little impact on the environment as possible.

### Performance Measurements and Information Management

#### THE EHS FIRST IT SUITE

eHS FIRST incorporates a constantly evolving suite of IT tools for measuring, analyzing and sharing information on EHS performance and other key aspects of the system. These tools allow information to be shared both vertically and horizontally within the organization, permitting sites to compare their performance with peers.



The suite serves as the auditable data source for many of the reports published in *EHS FIRST* and as a repository of definitions and terminology. It enables Alcan to readily analyze trends, develop programs to reduce risk, identify key performance indicators and share best practices. Each element of this suite is founded on the following set of key principles:

- Targeting the right information: The involvement of IT and EHS experts ensures that each tool, the data it targets for collection and the "standard" outputs remain aligned with Alcan's key EHS risks and objectives;
- Data integrity and quality: Data must have a clear definition and vigilant oversight to ensure quality. All users receive comprehensive training for each IT tool, ensuring that they "own" the process and information, and provide feedback;
- Tailored approach: Information requests can be tailored to ensure that the data is relevant to the end user. This also simplifies consolidation;
- Single point of data entry: Integration of data around a common organization and definition set ensures that there is no "double entry" of information.

#### **COMPONENTS OF THE EHS FIRST IT SUITE**

# 1) Performance Data Management (PDM) System

This system tracks and generates outputs related to statistical, case and other data types. Each site is provided with a set of customized data entry forms, including information required for the measurement of EHS performance. This tool offers flexibility in terms of exporting or downloading data into other programs. This user-friendly system allowed Alcan to deploy its Avian Influenza Medical Preparedness Plan throughout the Company in only four weeks.

In terms of benchmarking, users can exploit reporting to compare performance against similar sites. Every transaction in the system is recorded, ensuring that reports are repeatable, differences between reported periods are tracked, and that there is a reliable audit record in the case of a change of values between reporting periods (see Appendix 3.1).

#### 2) Audit Management System

The *EHS FIRST* audit management system provides a common set of questions and templates, which serve as a foundation for comprehensive *EHS FIRST* audits. This "databank" ensures auditors use the same question in each part of the audit and promotes company-wide sharing of expertise.



This system supports a consistent data set over time both at a site and throughout the organization. It also provides a record of the outcome of each audit, preventing record loss and facilitating documentation follow-up. The system is also linked to the Corrective Action/Preventive Action (CAPA) database.

#### 3) Document Management System

Alcan's document management system meets ISO 9000 and ISO 14001 requirements for all *EHS FIRST* program documentation. This includes appropriate approvals prior to review and publication for all revised or new documents in the *EHS FIRST* system.

#### 4) Event System (in pilot)

Alcan's stated objective of zero EHS incidents. The event system incorporates the *EHS FIRST* methodology of event recording, ensuring detailed information on each incident that, in turn, generates "learnings" to be shared throughout the organization. By accumulating comprehensive and accurate records of events, the entire organization can begin to truly exploit the "learnings" and further improve its EHS performance.

#### 5) CAPA System (in pilot)

Corrective actions/preventive actions are an integral part of an event analysis, audit outcome, public complaint or site review. The CAPA system records and tracks progress on these activities to ensure their success. The system eliminates a huge burden on site management by providing a list of actionable items, assigning the responsible employee and tracking performance versus deliverables.

#### 6) Info Alert and Alert! Action!

When the pertinence of the lesson learned exceeds a single part of a plant or operation, the site's *EHS FIRST* leader can issue an Info Alert. This tool extracts the outcome of the event into a form that enables instant reporting and dissemination. For more serious/severe events, an Alert! Action! can be issued for immediate action. This is a more concise summary intended for a broad group or company-wide audience. (see Appendix 3.2)

#### 7) Self-Assessment (GAP Analysis) Tool

Prior to a comprehensive or *EHS FIRST* audit, the GAP analysis tool allows a site to assess its performance. Given that *EHS FIRST* is constantly evolving in response to changing norms, requirements and











priorities, the self-assessment tool provides an opportunity to add to sites' statistical and event information, and helps line managers track the implementation status of these changes.

#### 8) Areas under Management (AUM)

A fundamental component of risk management is the tracking of information related to decommissioned sites. Successful management of these sites requires a sound understanding of the potential liabilities, as well as key information to develop strategies to manage AUMs and optimize revenues. In many organizations, the total scope of the liabilities is hidden within the organization's accounting structures. The AUM database provides a single and consistent reference point for these sites.

### **EHS Results**

(See Appendix 4 for additional information.)

#### **CONTINUOUS EHS IMPROVEMENT**

"The path to EHS excellence is a journey of continuous improvement and I am pleased to note that, in 2005, the Company made further progress in almost all of its key EHS FIRST metrics . . . So as we look back at our performance in 2005, we see conclusive evidence that

the Company's investment in EHS FIRST is delivering impressive results and contributing in a major way to the creation of sustainable value for our stakeholders."

Yves Fortier, Chairman of the Board, Annual Shareholder Meeting, April 2006

Alcan continues to make significant and consistent progress in minimizing its major EHS risks and improving its performance on key *EHS FIRST* metrics. For a total direct implementation investment of US\$36 million, the *EHS FIRST* system has, to date, delivered a minimum of US\$43 million in benefits, predominantly from safety. The estimated value at stake for environmental and health issues is more than US\$1 billion.

Between 2001 and 2005, Alcan underwent several major changes, including the acquisition of Pechiney and the spin-off of the corporation's rolling assets into a new company called Novelis. These structural changes impact overall EHS trends, for example, showing a growth in emissions where in fact there has been a reduction. Alcan would typically use an intensity measure to represent progress; however, it is difficult to develop intensity measurements for the entire corporation since they relate to production and given the diversity of Alcan's ever-evolving activities. Where metrics are only relevant to specific production or business group activities, per unit measures have been provided.









Key EHS FIRST Metric	2001	2005	Improvement (2001 to 2005)
Greenhouse Gas Emissions	22.8 million metric tonnes	33.3 million metric tonnes	Performance towards TARGET emissions objective: 3.5 million tonnes reduced; total change related to asset acquisition and divestiture
Perfluorcarbon Emissions	1.4 metric tonnes per tonne of hot metal produced	1.1 metric tonnes per tonne of hot metal produced	21% reduction; 60% reduction from 1990 to 2000
Water Use	168.8 million cubic metres	267.0 million cubic metres	Total change related to asset acquisition and divestiture
Hazardous Waste	1,016* thousand tonnes	95 thousand tonnes	14% reduction from 2004 to 2005
Bauxite Residue	0.69 tonnes per tonne of alumina	0.65 tonnes per tonne of alumina	6% reduction since 2003
Fluoride	1.49 metric tonnes per tonne of hot metal produced	1.08 metric tonnes per tonne of hot metal produced	28% reduction per tonne of production
Polycyclic Aromatic Hydrocarbons (PAH)	1.21 metric tonnes per tonne of hot metal produced	0.73 metric tonnes per tonne of hot metal produced	40% reduction per tonne of production
Energy	292 million gigajoules	415 million gigajoules	Total change related to asset acquisition and divestiture
<b>Energy for Smelting</b>	15.4 kWh per metric tonne of hot metal produced	14.5 kWh per metric tonne of hot metal produced	6% reduction
Recordable Case Rate	5 in 100 employees	1.5 in 100 employees	70% reduction
Lost-Time Injury/ Illness Rate	1.72 in 100 employees	0.54 in 100 employees	69% reduction
Certification ISO 14001/ OHSAS 18001	34% of facilities	100% of facilities	66% improvement

<sup>\*</sup>Includes bauxite residue

Highlights of Alcan's 2005 *EHS FIRST* performance feature the Company's best-ever performance for all safety metrics in all regions of the world. This

includes a 20% reduction in Alcan's Recordable Case

Rate over 2004, with 70 sites reporting zero recordable cases and proving that zero is possible. This also includes a 69% drop in the Lost-Time Injury/Illness (LTII) rate and zero Alcan AIRS fatalities. Twenty









(20) sites achieved a best-in-class LTII performance, that is, more than one million hours worked, or two to 11 years, with no LTII.

By year-end, the Company had zero major environmental events, and its voluntary perfluorocarbon (PFC) emission-reduction initiative had enabled a 21% decrease in emissions compared to 2001 and a 60% reduction compared to 1990. In addition, 11 new directives were added to *EHS FIRST* in 2005 to address business group-specific risks.

#### USE OF KEY LEADING INDICATORS

As part of its commitment to EHS excellence, Alcan measures a number of leading indicators to assess its EHS performance and subsequently plan and implement targeted programs and systems to further enhance performance. The Company seeks to leverage its leading indicators so that they provide valid predictions of trailing indicators.

Leading indicators include CAPA reporting to capture "learnings" from high-potential near-misses; a diverse range of EHS audits and safe behaviour observations such as Management Safety Observation Tours (MSOTs) and Hierarchical Safety Inspections (HSIs); activities to reinforce positive EHS behaviour such as Alcan Packaging's Bonsai Awards, President's EHS Days at Engineered Products and Alcan Inc.'s Nathanael V. Davis Award.

#### **USE OF KEY LAGGING INDICATORS**

Lagging indicators are crucial to action planning and continual improvement in EHS. Alcan tracks numerous lagging indicators, including Lost-Time Injury/Illness, Recordable Cases, diverse air and land emissions, employee absenteeism, waste generation, water use and occupational illnesses.

#### ENVIRONMENTAL PERFORMANCE

#### **Environmental Releases**

#### **Greenhouse Gases (GHG)**

About 75% of Alcan's GHG emissions are generated by smelting activities in the Primary Metal group. The production of molten aluminum results in carbon dioxide ( $\rm CO_2$ ) emissions. If fossil fuels are used to create the electricity consumed, additional  $\rm CO_2$  emissions result. Perfluorocarbons (PFCs), another greenhouse gas, are also produced intermittently in the smelting process. Alcan has significantly reduced "anode effects" and the associated PFC emissions at many smelters worldwide. It continues to conduct innovative research in order to eventually eliminate PFCs from the electrolytic process completely.

By 1999, Alcan had already reduced annual emissions by about 12% compared to 1990, despite overall primary metal production increases of 4% during this period. *EHS FIRST* has helped identify further









GHG reduction opportunities through process improvements, energy efficiency, transportation and energy mix.

#### **TARGET: A History of Engagement and Successes**

Launched in 2001, this voluntary greenhouse gas emissions reduction program accommodates economic growth, embeds an emissions reduction and energy efficiency philosophy throughout the Company, and optimizes long-term, cost-effective reductions. TARGET uses a moving baseline to compare reductions to a reference year, allowing accurate adjustments to objectives to reflect changes in Alcan's businesses and indicate real performance improvement.

In the first four years of Target (2001-2004), the cumulative GHG reduction objective was 575,000 tonnes of CO<sub>2</sub>e (carbon dioxide equivalent). Alcan far surpassed this objective by reducing CO<sub>2</sub>e by 3.5 million tonnes during this period.

Alcan partners with many stakeholders to ensure that pragmatic and cost-effective solutions are found to reduce GHG emissions. The Company's proactive role in industry responses to GHG emissions includes voluntary GHG emission reduction initiatives such as a landmark agreement with the Government of Quebec, participation in the U.S. Climate Leaders Program, as well as AERES (Association des Entreprises pour la Réduction des gaz à Effet de Serre) in France. As part of the latter national voluntary commitment program, Alcan reduced emissions by 26% for the 2003-2004 period in comparison with 1990 levels. Under AERES, Alcan is targeting total reductions of 33% between 2005 and 2007 compared to 1990.

#### Waste

Between 2001 and 2005, Alcan decreased hazardous waste by 10%. In 2005, the Packaging group achieved a 20% reduction in hazardous waste compared to 2004. Packaging also reduced its nonhazardous waste by 6% reduction, while Primary Metal achieved a 4% reduction.

#### Water

Alcan is committed to implementing a company-wide water management strategy, including key performance indicators (KPIs), to reduce its water footprint and meet rising stakeholder expectations. Through EHS FIRST, Alcan seeks to improve the efficiency of water use, including direct consumption, recycling and reuse. Process improvements at Alcan have led to reduced consumption and, in some cases, made it possible to eliminate process water releases and to use rainwater in place of other water resources. Alcan continues to explore these opportunities to promote more efficient water use.









In the Bauxite and Alumina group at Compagnie des Bauxites de Guinée (CBG), Alcan is investing US\$6.3 million in a wastewater treatment project for the city of Kamsar to increase the treated sewage volume by 50%, which should allow an additional 8,800 individuals to benefit from the project by mid-2007.

#### **Energy**

As one of Alcan's key inputs, energy is an integral component of *EHS FIRST*. All Alcan sites are required to promote a systematic approach in resource management, including energy, through the effective use of management systems and through continuous performance improvement. Company-wide, Alcan consumed 211 million gigajoules (GJ) of energy for its industrial processes in 2005, including direct energy sources used on site and indirect energy sources for site electricity, heat and steam. The Primary Metal group accounted for 75% of Alcan's total energy consumption, followed by the Bauxite and Alumina group at 18%.

The International Aluminium Institute reports that primary energy requirements per tonne of aluminum produced have decreased by one third between 1950 and 1990 and by one third again since 1990. Alcan has been an important contributor to this global trend.

Between 2001 and 2005, Alcan reduced its energy consumption in smelters from 15.4 kWh/kg of aluminum to 14.5 kWh/kg of aluminum.

The Company constantly undertakes efforts to reduce its overall demand for energy and increase its energy efficiency. Alcan generates ongoing improvements by replacing older, inefficient technology with its advanced AP (Aluminium Pechiney) technology, the industry's benchmark technology in several areas including energy efficiency.

In Quebec, Canada, approximately CA\$450 million has been invested to date in a turbine/alternator upgrade program, enabling Alcan's Quebec Power Operations to produce more electricity per volume of water, with an efficiency increase from approximately 95% in 1993 to 98.5% today.

#### **Product Stewardship**

(see Appendix 4.7)

Product stewardship has been identified as one of eight decisive areas for Alcan's long-term sustainability and, by extension, profitability. Leveraging the *EHS FIRST* mindset and the CI toolbox, lifecycle thinking is now necessary to broaden relationships and further engage suppliers, customers and other stakeholders. From the development of special alloys to innovative multi-material packaging solutions, the Company is committed to furthering this









approach. A toolbox is under development to introduce product stewardship into existing decisionmaking processes for products.

Alcan is also actively engaged in the development of standard practices and methodologies for environmental life-cycle assessments, working with associations such as the International Organization for Standardization (ISO), the European Aluminium Association, the International Aluminium Institute, the United Nations Environment Programme (UNEP) and the Society of Environmental Toxicology and Chemistry (SETAC).

#### **HEALTH PERFORMANCE**

#### Well-being

Alcan considers well-being in very broad terms to the benefit of many stakeholders. While it covers occupational health and safety in the workplace, well-being also includes a focus on broader employee issues such as work-life effectiveness, mental health, smoking and employee fitness. Well-being also incorporates Alcan's responsibility to help address larger community issues, such as HIV/AIDS and access to adequate sanitation and drinking water.

#### **Occupational Health**

The cost of recognized occupational health claims in 2005 was US\$4.25 million. Musculoskeletal disorders are the leading recognized occupational illness

at Alcan. Hearing loss and occupational cancers and asbestos-related diseases pose additional health challenges at Alcan facilities. These key health hazards are an important focus in the *EHS FIRST* 2006-2010 Strategic Plan currently being completed.

#### **Health Days**

Health Days are organized at a number of Alcan sites to build awareness and emphasize Alcan's commitment to *EHS FIRST* on a variety of health-related matters, including diet, fitness, work-life balance, personal protective equipment (PPE) and ergonomics.

#### Work-Life Effectiveness (WLE)

The Primary Metal group recently launched a work-life effectiveness program to foster a resilient and engaged workforce. The definition of work-life effectiveness was proposed through a structured program that is part of *EHS FIRST*. The WLE program helps managers and employees integrate work and life in ways that contribute to personal health and well-being, business success and a sustainable work environment.

#### **Avian Influenza**

In response to the threat of a global pandemic,
Alcan developed and rolled out a comprehensive
Avian Influenza Medical Preparedness Plan in 2005.
Communication packages for all levels of the organization have been produced and distributed to sites.





A screening process for alert levels has been established, while development of a regional medical response network is under way.

#### **Tobacco Cessation**

Many sites across Alcan have introduced smoking cessation programs, which include reducing or eliminating smoking areas at sites. Tobacco-related risks are currently being quantified throughout Alcan, following which a recommended cessation process will be developed.

#### **SAFETY PERFORMANCE**

EHS FIRST applies at all sites in all Alcan business groups and sets standards that exceed and/or are aligned with OHSAS 18001. To date, EHS FIRST has delivered a minimum of US\$43 million in benefits, most of this occurring in safety. Alcan has improved its safety performance in virtually all metrics since 2001.

A key focus of *EHS FIRST* is the elimination of potentially high-risk exposures for employees and contractors. In 2005, over 3,500 employees received *EHS FIRST* and safety-related training.

#### **Fatalities**

Alcan has experienced a steady decline in fatalities since the introduction of *EHS FIRST*. In 2005, the Company had zero Alcan Injury and Illness Record-keeping System (AIRS) fatalities, while three non-AIRS (Project Contractor) fatalities occurred

at Alcan sites. In response to a contractor fatality in Iceland, Alcan issued a Global Alert! Action!, the first such action in the Company, for non-locking carabiners. As a result, Alcan's Working at Height and Contractor EHS Management Directives are currently being enhanced and a roadmap developed to implement the changes.

#### **Days Lost**

Between 2001 and 2005, Alcan reduced its Work Days Lost by 43% and improved its Days Lost rate by 59%.

This represents a total cost savings of US\$14 million, which represents 50 individuals off work each year at an average annual employment cost of US\$56,000.

#### **Recordable Case Rate**

In 2005, Alcan improved its Recordable Case Rate by 70% compared to 2001, with a 20% improvement occurring in 2005 versus 2004. At year-end 2005, 30% of sites achieved the ultimate goal of Zero Recordable Cases, which represents 8% of the total exposure hours, and 67% of all sites were at or below the 2005 target.

#### Lost-Time Injury/Illness Rate

In 2005, Alcan improved its LTII Rate by 68% compared to 2001 results, with a 25% improvement occurring in 2005 versus 2004. At year-end 2005,









54% of Alcan sites achieved the ultimate goal of Zero LTIIs, which represents 31% of total exposure hours, and 63% of total sites were at or below the 2005 target.

#### **Worker's Compensation Costs**

In 2005, Alcan achieved a cost savings of US\$2.52 million based on US\$338 million of insurable earnings. Extrapolated to Alcan's total employment costs of US\$3.385 billion in 2005, these savings represent US\$25 million. In 2005, the Company improved its claims by 46% compared to 2001, its adjusted premiums by 39% and its costs per insurable earning by 76%. Through rebates, Alcan has avoided US\$4.4 million in costs since 2002.

### Linkage between EHS and Business Performance

# INTEGRATION OF EHS AND BUSINESS MANAGEMENT SYSTEMS

As explained in this submission, *EHS FIRST* is one of the four interconnected pillars of AIMS, the Alcan Integrated Management System. As such, *EHS FIRST* is embedded in Alcan's business processes and culture, and is a fundamental component of all strategic planning and decision-making at both a corporate and operational level. In terms of organizational structure, Alcan has a vice president of *EHS FIRST*/ Sustainability who reports directly to the CEO.

The integration of AIMS' pillars is reflected in the fact that 20% of all Continuous Improvement projects are related to *EHS FIRST*, and that Value-Based Management analyses are systematically applied when determining EHS priorities at Alcan. In terms of the "People" and *EHS FIRST* pillars, the Company actively develops EHS leaders and champions at all levels and sites.

#### EHS AS A CORE CORPORATE VALUE

Given the central role of *EHS FIRST* within AIMS, senior management's visible EHS leadership and commitment, and the significant resources deployed to launch and maintain *EHS FIRST*, it is clear that EHS is a core corporate value that contributes to Alcan's vision of being the best at everything it does. *EHS FIRST* plays a crucial role in helping Alcan generate maximum sustainable value and maintain its license to operate and grow. *EHS FIRST* reduces EHS liabilities and claims and enhances Alcan's image with all key stakeholders, including the media. The Company has received numerous external awards and recognitions for its leadership in EHS and sustainability (see Appendix 4.4).

EHS FIRST also makes Alcan a better corporate citizen in the communities where it operates, as well as on the international stage. In terms of employee/







labour relations, Alcan's Global Employee Survey confirms that employees are proud to be part of a company that cares about the environment and the health and safety of its workers and its communities.

# ALIGNMENT OF EHS WITH CORPORATE OBJECTIVES AND STRATEGIES

EHS FIRST is a crucial driver of Maximizing Value,
Alcan's governing objective. In fact, it is the synergy
between the pillars of AIMS and their seamless integration that enables Alcan's business management
system to generate maximum long-term value.

### CONTINUOUS AND SYSTEMATIC EHS AND BUSINESS PERFORMANCE IMPROVEMENT

As highlighted throughout this submission, Alcan has continuously improved its performance on all key EHS metrics since 2001. Through *EHS FIRST*, EHS is firmly and permanently positioned at the centre of Alcan's corporate and business group radar. Alcan employs both leading and lagging indicators to measure its progress in all areas of EHS, and strives to exceed compliance whenever possible.

The Company's goal is not simply to achieve zero, but rather to create sustainable EHS value wherever it operates. This includes contributing to biodiversity conservation, supporting local community initiatives, playing an active role in organizations dedicated to making the world a better place to live, and promoting employee fitness, health and well-being

# DYNAMIC INTERACTIVITY OF EHS WITH OTHER OPERATIONAL FUNCTIONS

In the drive for procurement excellence at Alcan, working with suppliers is an important aspect of preserving value. Alcan encourages the development of mutually beneficial relationships with preferred suppliers who share its value-based approach and are clearly committed to being part of the solution to EHS challenges.

As an example, Alcan's Primary Metal group worked with a supplier to develop the most significant breakthrough in the last two decades in anode technology.

The innovative SCAP-Rhodax\* process produces anodes with a high resistance to thermal shocks in electrolytic cells, delivering environmental benefits through more efficient use of energy and raw materials as well as a smaller plant footprint.

In terms of collaborating with Human Resources, the Primary Metal group has been sponsoring a peer network of voluntary care providers active in most Alcan facilities in Quebec. This network is complementary to HR's Employee Assistance Program and trains employees to help their co-workers with issues such as work-life balance, workplace reintegration and retirement.





## DEMONSTRATION OF IMPROVEMENT IN PRODUCTIVITY THROUGH EHS

While difficult to quantify, it is clear that *EHS FIRST* has improved productivity on many levels at Alcan. Well-being and work-life effectiveness programs have helped reduced employee absenteeism. Systematically assessing risks with a view to eliminating or minimizing them has reduced lost-time incidents, streamlined processes and enhanced systems, which in turn improves productivity. For example, a company-wide pedestrian safety/mobile equipment initiative served to eliminate steps in processes and to improve employee productivity.

**Other Factors** 

EHS FIRST serves as the "glue" whenever Alcan acquires an asset around the world, bridging the gap created by different cultures and languages.

EHS FIRST and the values it embodies are universal and provide a foundation for building mutual respect, understanding and consensus. With every acquisition, Alcan augments its EHS knowledge and incorporates additional best practices. It also freely shares its own best practices and commitment to EHS. For example, today Alcan's joint venture in China is triple certified for EHS and quality due in large part to Alcan's lead-

ership in EHS and its passion for EHS excellence.

The Pechiney acquisition provides another example of leveraging *EHS FIRST* to facilitate and accelerate integration between two entities. Teams from Alcan and the former Pechiney worked together to identify Pechiney's areas of excellence, creating many opportunities to learn from each other and building mutual respect in the process.

### **Conclusion and Other Recommendations**

"Passion drives excellence in any endeavour. Alcan needs leaders with a passion for EHS. I ask that you join me in becoming one of these leaders."

Travis Engen, Former Alcan President & CEO Alcan EHS FIRST Manual

The business case for *EHS FIRST* is both compelling and sound. *EHS FIRST* delivers tangible value through reduced accidents, occupational illnesses, environmental incidents, liabilities and insurance premiums. It also lowers overall costs through its focus on excellence and continual improvement, as well as on problem-solving, quality and stakeholder engagement.

To date, a total investment of US\$36 million in *EHS FIRST* has delivered sustainable value. In terms of workers' compensation costs alone, US\$25 million was avoided through a reduction in Alcan's health and safety incident rate between 2001 and 2005.

The value at stake for environmental and health issues is estimated at well in excess of \$US1 billion. *EHS FIRST* has also generated significant value as a business integrator following the acquisitions of Baltek, VAW, Pechiney and Alcan Ningxia.

EHS FIRST sets the bar high, with the ultimate goal of becoming a recognized leader of EHS excellence in everything Alcan does and everywhere it operates. This journey toward EHS excellence is a journey of continuous improvement. The first five years of this journey have enhanced Alcan's EHS performance, as well as its profitability, productivity, reputation, employees' engagement and stakeholder relations.

With an unwavering focus on constant EHS improvement, Alcan's Bauxite and Alumina and Primary Metal groups implemented a Hazardous Energy Control program in early 2006, while Packaging and Engineered Products just rolled out a Man/Machine Interface initiative.

Alcan is currently finalizing a strategic plan for the next five years of its *EHS FIRST* journey. This strategic plan will raise the bar, once again, building on lessons learned in the past to deliver world-class

EHS performance in the future. Pockets of EHS excellence exist in different areas throughout Alcan. The Company's leadership focus and commitment are essential to ensuring these best practices are applied throughout Alcan and that employees continue to put EHS *first*.

Moving forward, the emphasis in *EHS FIRST* will be on enhancing line leadership and employee engagement, evolving from a focus on risk control to risk reduction, minimizing serious injuries, continuing the implementation of best practices, strengthening the Company's capabilities to manage specific risks notably in "E" and "H", and increasing the use of e-learning and IT systems in EHS.

EHS FIRST has proven to be a powerful competitive differentiator and a driver of leadership, integration, engagement and consensus at Alcan sites worldwide. Simply put, EHS FIRST is making Alcan a better employer, investment, neighbour and corporate citizen.