

**Nyrstar**  
**Sustainability Report 2008**



# Scope of the Report

**Nyrstar is a leading global multi-metals business, producing significant quantities of zinc and lead as well as other products (including silver, gold and copper). Our operations and activities are located in Western Europe, Australia, the USA and China. Nyrstar was formed on 31 August 2007 after the merger of zinc and lead smelting assets formerly owned by Umicore and Zinifex.**

This is our first annual Sustainability Report and includes information on our performance for the 2008 calendar year, our first full year of Nyrstar operation.

We apply Nyrstar Group policies and procedures at all our Nyrstar operations and activities, including Joint Ventures where we have management control. However, the information in this report covers the performance of our six major wholly Nyrstar owned operating sites only, as these sites present the material and significant sustainability risks and opportunities for the Company. These facilities, their main activities and locations are:

	Operation	('000 Tonnes)	Site employees	Location
<b>Auby</b>	zinc smelting	Zinc metal 118	305	France
<b>Balen / Overpelt</b>	zinc smelting, alloying & oxide washing	Zinc metal 284	529 / 190	Belgium
<b>Budel</b>	zinc smelting & alloying	Zinc metal 239	450	the Netherlands
<b>Clarksville</b>	zinc smelting & alloying	Zinc metal 125	250	Tennessee, USA
<b>Hobart</b>	zinc smelting & alloying	Zinc metal 253	510	Tasmania, Australia
<b>Port Pirie</b>	Multi-metal smelting	Lead metal 220 Zinc metal 35 Copper metal 3.8 Silver metal 0.54 Gold dore 0.0005	670	South Australia, Australia

We have prepared this report considering the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (Version 3, also known as the G3 Guidelines) and intend for our reporting to qualify for GRI Report Application Level B+. This document should be read in conjunction with the Nyrstar Annual Report 2008, which provides specific information about the company, its operations, management, business structure and governance arrangements.

Other Nyrstar public reports, including the 2008 Annual Report, a GRI Content Index for our Group level sustainability reporting and individual site level sustainability reports (where produced) are available on our website: [www.nyrstar.com](http://www.nyrstar.com)

For further information about Nyrstar or this report please send an email query to [communications@nyrstar.com](mailto:communications@nyrstar.com).

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## Letter from the CEO

### I am pleased to present our first Nyrstar Sustainability Report.

Nyrstar was formed in August 2007. Our vision is to be the partner of choice in essential resources for the development of a changing world. We strive to be a lean, efficient, dynamic and flexible business focused on creating value for all our stakeholders. Our ongoing business activities compete with producers in many different locations and economies around the world. For Nyrstar to be successful, we need to ensure that we can continue to attract qualified and dedicated employees and that we continue to be welcome in the communities where our facilities are located.

During our first full year of operation, we concentrated on the integration of business activities and established the framework required for the longer term sustainability of our business, which includes policies and programs covering governance, risk management, audit and compliance. We developed and communicated a set of Nyrstar Values and a Code of Business Conduct, which will guide our decision making in our dealings with our suppliers, customers, regulators, communities and each other.

In terms of our performance during the year, the fall in metal prices and a weak US dollar significantly impacted our 2008 profitability, with underlying EBITDA of € 153 million, being 72% lower than our 2007 result. However, our strong cost containment focus meant that we still ended the year in a strong financial position, with consolidated net cash of € 147 million at the end of 2008, significantly better than the net debt position of € 155 million reported at the end of 2007.



Roland Junck  
Chief Executive Officer

In terms of non-financial performance measures, we substantially delivered on the targets that we had set for ourselves. We completed the development of core governance and risk management processes, including baseline safety, health and environmental audits. We exceeded the 25% injury reduction target we set for 2008, achieving a 28% reduction in lost time injury frequency rate per million hours worked from 4.6 in 2007 to 3.3 in 2008. Similarly we exceeded our 20% reduction target for environmental non-compliances, reducing the number of recordable environmental incidents by 53%, from 51 in 2007 to 24 in 2008. These improvements in performance were as a direct consequence of the outstanding efforts by our workforce across the company.

We also made progress on a number of our key projects to reduce environmental legacy issues across the company. Significant progress has been made on the tenby10 project at Port Pirie by Nyrstar together with the South Australian Government and local community, resulting in blood lead levels of local children and the workforce, and well as community lead in air levels now at record lows. At Budel, we completed covering of the last pond in the historical jarosite and gypsum storage area, a project which commenced in 1996 and which will see responsibility for this area handed over to the Province of Noord Brabant in the future. The program to address historical soil contamination in the local community at Auby was continued, with remediation works to be completed in 2009. Programs for groundwater remediation at Balen and Overpelt were progressed and we aim to have all regulatory approvals in place in the coming year.

Apart from the global financial crisis, the other key sustainability issue being a high priority for governments and society in 2008 was climate change, particularly in regions where we have our major operations: Western Europe, Australia and the USA. Nyrstar supports co-ordinated government action on climate change and recognizes the responsibility we have as a company to minimise our own carbon footprint while continuing to meet society's need for zinc and other metals. Zinc smelting is an energy intensive industry, predominantly due to the electricity we use, so our carbon footprint is heavily influenced by regional electricity generation profiles. We supply global commodity markets and compete primarily on cost of production. With energy being around 35% of our operating costs, it is very important to our competitiveness that all industry players face similar carbon costs and constraints as economies develop their climate change policies. We will continue to lobby governments on this issue in 2009, to ensure a level playing field for the zinc and lead smelting industry around the world.

The global economic situation that developed over 2008 meant we ended the year in a very different operating environment from when the company was launched. However we believe that what we achieved during the year has established a firm foundation for the business going forward. We must now work on transforming the business to ensure its ongoing sustainability amidst uncertainty in the global economy and the markets in which we operate in the short to medium term. In the coming year, our focus will be on transforming to a lean, efficient dynamic and flexible business focussed on creating value for all stakeholders - a business that will be well positioned to rapidly respond to and benefit from changing economic conditions.



**Roland Junck**  
Chief Executive Officer

## Sustainability Impacts, Risks & Opportunities

**Nyrstar supplies commodity grade metals, including zinc, lead, silver, gold and copper, and sulphuric acid to customers for use in further processing and manufacturing activities. Key users of our zinc products are die-casters and galvanisers, and those of our lead are lead-acid battery manufacturers. Sulphuric acid is used in the production of other chemical products such as fertilizer and nylon, and as an electrolyte in lead-acid batteries. Zinc containing products are in common use throughout society in construction, building, automotive and consumer appliance applications. Zinc is also an element that is essential for human health, its deficiency in soils and diets needing to be addressed in many parts of the world.**

### Key sustainability impacts, risks and opportunities

Most of our major production facilities have long operating histories and although in developed and regulated economies such as Western Europe, Australia and the USA, each was established at a time when standards were different to what they are today. These operations are located in regional areas, typically in close proximity to local residents and often form a significant part of the local economy. For our business to be sustainable, we must ensure that we meet the expectations of all our stakeholders, which will continue to evolve over time.

Our key sustainability impacts, risks and opportunities are:

- Creating value by continually reviewing our portfolio of assets, improving returns from existing assets and seeking to grow the business.
- The zinc and lead smelting industry has historically been characterized by variable returns to shareholders reflecting the lack of industry consolidation and the cyclical nature of commodity metal prices. We need to pursue growth opportunities in line with our strategic objectives and continually improve the return on capital from our current assets, in order to provide adequate return to our investors.
- Ensuring that our activities do not adversely affect the health and safety of people that work at and live close to our operating sites.

Safety of our people is our highest priority. There are a number of physical and chemical hazards at our facilities that we need to identify and understand. To minimise the potential for injury or illness we need to assess and manage the risks relating to these hazards and to ensure the effectiveness of risk controls we have in place. We take a holistic approach to preventing harm which includes addressing workplace equipment and management systems as well as workforce culture and behaviours.

- Minimising the impact our production sites have on the local environment by improving current emissions performance and addressing legacy issues.

Metals are naturally occurring substances, however emissions from processing facilities can result in elevated levels of metals in the air, soil, groundwater and surface water around the site. As most of our sites have been operating for many years, there are potential environmental impacts from not only current activities, but also historical operations

and practices. There are a number of factors which influence whether metals in the environment pose a risk to people or the ecosystem, and these need to be taken into account when prioritizing investments to reduce emissions and address historical contamination or waste stockpiles.

- Improving our natural resource efficiency, including the use of raw materials, water and energy.

We make metals and acid predominantly from zinc and lead concentrates, a product of the mining industry. However we are increasingly processing secondary zinc and lead containing materials, which provides a valuable recycling route for some of these metals, particularly by-products of galvanized steel recycling. The zinc and lead smelting process is very energy intensive, with electricity used to convert dissolved zinc into zinc metal in the electrolysis process and coke and coal needed for the lead smelting process. Water is used as the process medium in leaching and electrolysis stages of the process.

All of these materials have sustainability impacts associated with their supply and use, and industry's requirements for energy and water must be balanced with that of the rest of society.

### Our approach to sustainability

We take a holistic approach to our business sustainability and this is recognized in our Nyrstar Values, our Code of Business Conduct and our business Risk Management Policy. We have an enterprise risk management framework that uses a consistent approach to identifying and assessing risks and prioritizing actions required for all types of business risk: financial, safety, health, environmental, legal compliance, stakeholders, quality, production and organizational structure. Oversight of enterprise risks and risk management processes is maintained at the Nyrstar Board level. An external review of key business risks was undertaken during the year to establish a baseline for corporate review and priority setting, as summarized in our Annual Report.

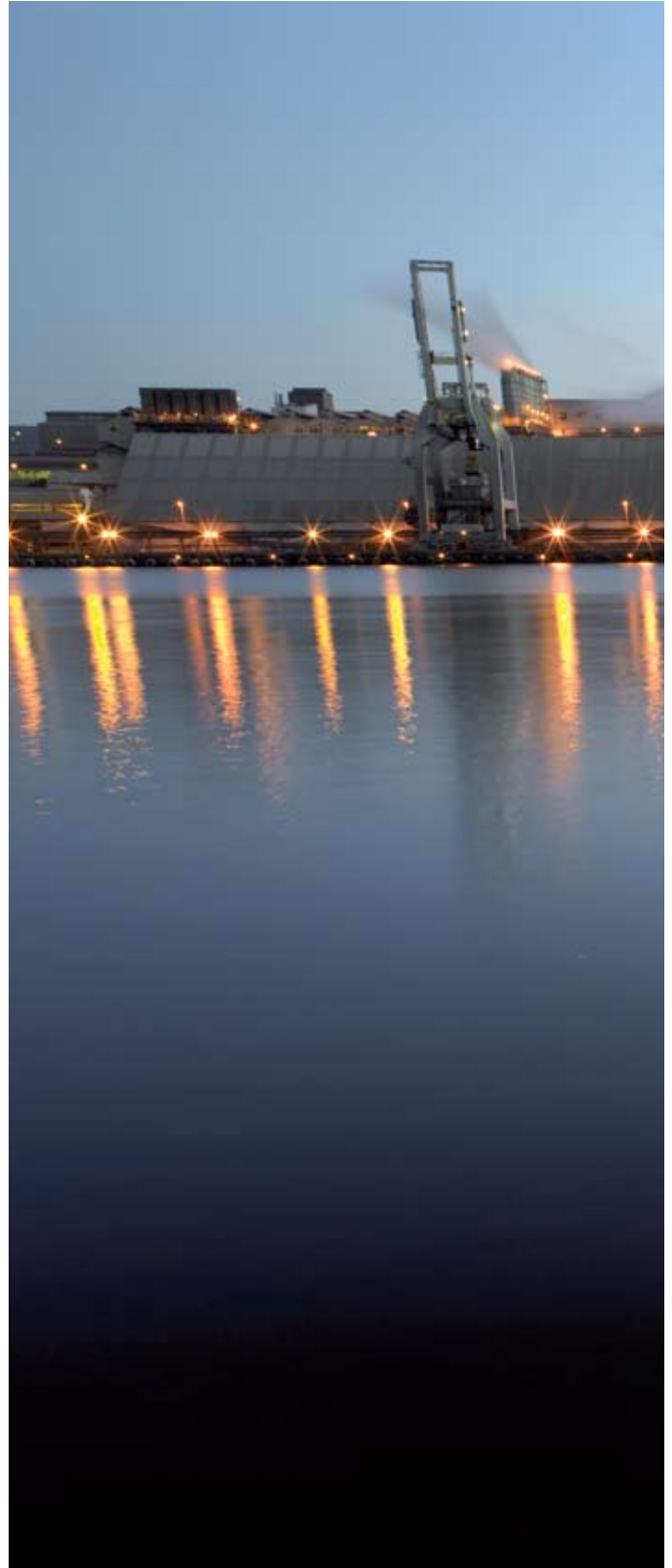
A key sustainability focus in our first year of business was to establish core corporate policies and to integrate operations globally by establishing common business processes and procedures. We established Nyrstar Group Policies for Safety and Health, Environment, Risk Management and Quality. These policies underpin the Nyrstar Values and provide more specific guidance for decision making in key sustainability areas.

In addition, Safety and Health Management Standards were developed and a baseline assessment completed at all sites as part of the corporate safety and health audit program. Key performance measures and reporting processes for production, finance, safety, health, environment and asset management were defined for consistent interpretation and application across the business. These measures will form the basis for future performance assessment and target setting both at a site and corporate level. While there are still areas for further development and improvement, we believe we have established a good foundation for the business going forward.

Our economic contribution is described on the next page. Progress on our key risks and sustainability issues during 2008 are summarized in the Performance Overview table in the following pages and are discussed in more detail in the various sections of this report.

Looking forward, our key challenges in the short to medium term are:

- transforming to a lean, efficient, dynamic and flexible business focused on creating value for all stakeholders, which is capable of responding more quickly to changes in the external business environment
- meeting the challenges of new legislation and business requirements such as proposed changes to or introduction of greenhouse gas emissions trading schemes and REACH legislation in Europe.
- continuing to deliver improvements in our safety, health and environmental performance and continuing to address historical environmental legacy issues.

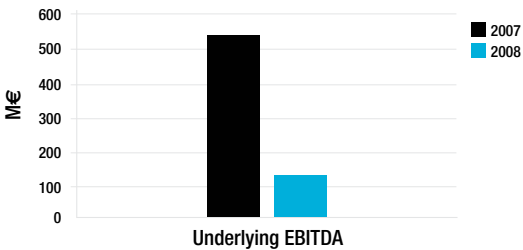
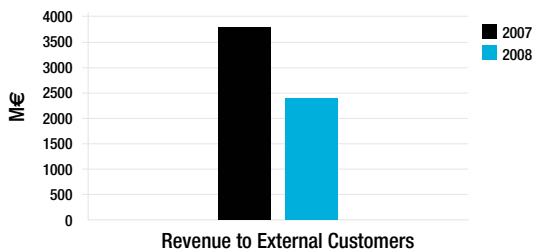


# Economic Contribution



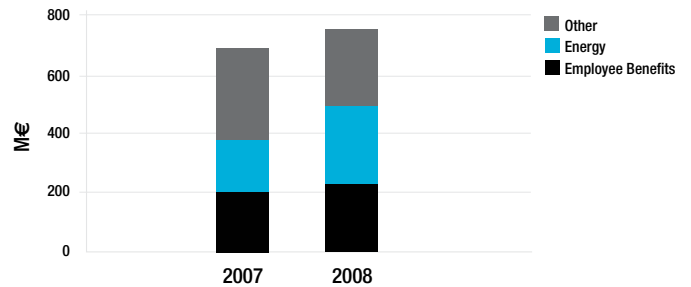
Results for 2008, our first full year of operation, were lower than planned and lower than the previous year due to a very challenging business environment that saw metal prices and US dollar exchange rates, two of the variables our results are most sensitive to, move unfavourably. Although both revenues and profitability were significantly reduced, as seen in Figure 1, we reacted in a timely manner to the change in external environment to contain operating costs and to reduce production levels in line with the lower demand for zinc, lead, acid and other products.

**Figure 1: Revenues and Profitability (M€):**

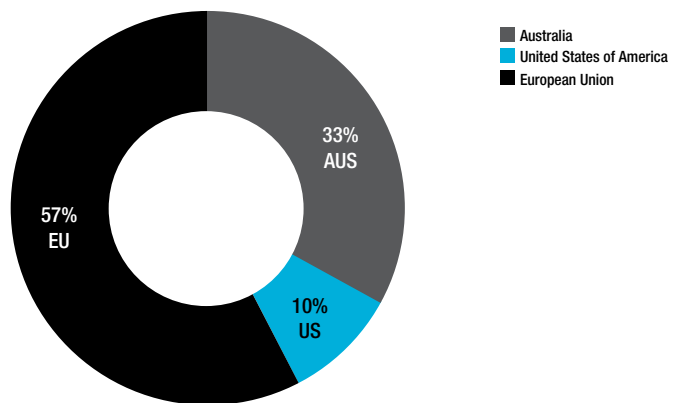


Our sites are generally located in regional areas, so they represent a significant employer in and contributor to the local economy. Our most significant operating costs are for employee benefit expenses (30%) and energy (35%), both of which increased during 2008, as seen in Figure 2. Capital expenditure and cyclical maintenance costs also increased slightly, up to 116.4 M€ during 2008 from 102.2 M€ in 2007. Direct economic benefit in terms of site operating costs were 370 M€ in Western Europe, 61 M€ in the US and 209 M€ in Australia (Figure 3).

**Figure 2: Total operating costs (M€):**



**Figure 3: Total operating costs by region (M€):**



# Performance Overview

During 2008, our targets related to developing company-wide systems and processes, and to measuring our performance against indicators that were either readily available at all operations, or able to be determined from data already recorded. A number of other measures were identified, for which 2008 performance was established as a baseline for future comparison.

Goals	2008 Performance	2009 Target
<b>Safety</b>		
No fatalities	✓ No fatalities recorded	No fatalities
25% reduction in employee* Lost Time Injuries	✓ 31% reduction in employee* Lost Time Injuries, down from 35 in 2007 to 24 in 2008	Further reduce Lost Time Injuries Targets for 2009 relate to recordable injuries
Establish 2008 baseline for recordable injuries	✓ Recordable injuries for employees established from 2007 data Consistent and verifiable recording of recordable injuries for all employees and contractors in 2008	15% reduction in recordable injuries from 2008 result of 139
<b>Health</b>		
Reduce overall workforce blood lead levels. Sites to set individual reduction targets.	→ Number of individual results for employees and contractors exceeding the target blood lead level of 30 µg/dl reduced by 43%	Develop formal group procedures for managing exposure to metals in the workplace Sites to define individual reduction targets
<b>Environment</b>		
20% reduction in recordable environmental incidents	✓ 53% reduction in recordable environmental incidents, down from 51 in 2007 to 24 in 2008	20% reduction in recordable environmental incidents from 2008 result of 24
No environmental incidents with significant off-site impact	✓ None of the reportable spill or emission incidents resulted in a significant off-site impact or in regulatory action	No environmental incidents with significant off-site impact
Establish baseline data for greenhouse, energy and water use, key emissions to water & air	✓ Key data requirements defined. 2007 and 2008 data reviewed and verified	Review data and establish performance targets where relevant
<b>Community</b>		
All sites to establish effective community engagement processes	→ Community relations activities underway at all sites. Community Relations Co-ordinator in place for 50% of sites	Develop formal site community engagement plans at all sites
<b>Governance</b>		
Establish and publish Nyrstar Code of Business Conduct	✓ Nyrstar Business Code of Conduct published and communicated to management	Training for all Nyrstar employees
Conduct baseline enterprise risk review	✓ Risk review workshops were conducted at a number of operating sites in 2008, all sites will be completed through 2009	Establish enterprise risk register and controls in RIMS database
<b>Management Systems</b>		
All sites to achieve and maintain ISO14001 certification	✓ All sites maintained ISO14001 certification in the period	All sites to maintain ISO14001 certification
All sites to achieve an audit rating of 'majority of basic requirements has been implemented' against the Nyrstar Safety & Health Management Standards	✓ All operations were audited and achieved a rating of 'majority of basic requirements has been implemented', or better, when assessed against the Nyrstar Safety & Health Management Standards	All sites to achieve an audit rating of 'all basic requirements have been implemented' for Nyrstar Safety & Health Management Standards in 2009

✓ = achieved → = progressing on plan o = not achieved / not progressing according to plan

\* employee Lost Time Injuries does not include contractors, casuals or visitors to sites.

# Safety



One of the Nyrstar values is to 'prevent harm'. This means ensuring that our activities do not adversely affect the health and safety of people that work at and live in close proximity to our sites.

The first priority for Nyrstar as a new company was to establish core policies and procedures to support a consistent approach and a culture of looking after each other and keeping each other safe. We developed our Nyrstar Safety and Health Policy, which was endorsed at Board level. We also defined a set of Management Standards that cover all aspects of safety and health. For each Management Standard, a set of expectations and requirements has been specified. The requirements under each expectation define the level of safety management we would anticipate to deliver above average industry performance. Implementation of the additional requirements specified in the standards will be required to deliver Nyrstar's goal of world class safety performance by 2012.

Formal Site Health and Safety Committees that represent all of the site's workforce, are in place to help monitor our health and safety performance and advise on improvement initiatives.

The most significant safety risks at our sites relate to exposure to the hazards inherent in our operations such as: molten materials; dusts and fumes containing metals such as lead, cadmium, mercury, and arsenic; acidic liquids; working at height; electricity; materials handling; moving machinery and vehicles; and the manual nature of many of our tasks.

Our key strategies for reducing the potential for workplace injury, and therefore the key areas where we have opportunities to further improve are:

- systematic identification of hazards, risks and appropriate controls
- standard best practice management systems, practices and procedures
- a safe work culture where all individuals take responsibility for their own actions and also ensure that their colleagues are working safely.

## Nyrstar Safety Management Standards

Baseline audits were conducted which allowed a systematic evaluation of site compliance with Nyrstar requirements as defined in the Management Standards and with legislation. A rating of current site management systems and performance was given against a standard scale, with the goal being to achieve a minimum rating of 'the majority of the company's basic safety & health requirements being met'. All of the sites met or exceeded this goal by the end of 2008.

## Safety Leadership

We recognize the critical role of safety leadership and safe work behaviours in ensuring that our people are not harmed in the workplace. We reviewed the level of safety leadership training previously conducted at the sites and developed and commenced delivery of our 'Working Safely

1' program to ensure that all sites had a consistent base level of training. Topics addressed during this first module included: organizational culture and safety culture; causes of unsafe behaviour; company expectations and a safety first philosophy; personal motivation and commitment to action.

## Catastrophic Risk Management

Most of our major operating sites are subject to additional regulations applying to industrial facilities with the potential for catastrophic risks, which are defined as risks which could result in multiple fatalities or serious off-site impacts. In Europe, we continued with risk analysis, explosion hazard management and emergency response activities relating to the requirements of the "Seveso II" directive. In Australia, we are assessing the requirements of upcoming Major Hazard Facility legislation on our smelters and expanding our site risk analysis programs as a result.

## Workplace Injuries

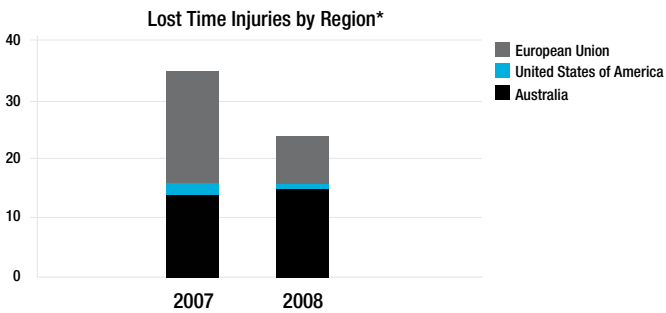
When Nyrstar was formed in August 2007, it was evident that the various sites had different definitions and attitudes in the reporting of injuries and safety performance statistics. Our first challenge was to secure a consistent approach so that we could properly track our performance and prioritise our improvement initiatives. The one consistently understood measure was Lost Time Injuries, so this was used as our key performance and reporting statistic for 2008.

Nyrstar's first operating year has been characterized by a significant and sustained decrease in Lost Time Injuries. A continuous focus on safety, the introduction of Nyrstar Group-wide initiatives such as the behavioural safety program and the audit programme, and the ongoing efforts at the operational level, have resulted in a 31% reduction in employee Lost Time Injuries at our sites, from 35 in 2007 to 24 in 2008. This exceeded our goal of a 25% reduction for the year.

Going forward, we will be focusing on recordable injuries as our key injury performance measure as this represents a more accurate statistic in line with our goal of preventing harm. We recorded a total of 139 recordable incidents at our sites during the year.

Another important measure of the company's safety performance is the number of 'critical incidents', that is, incidents that did result, or could reasonably have resulted in a fatality or permanent serious disability. We established this performance measure in 2007 with 11 such incidents reported at the sites; in 2008, only 6 critical incidents were reported. Both the reporting and prevention of such incidents will remain one of our main priorities going forward.

**Figure 4: Rates of injury**



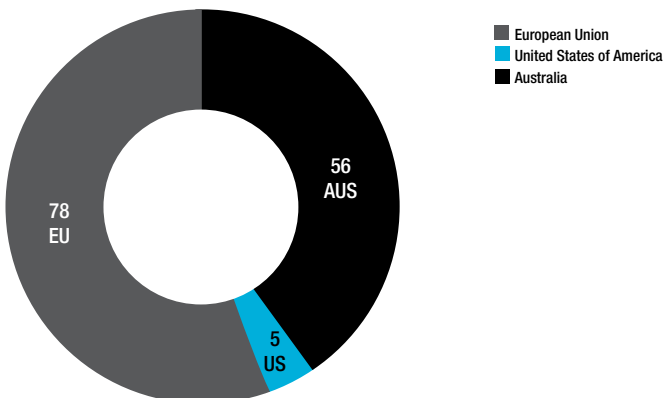
\* Lost Time Injuries includes employees only and not contractors, casuals or visitors to sites.

**Looking forward**

Our key safety priorities and targets for the coming year include:

- finalise and communicate our 'Safety First Standard' to reinforce our approach of strict accountability for safe behaviours by leadership and employees and our response when non-compliances or un-safe acts are observed.
- complete the next phase of our safety leadership training program 'Working Safely 2' at all of our sites.
- achieve a 15% reduction in the number of recordable safety incidents compared to our 2008 result of 139.
- complete the development of technical Safety & Health Standards in order to harmonize risk control efforts across our sites.
- implement the company's current best practice personal protective equipment standard at all sites
- complete a thorough root cause analysis for all lost time injuries at a minimum and distribute a related safety alert to all operating sites in a timely manner.
- ensure that sites comply with relevant requirements of the Major Hazard Facility legislation

**2008 Recordable Injuries by Region**



# Health

The Nyrstar Values, Policies and Management Standards that apply to safety also apply to health. We have established a global health and hygiene network to ensure a common group wide approach to health management and the sharing of best practise within the company.

The most significant health risks arising from our operations relate to exposure to the physical and chemical hazards inherent in our work environment, including: metals such as lead, cadmium, mercury and arsenic; acid mist; toxic gases such as sulphur dioxide, hydrogen sulphide and chlorine; noise, and heat.

There are also a number of common health risks for our employees and contractors that are not related to hazards in the workplace, but to the demographics of our workforce. These include health issues relating to an aging workforce and to lifestyle choices such as smoking, diet and exercise.

Our key strategies for supporting a healthy workforce include:

- systematic identification of workplace exposures, monitoring of exposure levels and application of systems or practices which minimize exposure to acceptable levels
- monitoring of workforce bio-markers and health indicators
- supporting our workforce in general health awareness issues and wellness programs, encouraging individuals to make healthier lifestyle choices.

## **Lost work days and absenteeism**

All sites record the level of absence from work due to health, sickness or other causes. At present we are still working on common group definitions and recording systems, which will allow group statistics relating to absenteeism to be reported, collated and verified in the future.

## **Workplace exposure standards and monitoring**

As an outcome of Nyrstar's first health and hygiene network meeting in July 2008, it was agreed that group wide standards will be developed for exposure monitoring, bio-monitoring and health surveillance. These will be drafted and communicated in the coming year. These standards outline minimum company requirements regarding the measurement and evaluation of biological, chemical and physical exposure in the workplace, and the monitoring of lead, cadmium, mercury, and arsenic levels in our employees and contractors. We will use the recommendations of the American Conference of Industrial Hygienists (ACGIH) in establishing our Nyrstar internal limits, targets and action levels.

In addition, guidelines regarding the reporting of occupational illnesses, in line with personal privacy and confidentiality requirements, will be included in Nyrstar's safety and health performance reporting standard, to allow inclusion in group level reporting in the future.

## **Routine medical assessment**

The proposed group-wide health surveillance standard will cover the requirement for pre-employment medicals, annual health assessments, end of employment medicals and any relevant follow-up processes. The scope of these medical assessments focuses on ensuring physical capability of people in the workplace will include physical examinations, blood/urine analysis, spirometry, audiometry, functional capacity testing, and where appropriate, suitability for alternate duties.

## **Fitness for work**

Programs exist to minimise the potential for drug and alcohol impacts in the workplace, including systematic testing where this is permitted by law. These programs are yet to be standardized across all Nyrstar sites.

## **Healthy lifestyle choices**

Wellness programs are an integral part of Nyrstar's safety and health programs and initiatives have been developed at most Nyrstar sites. Examples of initiatives supported in the past year include:

- various awareness programs for employees and family members regarding healthy lifestyles
- general health assessments during annual physical examinations, including screening for high blood pressure, skin cancer, diabetes and other diseases with lifestyle risk factors
- influenza vaccinations for employees and their families
- subsidised stop smoking courses
- support for participation in fitness and weight loss programs

## **Looking forward**

Our key workforce health priorities and targets for 2009 include:

- implement the company's health surveillance, biomonitoring and exposure monitoring standards
- Introduce standardized reporting and trend analysis for workplace exposures, including exposure to metals, sulphuric acid mist, noise and heat
- develop a standardized measurement methodology for sulphuric acid mist in order to ensure compliance with pending legislation
- ensure site specific examples of best health management practice, such as the prevention of chemical burns using buffering solutions and the use of medical surveillance software are implemented group-wide.



# Environment



In early 2008 we established a Nyrstar Environment Policy, which was approved by the Nyrstar Board and will guide our future efforts and investments on environmental issues. We commit not only to minimising the environmental impact from current activities, but also to recognizing the environmental impact from past operations and addressing legacy issues.

As part of forming a new company, we also established core Group wide environmental standards and processes, including areas such as risk management, incident reporting, performance measurement and reporting, legal and other requirements, environmental provisions estimation and audits.

Our sites have Environmental Management Systems certified to ISO 14001. This ensures that all sites have identified their significant environmental risks and aspects and have established processes in place to minimize their emissions and continually improve their performance.

Nyrstar's key environmental risks and opportunities relate to:

- continually improving the performance of our production facilities and minimizing emissions
- meeting legal obligations and the requirements of our voluntary agreements which become more complex and stringent over time
- addressing legacy issues, particularly historical soil and groundwater contamination and accumulated by-products and wastes
- providing material stewardship through efficient and responsible use of resources, including water and energy, minimizing waste and expanding recycling options

### Environment Improvement Projects

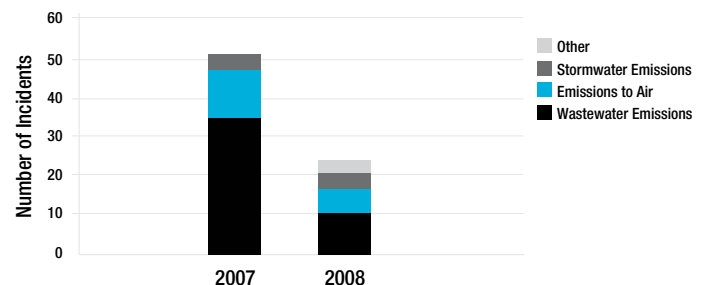
The most significant risks at each site differ, depending on the site history and location, physical and regulatory environment, and the level of past investment in environmental protection measures. Therefore environmental improvement programs and targets are generally site specific. We have progressed a number of key site projects over the past year, including:

- on-site fugitive lead emission reduction measures including blast furnace enclosure and continued support for measures to reduce community lead exposure at Port Pirie
- installing final capping on the last gypsum pond, which completes remediation of the historical jarosite and gypsum storage area at Budel
- upgrading the wastewater treatment plant at Overpelt
- finalizing the scope of the contaminated groundwater remediation programs at Balen and Overpelt
- reaching agreement with local residents for a garden soils remediation program in the Asturias area at Auby
- installing additional stormwater retention capacity, progressing reclamation of historical leach product and manganese dioxide stockpiles, and disposal of historical mercury contaminated wastes at Hobart.

### Compliance

Our key compliance measure is recordable environmental incidents, which are defined as events requiring reporting to the relevant regulatory authority which are a non-compliance with licence conditions. The total number of recordable incidents in 2008 was 24, which was a 53% reduction on the 2007 result of 51 and exceeded the 20% improvement target we had set ourselves. The most frequent incident type was non-compliance with wastewater discharge limits (46%), the next most common related to air emissions (25%). All of the recordable environmental incidents were minor in nature and there was no material impact on the environment or communities adjacent to any of Nyrstar's operations.

**Figure 5: Recordable Environmental Incidents**

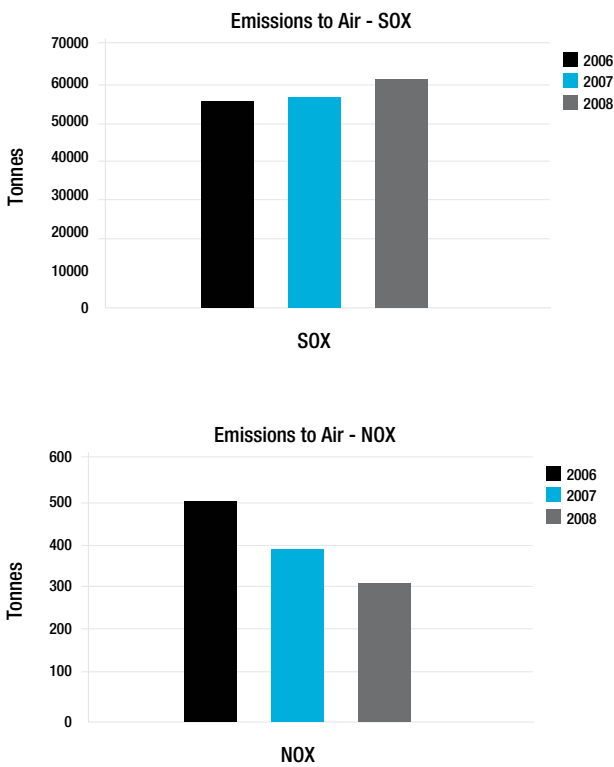


### Emissions to Air & Water

We measure emissions of key pollutants discharged to air and water at licensed emission points (stacks and wastewater outfalls). The overall target is to reduce our emissions.

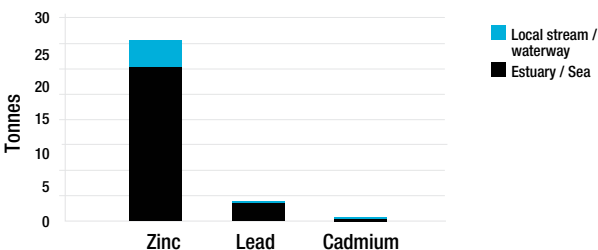
Emissions to air from licensed point sources for nitrogen (as NOx) decreased, reflecting a reduction at a number of sites. Emissions of sulphur (as SOx) increased, although 97% of these emissions relate to Port Pirie which has limited sulphur capture and emissions are related to production rates.

**Figure 6: Significant air emissions by type and weight**



Consistent data relating to wastewater emissions from licensed point sources is only available for the 2008 year. The discharge of key metals in wastewater emissions by receiving water type is shown in Figure 7.

**Figure 7: Total water discharge by quality and destination**

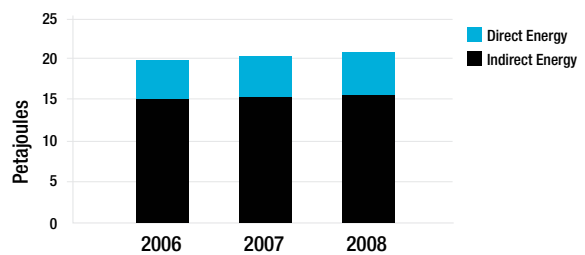


**Energy & Greenhouse Gases**

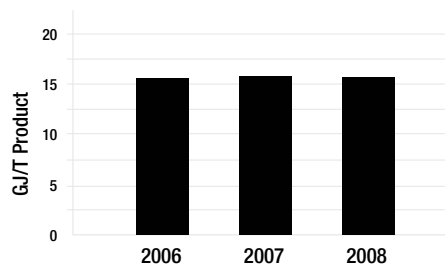
Zinc and lead production are energy intensive, predominantly due to the use of electricity in our processes. Our carbon footprint is therefore highly dependent on the electricity generation source in the regions that we operate. Our energy and greenhouse gas emission indicators include direct energy use at the site and emission of greenhouse gases from the site or associated with generation of direct energy used during the period. Our overall target is to increase energy use efficiency and reduce greenhouse gas emission intensity.

Energy use has increased slightly from 20.1 Petajoules in 2007 to 20.5 Petajoules in 2008, however energy use and greenhouse gas emission intensity have remained constant at 16.1 Gigajoules and 1.5 tonnes CO<sub>2</sub>-e per tonne of metal production. For zinc smelters, an average of 95% of energy use is electricity (indirect), most of which is used in the electrolysis step of the process. Similarly, the carbon dioxide profile at the zinc smelters is almost entirely indirect emissions, averaging 97% across the Group, and therefore the profile is heavily influenced by the regional electricity generation source. Direct energy use and carbon dioxide emissions are greater than indirects at the Port Pirie smelter which uses different processes to produce a variety of metal products.

**Figure 8: Energy consumption**

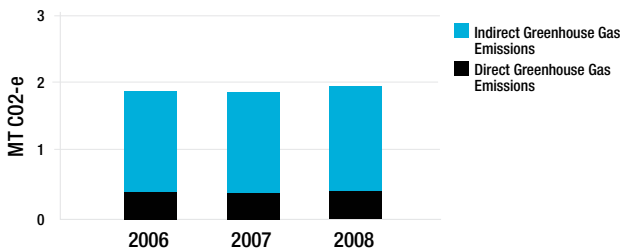


**Figure 9: Energy use intensity (GJ/T product)**

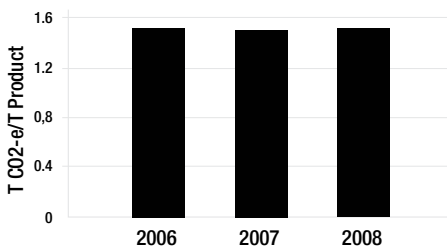




**Figure 10: Total direct and indirect greenhouse gas emissions**



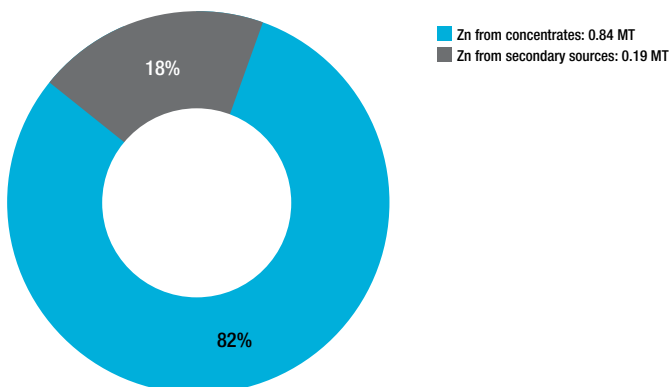
**Figure 11: CO2 emission intensity**



**Raw Material Use**

We extract metals and other valuable by-products from natural raw materials, and also increasingly from secondary recycled sources such as zinc oxides. We intend to increase the proportion of zinc production from secondary materials, which has cost and energy efficiency benefits.

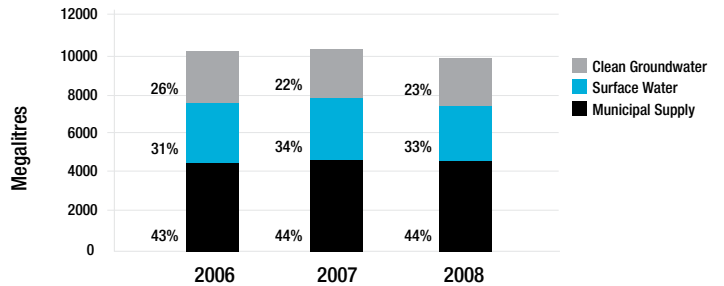
**Figure 12: Zinc from primary and secondary raw material sources**



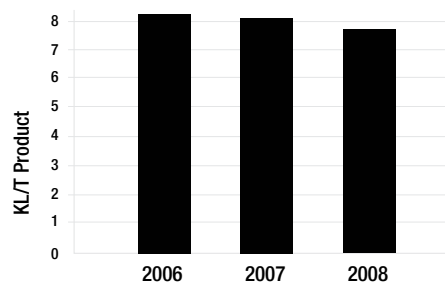
**Water Use**

We track water sources used on site for process purposes. We use fresh water as supplied by local utility companies or from local surface or groundwater resources. We may also use stormwater or contaminated groundwater that has been recovered at the site to replace fresh water. Our overall target is to increase water use efficiency, particularly for fresh water supplies. Fresh water use decreased slightly over the past year. Fresh water use efficiency has continued to improve slightly, from 8.2 Kilolitres per tonne of product in 2006, to 8.1 in 2007 and 7.7 in 2008.

**Figure 13: Fresh water use by source**



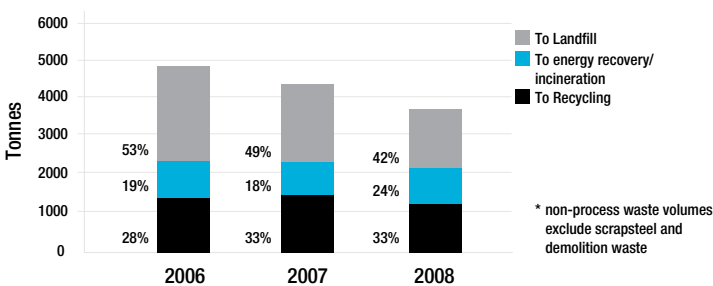
**Figure 14: Fresh water use efficiency**



**Waste**

We measure both process and non-process wastes arising from our operating sites. Our target is to increase recycling, reduce waste to landfill and reduce on-site waste stockpiles over time. Efforts to reduce waste volumes have seen a decrease in the tonnage and proportion of non-process waste to landfill in 2008.

**Figure 15: Non-process waste by disposal method**



**Looking forward**

During 2009 we plan to continue our existing initiatives to support risk management, the reduction of emissions from our current activities and addressing our historical contamination and waste issues. The timing and scope of a number of these programs have been reviewed in light of the current global economic situation and the restricted availability of capital in the coming year. Key activities and initiatives for 2009 include:

- ensure that all site significant environmental risk registers are current and complete as recorded in our global Risk Information Management System
- undertake site level initiatives to raise the environmental awareness of our workforce
- further reduce the number of recordable incidents by 20%
- complete and commission the electrostatic mist precipitator at Hobart to reduce the visibility of the foreshore stack plume.
- complete the soil remediation program in the local Asturias community and complete the goethite compacting project to extend current landfill life at Auby
- finalize the Aftercare Plan for the Budel historical landfill area with the Province of Noord-Brabant
- obtain all required regulatory approvals for the Balen and Overpelt groundwater remediation projects and establish a landfill for as a repository for off-site community soil remediation projects at Balen.



# People



At Nyrstar, we believe that people are the foundation for our success. Our long-term sustainability depends upon recruiting, training, developing and retaining a talented, dedicated and motivated workforce.

We are committed to open and honest relationships with our employees, and we aim to be consistent, fair and transparent in our practices and processes and, as a minimum, to meet all legislative requirements in our jurisdictions of operation.

To support and guide us in our commitment to our people, we operate by a set of core Nyrstar values which clearly set out our intention to prevent harm, be open and honest, keep our word, be considerate and work together as we go about our tasks. To further reinforce their importance, we link our values to individual reward via our performance management process by inclusion in our Annual Incentive Plan for all employees and a 360 degree feedback process for those at management level. We believe that the Nyrstar values and the behaviours associated with them will not only create a culture that attracts and retains talented employees but will also translate into building a lean, efficient, dynamic and flexible business that is focused on creating value.

In addition to our Nyrstar values, we also have developed a Code of Business Conduct that defines even further the standards of integrity and business conduct expected of all employees in their dealings with our community, environment, customers, suppliers, competitors, shareholders and the assets of the company. All employees are exposed to these expectations, typically during the induction process. At this time they are given a copy of the Code of Business Conduct booklet, which also contains a useful framework for ethical decision-making.

### Human Rights

Support for fundamental human rights is an integral part of how we operate. We believe companies can and should play a constructive role in upholding and promoting human rights. We are committed to respecting our employees' rights in line with the International Labour Organisation's Declaration of Fundamental Human Rights at Work.

### Workforce composition and terms of engagement

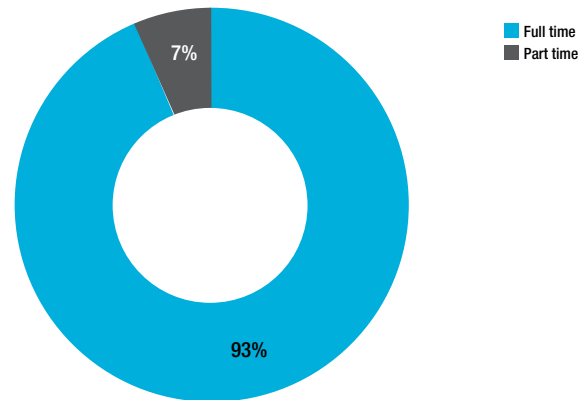
Nyrstar aims to comply with relevant legislative employment frameworks wherever we operate. We recognize the right of freedom of association by our employees. We have a number of operations where we have a mix of collective and individually regulated employment agreements, however this does not affect the rights of employees to choose to belong to trade unions.

In 2008, approximately 71 per cent of our global workforce was covered by a collective agreement. Most of our employees are engaged on a full time basis, however the same standard terms and conditions of employment apply to both full and part time employees.

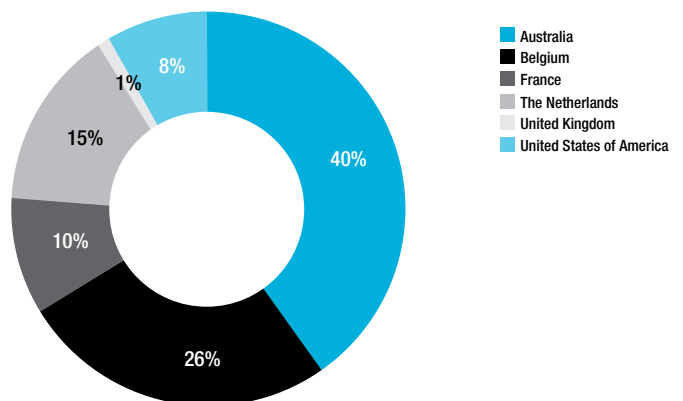
Nyrstar believes in constructive and open dialogue with our employees. Our policy is to consult with employees on any major organizational changes, and to ensure that appropriate processes are in place at each of our operations to manage and resolve any issues as they arise. We have processes in place at all sites to effectively manage any discriminatory incidents. There were no incidents of discrimination or violation of rights reported during 2008.

**Figure 16: Workforce composition**

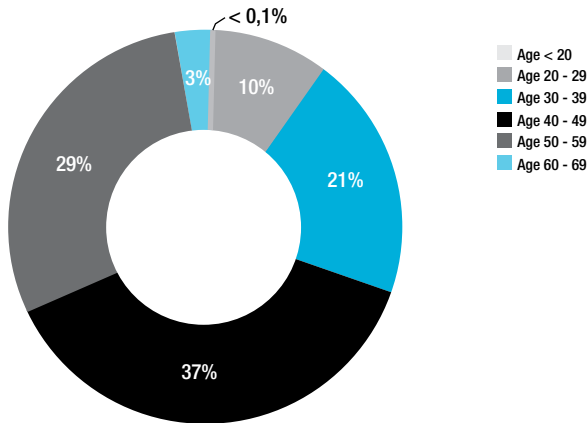
2008 Workforce composition by employment type



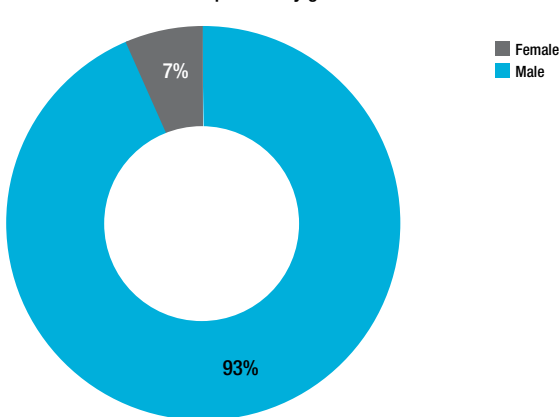
2008 Workforce composition by region



2008 Workforce Composition by age



2008 Workforce composition by gender



**Training and Development**

Having the right people with the right skills at the right time is critical to our success. We have formal processes in place to ensure that all of our employees receive regular performance reviews. To ensure that that our people have the requisite skills, we have several development programs in place.

**Nyrstar Leadership Program**

For our managers and in particular our front-line leaders, we have the Nyrstar Leadership Program that focuses on the development of

core managerial skills. This program is conducted at our sites in local languages.

**Nyrstar Unlimited**

As part of a broader cultural transformation initiative, we have the Nyrstar Unlimited program that builds on these critical people leadership skills but also deepens self-awareness and reinforces the desired attitudes and spirit necessary for success. This program is being conducted at our major sites in Balen, Budel, Hobart, Port Pirie and Clarksville and will shortly commence in Auby.

**Graduate Development Program**

The Nyrstar Graduate Program is a key component of our overall talent attraction and development strategy and helps us to ensure that Nyrstar is an employer of choice for young professionals. The two-year program is structured to provide a depth and breadth of technical experience and also to enhance interpersonal skills and personal development. In 2008, Nyrstar employed 12 graduates globally within the Nyrstar Graduate Program, spread across our operations.

**Safety Leadership**

In line with our emphasis on safety and our commitment to preventing harm, we have a number of specific safety leadership programs for operating and supervisory staff. These include programs with an emphasis on building skills and awareness in fundamental safety skills and environmental impact, risk-assessment and promotion of a safety-oriented mindset.

**Leading by example**

We strongly believe that leaders lead by example and as a result of this view, the senior management team continuously upgrades it leadership effectiveness by participation in an ongoing development program.

**Looking forward**

Our key people priorities and targets for 2009 include:

- Enhance our leadership capabilities: continued roll out of our suite of Leadership Development Programs;
- Continue to build upon our competency-based training programs, particularly across our European operations
- Continue to embed the Nyrstar Values within our systems of reward and broader human resources processes;

## Community and Society



Nyrstar's reputation is greatly influenced by our ability to communicate in a consistent and professional manner with all our stakeholders, including employees, shareholders, the investment community, media, government and the communities. A core Nyrstar value is to be open and honest. That is, we will communicate openly and tell the truth, building trust and simplifying our communications.

We consider our key external stakeholders to be our shareholders, our customers and suppliers, our regulators and the local communities around our operating plants. Our strategy for engaging our stakeholders differs with each stakeholder group.

### Investors

Nyrstar is a Belgium-based company listed on the Euronext Brussels stock exchange. As a Belgian listed company, Nyrstar is obliged to provide investors in its shares with all information necessary to ensure the transparency, integrity and good functioning of the market. The information that is disclosed must be fair, precise and sincere, and must enable the holders of shares in Nyrstar and the public to assess the influence of the information on Nyrstar's position, business and results.

During 2008, we developed our Disclosure Policy, which outlines how we will ensure that we meet the requirements for disclosure of company information and for informing the investment community.

As well as scheduled communications and meetings with the business and investment community on our performance, we took steps to ensure that our investors and potential investors understood our business and business model by holding an investor teach-in and posting related materials on the investors section of the Nyrstar website.

During 2009, our key objective will be ensuring that the financial community understands our strategy and vision, particularly in light of recent company changes. In June, we plan to hold a Nyrstar Strategy Day to communicate this directly to key investors and investment analysts in a workshop format.

### Customers and Suppliers

Our customers are important to our success and most of our engagement with them is on an individual basis.

We conduct our business within the framework of applicable professional standards, laws, regulations and internal policies; however we also acknowledge that these requirements do not govern all types of behaviour. As a result, Nyrstar has developed a Code of Business Conduct, which covers all Nyrstar people and sites. Training on the code was commenced and will be completed at all sites during 2009. An anti-trust and competition law training program specifically designed for Nyrstar was also delivered during the year. The program aimed to provide support and guidance to key employees in understanding how we

must conduct our business in this area.

There were no legal actions taken against the company regarding anti-trust or anti-competitive behaviour. There were no non-compliances reported with regulations or voluntary codes concerning any type of marketing communications, product information or labelling or breaches of customer privacy.

Looking forward, we will complete training all of our people in the Nyrstar Code of Business Conduct and the role of the Compliance Officer. We will conduct annual anti-trust and competition law training for selected Nyrstar personnel in relevant roles. We will also commence a review of all our product health and safety information as part of introduction of the REACH legislation in the European Union.

### Communities and Regulators

Nyrstar recognizes the importance of having healthy and sustainable communities around our operating sites. We believe that mutually beneficial relationships will assist us to achieve our business objectives and support sites in maintaining their licence to operate. Our support can also contribute to the viability of local businesses and support services, and promote a safe and vibrant community; which are important factors for attracting and retaining skilled employees in those regions.

### Community Consultation Processes

As part of the formation of Nyrstar, we have been developing a more consistent approach to stakeholder relations, including how we can more constructively engage and consult with our regulators and local community. This will continue in the coming year. We have formally recognized the community relations role as part of the standard organizational structure at our larger sites. Currently our consultation processes vary between sites and issues, but include formal meetings and consultation committees, regulator newsletters, site open days, issues based public meetings and mail outs, and individual contacts.

There have been a number of key issues where we have worked closely with our communities and regulators over the past year, including:

- development of the 'Sustainable Industrial Park Cranendonck' (DIC), on land adjacent to the Budel facility.
- addressing soil contamination in the Asturias neighbourhood at Auby, where 139 local gardens are being remediated.
- continuing the Port Pirie tenby10 program to reduce children's blood lead levels in the local community
- revisiting the nature and extent of historical soil contamination around the Hobart Smelter, which was last investigated in the mid 1990's.
- communicating with regulators, researchers and the local community on ongoing community health issues relating to cadmium in the Flanders area.

### Public Policy and Regulation

There are a number of issues on which Nyrstar has chosen to engage with public policy makers and regulators, either directly, or through industry associations which we belong to including the International Zinc Association, International Lead Association and Eurometaux. The issues which Nyrstar has provided input on in the past year include:

- Greenhouse Gas emissions trading schemes in Europe and Australia. The European Union is proposing changes to its existing greenhouse gas emissions trading scheme post 2012 and the Australian government is currently designing a scheme that will come into force in 2010. Nyrstar, together with other zinc smelting companies operating in the EU and Australia are currently actively involved in responding to the various draft proposals on emissions trading schemes. In particular Nyrstar has been commenting on specific considerations proposed for trade exposed energy intensive industries. Hobart and Port Pirie sites also completed activities and reporting under the Australian Energy Efficiency Opportunities Act, with the first site public reports being made available on the Nyrstar website.
- The EU's New Chemicals Policy for the Registration, Evaluation and Authorization of Chemicals (REACH) that entered into force on 1 June 2007. Nyrstar participates in a number of industry consortia formed for the purposes of REACH compliance. All Nyrstar legal entities pre-registered for the substances currently produced or imported into the EU ahead of the November 2008 deadline.
- Revision of the EU Integrated Pollution Prevention and Control Directive best available techniques reference document for the non-ferrous metals industry (IPPC BREF Notes). Although the BREF Notes are not legally binding, Member States and their authorities are obliged to take account of the BREF based standards when setting IPPC permit conditions for individual sites. Nyrstar made both individual and industry submissions on the revised zinc smelting section of the document.
- Impacts on the zinc industry arising from Dutch proposals on sustainable procurement legislation. Nyrstar has been working with the Stichting Duurzaam Bouwmetaalwith (DBM) in an effort to ensure that findings from the EU Risk Assessment for zinc are adequately incorporated into policy development.
- Recognition of hazardous waste issues in Tasmania and the need for a repository for such industrial wastes. Nyrstar Hobart has been working directly and with the Tasmanian Department of Economic Development and the Tasmanian Environment Division on this issue.
- Developments in general EU environmental legislation through participation in the International Zinc Association (IZA) and Eurometaux.

### External Partnerships, Sponsorships And Donations

During the year we developed a formalized Nyrstar Group approach to external partnerships, sponsorships and donations. This guides our actions in engaging and building goodwill with key stakeholders in a way that supports our business objectives. Our guidelines state that we will not

support activities that do not reflect the Nyrstar Vision and Values and will not support political parties or campaigns.

Sponsorships, donations and in-kind contributions during 2008 included support for local community initiatives such as sporting and cultural events. Our stakeholder support also contributed to the protection or restoration of habitats in the vicinity of our plants, such as the cleanup of historically contaminated sediments in a waterway and establishment of a nature reserve walkway near the Budel plant.

Looking forward for 2009, we see that there will be a continuation of most of the programs and policy issues that we were a priority for us in 2008.

### Recognition of Our Performance

2008 was a year of establishing systems and baseline performance for Nyrstar, however we did receive the following awards and recognition during the year:

- Investor Relations Society: Winner of the Best Practice Corporate Website 2008 - International Category for the Nyrstar website [www.ir-soc.org.uk](http://www.ir-soc.org.uk)
- Australian Civil Contractors Federation: CCF Earth Awards State Winner (Tasmania Category 2 – project value \$AUD1-5million) for the Nyrstar Hobart Smelter Stormwater Retention Pond. [www.civilcontractors.com/EarthAwards](http://www.civilcontractors.com/EarthAwards)

# External Assurance of the Report



## Nyrstar's approach to external verification.

Nyrstar has a Group Environmental Audit Program, in which the 2008 performance data relating to all of the wholly owned operating sites included in this report was reviewed by ERM.

## ERM Independent Assurance Report to Nyrstar

Environmental Resources Management Australia Pty Ltd (ERM) was engaged by Nyrstar to provide independent limited assurance of its 2008 Sustainability Report.

### Scope of Work

The 2008 Sustainability Report (the Report) covers Nyrstar's six major operations for the 12 months to 30 December 2008, unless stated otherwise in the text. These six operations are: Europe - Auby, Balen/Overpelt and Budel; USA - Clarksville; Australia - Port Pirie and Hobart. This work was performed in accordance with ERM's assurance methodology, which is based on the international assurance standards: ISAE 3000, AA1000 AS (2003) and ISO 19011. ERM reviewed Nyrstar's use of the AA1000 AS (2003) Principles of Completeness and Materiality, in reporting performance. To do this, ERM interviewed a number of personnel and reviewed relevant documentation for Nyrstar's six major operations, regarding:

1. **Data accuracy**, including data trails from original site-based data retrieval to the final Report, for a representative sample of material parameters.
2. **Robustness of data capture processes**, including collation, transcription, internal reporting and controls in place, such as internal data verification checks.
3. **Adequacy and relevance of key statements made in the Report**, in relation to the subject matter detailed below.
4. **Effectiveness of mechanisms in place for Report preparation.**

The subject matter for this limited assurance consisted of the following sections of the Report:

- **Performance Overview.**
- **Safety & Health.**
- **People.**
- **Environment.**
- **Community & Society.**

The scope of this assurance excluded financial information and data and statements relating to previous financial years. It also excluded a review of Nyrstar's GRI Application Level, therefore this assurance statement makes no comment on Nyrstar's self-declaration of Application Level B+.

### ERM's Independence

Nyrstar was responsible for preparing the 2008 Sustainability Report. The ERM team, led by Jo Cain, Partner and Practice Leader for Corporate Advisory Services, Australia & New Zealand, was responsible for expressing assurance conclusions in line with the scope of work agreed with Nyrstar. During 2008, ERM undertook auditing work with Nyrstar, including site data verification audits for some months of the financial year 2007/08.

### Our Conclusion

**On the basis of its scope of work, and in consideration of the limitations of the assurance engagement presented above, ERM concludes that, for the specified subject matter, Nyrstar's 2008 Sustainability Report addresses the AA1000 AS (2003) Principles of Completeness and Materiality for the 12-month period to 30 December 2008.**

### Key Findings

Based on its scope of work, and without affecting the verification conclusion noted above, ERM provides the following key observations relating to good practice:

- The use of RIMS, Nyrstar's electronic system for the internal reporting of site data, covers Nyrstar's six major operations and provides a strong basis for reporting key data to Nyrstar management and for use in public reporting.
- Recommendations made as a result of last year's site data verification audits have largely been addressed. This shows a commitment by Nyrstar to continually improve the systems and processes required for reporting.  
ERM also provides the following key areas for improvement:
- Lost Time Injury (LTI) definition does not include casuals, contractors and visitors, thus a complete dataset is not provided for the total LTI position.
- Some data definitions, such as fresh water use - rainwater and surface water, are not well understood by all relevant personnel, leading to different interpretations from site-to-site. Improved definitions and related procedures, alongside training for those involved in data collation, could improve data quality.
- Sponsorship, donations and in-kind support data could not be verified. This could be addressed with the development of a Community Investment Framework and implementation of a measurement standard using globally-acknowledged benchmarks and guidelines.
- Some sites estimate data for water use and waste generation. As these data could be measured, continued progress towards more accurate data sources is encouraged.
- Greenhouse gas emissions data are currently managed in RIMS and a separate spreadsheet. One data management tool is encouraged to assist in avoiding transcription error and duplication of effort.

ERM congratulates Nyrstar for committing to public sustainability reporting soon after recent changes in its ownership and structure.

A stylized, handwritten signature of the letters 'ERM' in a dark blue ink.

Environmental Resources Management Limited (ERM)  
17 JUNE 2009  
Melbourne, Australia

Environmental Resources Management Australia Pty Limited (ERM) is an independent global provider of environmental, social and Sustainability consulting and assurance services. ERM has prepared this statement for Nyrstar in accordance with ERM's standard terms and the standard practised by members of the environmental consulting profession performing this type of service at the same time. No other warranty, express or implied, is given by ERM as a result of the provision of this statement. To the extent permitted by law, this statement is provided for informational purposes only, without the right to rely, and ERM will not be liable for any reliance which may be placed on this statement by a third party. This statement may not be used by any third party without ERM's express written permission.



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