



We will operate to the highest standard of safety, health and care for the environment.

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About Orica

Orica is a publicly owned chemical company listed on the Australian Stock Exchange, employing around 9,000 staff across approximately 30 countries.

We have four main business areas – Mining Services, Agricultural Chemicals, Consumer Products and Chemicals. This includes activities of Incitec Ltd. We are also involved in two significant joint ventures – Qenos Holdings Pty Ltd and Australian Vinyls Corporation.

This report

Orica places great emphasis on safety, health and care for the environment (SH&E). This report documents Orica's performance in these areas over the last financial year (1 October 1999 – 30 September 2000) and is complementary to the company's Annual Report.

We have kept the report short to make sure that it is easy to read and understand. The report aims to give you insight into how Orica manages SH&E issues. More detailed information can be obtained directly from the company or via our website (www.orica.com). We rely on your feedback to guide us in our future reporting.



● Orica's major locations

Cover: Orica employees work in a safety first culture. Michael Crane (Agricultural Chemicals) is the main picture and, from top, Belinda Swinbourne (Chemicals), Ian Foote (Consumer Products) and Howard Baker (Agricultural Chemicals)



Orica's Safety, Health & Environment (SH&E) Policy

At Orica we believe that all work related injuries, illnesses and environmental incidents are preventable.

We will manage all our activities with concern for people and the environment and will conduct our business for the benefit of society and without compromising the quality of life of future generations.

In particular we will:

- strive to ensure our facilities operate to the highest standards to protect our employees, contractors, neighbours and the environment
- continue to seek ways to efficiently use materials and energy
- sell only those products that can be produced, transported, stored, used and disposed of safely
- provide appropriate information and/or training on the safe use and disposal of our products to our customers and consumers
- seek to develop new or improved products and processes to improve the contribution we make to the quality of people's lives and to minimise the impact on the environment
- require every employee and contractor working for us to comply with relevant legislation and with this policy and we will provide them with the necessary training
- encourage employee initiatives that contribute to a safer and improved environment at work, at home and in the community
- set challenging targets and measure progress to ensure we continuously improve our safety, health and environmental performance
- communicate openly about our activities and report progress on our safety, health and environmental performance.

We make this commitment to our employees, contractors, customers, shareholders and the community as we work towards our vision of 'No Injuries to Anyone, Ever'.

The policy was agreed by the Orica Limited Board on 10 February 1998 and signed by Philip Weickhardt.



Orica's inclusion in the Dow Jones sustainability group index this year is external endorsement of our safety, health and environment performance initiatives.

Message from the managing director and CEO

Welcome to our sixth annual safety, health and environment (SH&E) performance report. I trust it conveys our commitment to continuously improve our SH&E performance to meet the expectations of shareholders, employees and the general community.

This year I'm distressed to report that two of our employees were killed at work. These incidents came as a big shock to all of us working at Orica, as we pride ourselves on our safety performance. They highlight that even though we regularly handle potentially dangerous chemicals and operate complex equipment, it is often the more straightforward activities such as driving a car or operating a forklift that can pose threats to our lives.

Despite these tragic incidents, this year we have had significantly fewer work related injuries and illnesses than ever before. Our ultimate goals include conducting our business with zero injuries, zero illnesses, zero emissions and zero spills. However we know that is not easily achieved, so our practice is to set objectives and performance milestones we want to reach, or preferably pass, at some point in time. We did this for the period 1995–2000 with our Challenge 2000 program and although we did not achieve all we set out to achieve, we made great strides in all aspects that we targeted.

We are repeating this process with our Challenge 2005 program. We have retained many of our traditional measures, but have also introduced some different aspects that relate to the future of our company and its role in society. In particular we have set objectives for material efficiency, reduction of greenhouse gas emissions, product life cycle risk assessments and social responsibility, all of which are consistent with our commitment to the sustainability of our business and the world we live in.

Finally, I would like to share an answer I give shareholders and my contemporaries when asked why Orica puts so much emphasis on safety, health and environment. My answer is simple: we believe our employees have the right to come home safe and well at the end of every working day, and the public has the right to expect that we will operate our business to the highest standards. Beyond this, it is my personal experience that safe businesses are good businesses.

Philip Weickhardt
Managing Director

Orica's safety, health and environment performance

At Orica we believe all work related injuries, illnesses and environmental incidents are preventable.

Safety and Health

This year the number of work related injuries and illnesses suffered by our employees and contractors has been reduced significantly. However, any satisfaction with this improvement is tempered by the tragic work related deaths of two of our employees.

Fatal injuries

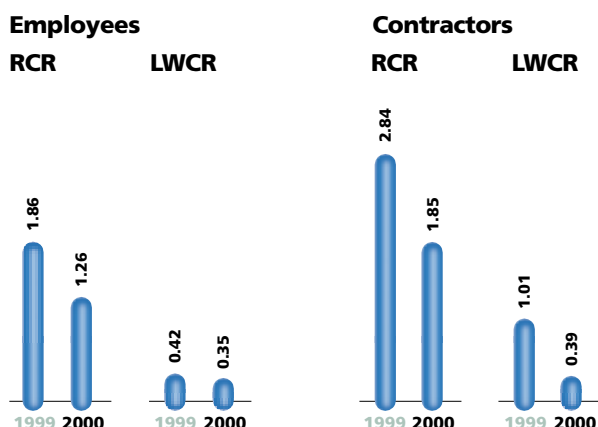
Muhammad Maliki, an operator at PT Orica Mining Services in Indonesia, was killed in a forklift rollover incident at the Satui Mine in South Kalimantan on 24 August 2000. This was the company's first fatality at one of its operations since 1991. A full investigation has been undertaken in conjunction with the local authorities, the mine owners and the mine managers.

Matthew Connor, an operator at our bulk explosives site in Jundee, Western Australia, was killed on 26 September 2000 when he lost control of the company vehicle he was driving on his way to the Orica site north of Kalgoorlie. The company is cooperating with the police in their inquiries as well as conducting an internal investigation.

Overall performance

In the past year there has been a significant reduction in the number of employees and contractors who have been injured or suffered work related illnesses. Both the number and, overall, the severity of incidents have decreased. Last year there were 193 employee and 48 contractor recordable cases. This year with a slightly smaller workforce we have had 121 and 38 recordable cases respectively.

For employees, this equates to a recordable case rate (RCR) of 1.26 per 200,000 hours worked and a lost workday case rate (LWCR) of 0.35. For contractors, that is those formally employed by others doing work for us on our sites, the recordable case rate was 1.85 and the lost workday case rate was 0.39. For both employees and contractors the rates this year show a considerable improvement in performance (see below).



This is the second full year that Orica has reported its injuries and illnesses using the US OSHA (Occupational Safety & Health Administration) system. We chose the system because of its rigour, comprehensiveness, and because it facilitates benchmarking with the safest companies in the world. For example, in 1999 member companies of the US Chemical Manufacturers Association had an average recordable case rate of 2.13 and lost workday case rate of 0.38. Orica's Australian operations also participate in the Plastics and Chemicals Industries Association (PACIA) annual safety survey. In this survey Orica has an injury rate about one quarter the chemical industry average.

Preventative programs

The safety and health performance improvement in this past year can be attributed to many factors. It is the result of a lot of thought, effort and commitment from all employees and contractors and their line managers. A notable contribution has come from the efforts to foster a prevention mindset safety culture at Orica and to clarify the safety expectations of all individuals and their supervisors.

Orica has set itself challenging performance improvement goals over the next five years and beyond, and to reach the milestones set, we recognise that emphasis must be placed on the areas of highest risk of injury, such as:

- manual handling – by better design of workplaces and improved training programs.
- forklift operations – by mandating use of seat belts and implementing other safety devices and programs.
- motor vehicles – by putting an even greater emphasis on behavioural safety in driver training programs.

We also have comprehensive health assessment and occupational hygiene programs in place which measure performance on a quarterly basis. Each program is subject to an ongoing quality assurance process to ensure continuing integrity.

Our SH&E Management System is continually being updated to reflect best practice and, at a more local level, knowledge management processes such as Basis of Safety, play an important role in retaining safe working conditions in hazardous situations. The roles of site responsible engineers are being reinforced to ensure the integrity of plant and equipment.

Employees and contractors – number of recordable and lost workday cases per 200,000 hours worked



Chemicals' bulk tanker loading facility at Timaru, South Island, New Zealand

Distribution

Orica transports large quantities of often hazardous materials over long distances to its customers. Most of this transport is by road and undertaken by contract carriers. In distributing its products in this past year, the company and its carriers were involved in 23 significant incidents resulting in loss of material or damage, injury or traffic disruption. Five of these incidents involved fatalities, three of them to third parties.

In each of these tragic incidents, the carriage of the products was not a factor and there was little or nothing within the direct control of the company. As is our practice, all incidents were subjected to a thorough investigation and the lessons were shared across the company.

Prosecutions

In March 2000 Orica pleaded guilty to four charges of breaches of the Victorian Dangerous Goods (Storage and Handling) and Occupational Health and Safety Acts relating to the site at Deer Park (Victoria, Australia) and was fined a total of \$35,000. In response a major overhaul of the site's fire protection system is underway and improved document management procedures have been implemented.

In April 2000 the company pleaded guilty to six offences under the UK Explosives Act and the Health and Safety at Work Act and was fined £30,000. The business has complied with the conditions of the original improvement notice and has satisfied government inspectors in subsequent visits.

In May 2000 a NSW WorkCover inspector issued an infringement notice with a fine of \$550 to Incitec at the Port Kembla (New South Wales, Australia) site for breaches of the NSW Confined Spaces Regulations.

During the year the US business received a total of 35 minor citations from the US Mines Safety and Health Administration. These related to breaches of mine safety regulations and incurred fines in total of about \$US5,000.

Awards and achievements

A team from the Watercare business received the TG Crane/PACIA Health and Safety Award for their Chlorine Safeguard product stewardship program (see page 13). This is the fourth year in a row that a team from the company has won this prestigious Australian chemical industry award.

The Samarinda Safety Squad, a team involved in the construction project for the major upgrade of the Formaldehyde and Resins plant at Samarinda in Indonesia, won the SH&E award at the Orica Excellence Awards in December 1999.

Steven Toth, Consumer Products

Environment

Environmental impacts

Orica's activities can impact on the environment in one of three ways:

- by consumption of natural resources, particularly fossil fuels, and by emissions and transfers of waste products from our existing operations,
- from past practices when manufacturing technology and environmental management were inadequate by the standards of today, and
- by dispersion of its products into the environment with the potential for short and long term effects.

We are committed to the prevention of pollution from our operations. Waste reduction plans are in place and waste streams are monitored. The results are published in site community reports or as required by the relevant authorities (see table on page 7).

Similarly, we are always seeking ways to use materials more efficiently. The company is a major consumer, either directly or indirectly, of fossil fuels.

This not only has resource use implications, but also impacts on climate change. In addition, Orica uses almost 10 million kilolitres of water in its operations every year.

Orica's product stewardship activities seek to not only ensure the safe handling of our products but also to minimise their impact on the environment. Examples of product stewardship activities are given in the business pages 10 to 13.

Energy usage and greenhouse gas emissions

Orica consumes a total of 27,000 terajoules of energy a year in carrying out its operations. This includes natural gas consumed by the Incitec operations at Gibson Island (Queensland, Australia) and Kooragang Island (New South Wales, Australia) in the manufacture of ammonia. In the past year the total release of carbon dioxide, including that as a consequence of electrical energy consumption, was 1.8 million tonnes. This was down from the figure the previous year of 2.7 million tonnes, which included the ethylene/polyethylene operations at Botany (New South Wales, Australia) prior to its transfer to the joint venture company – Qenos. More than 90% of the energy consumed and carbon dioxide emitted by the company over the past year was in Australia.

In June 1996, Orica was one of the first four companies to sign a Cooperative Agreement under the Australian Government's Greenhouse Challenge program. The agreement included all fully owned sites in Australia. Since the signing of the agreement Orica has undergone substantial restructuring, with the closure of a number of plants and the formation of joint ventures involving other facilities.





Reading the vacuum system pressure transmitter on Incitec's new urea granulator plant at Gibson Island (Queensland, Australia)

Between 1995 and 1999 carbon dioxide emissions from the participating sites were reduced by 360,000 tonnes a year, equivalent to 25% per tonne of production. As a result of this and other activities, the company has met all of its commitments under the agreement.

In 1999 Australian Vinyls and Incitec, both Orica subsidiaries, signed separate Greenhouse Challenge Cooperative Agreements. Orica Australia and Qenos are currently reviewing an extension to their agreements over the next four to five year period. The ethylene/polyethylene manufacturing facilities at Botany will be included in the scope of the Qenos agreement.

Environmental licence compliance

Orica conducts a number of tests as part of its site licence requirements. This year the company was required to conduct over 27,000 tests. Of these 74 were either not completed or out of specification, giving a compliance rate of 99.7%.

Prosecutions

In November 1999 Incitec was fined \$25,000 in the New South Wales Land Protection Court for breaches of the NSW Environment Protection Act relating to a release of ammonia at Kooragang Island (New South Wales, Australia) in June 1998.

In February 2000 Australian Vinyls was fined \$10,000 in the Melbourne Magistrates Court for breaches of the Victorian Environment Protection Act. No conviction was recorded. The charges related to a release of vinyl chloride monomer from the Laverton (Victoria, Australia) plant in November 1998.

In September 2000 Incitec was fined \$25,000 in the New South Wales Land Protection Court for breaches of the Kooragang Island site licence conditions. This related to an incident in March 1999 when a quantity of nitric acid was discharged through the site effluent system.

In each case actions have been taken to prevent recurrence.

Awards

A team from Incitec's Gibson Island (Queensland, Australia) works won the 2000 PACIA Environment Award for their urea granulation facility project which led to a significant reduction in emissions (see page 11). This is the second year in a row that Incitec has won this important industry award.

Australian Vinyls won an Outstanding Achievement award at the Sustainable Energy Authority of Victoria 2000 Energy Smart Awards. The Altona and Laverton sites (Victoria, Australia) have reduced energy costs by over \$300,000 per year with consequential carbon dioxide emissions savings of over 11,000 tonnes per year.

Legacy Issues

Orica has maintained its program to remediate former manufacturing sites. In this past year work has been completed on the Cabarita (New South Wales, Australia), Cheltenham (Victoria, Australia) and Port Adelaide (South Australia, Australia) sites and the land has either been divested or is in the process of divestment. There has also been progress with our major programs at Botany and Rhodes (both New South Wales, Australia).

Botany – groundwater

Remediation is proceeding to plan and the project continues to draw on the best available international technologies and experience.

The pilot scale subsurface permeable reactive iron barrier installed in 1999 continues to treat shallow groundwater effectively. Performance monitoring data collected over 19 months is being used to optimise the design and location of a full scale treatment barrier. The project is proceeding under a voluntary remediation agreement with the NSW Environmental Protection Authority (NSW EPA) and in close collaboration with the local community through quarterly meetings and newsletters.

Botany – HCB disposal

The project for the safe and environmentally responsible destruction of hexachlorobenzene (HCB) waste securely stored at the Botany Industrial Park continues in line with the management plan regulated by the NSW EPA. The project team maintains close liaison with the Botany community by means of quarterly meetings and newsletters. A preferred technology has been chosen for the destruction process, and an environmental impact statement for the proposal will be issued for public comment in 2001. It is anticipated that it will take until 2007 to fully complete the waste destruction.

Rhodes

Remedial work on the Rhodes (New South Wales, Australia) site commenced in November 1999 and is scheduled for completion in mid 2001. Risk assessment of sediments in Homebush Bay is being undertaken with the support of the NSW EPA and Waterways Authority.

Land investigations are underway at Yarraville (Victoria, Australia) and Villawood (New South Wales, Australia). Remediation work is starting at Avondale (New Zealand).

Existing Orica sites are required to investigate, monitor and control operations to ensure current operations avoid creation of further legacy management issues.

Rowan Neilson, Corporate



Specific chemical releases from Orica's operations

Chemical	Releases (tonnes)		Sites
	1999 Total	2000 Total	
Acetone	84	96	Deer Park (Vic), Lorena (Brazil), Padstow (NSW), Rocklea (Qld)
Ammonia	3000	2000	Kooragang Is (NSW), Gibson Is (Qld), Monclova (Mexico), Carseland (Canada), Yarwun (Qld)
Carbon monoxide	2120	2020	Kooragang Is, Gibson Is, Monclova, Deer Park, Botany (NSW), Laverton – AV (Vic), Altona (Vic)
Chlorine	0.6	0.1	Botany, Yarraville (Vic), Yarwun
Chloroethane	0.3	0.3	Botany
Cobalt and compounds	0.2	0.1	Gracefield (NZ)
Dichloroethane (1,2)	31.5	31.0	Botany
Dichloromethane	1.1	1.9	Padstow
Di-(2-Ethylhexyl) phthalate	–	0.2	Deer Park, Mentone (Vic)
Ethanol	8.7	9.0	Lorena
Fluoride compounds	1.4	1.5	Cockle Creek (NSW)
Formaldehyde	7.4	7.0	Mt Maunganui (NZ), Hornby (NZ), Deer Park, Samarinda (Indonesia)
Glycol ethers	5.1	0.1	Scoresby (Vic)
Hexane	4.7	1.4	Padstow
Lead and compounds	25	40	Brownsburg (Canada), Deer Park, Lorena
Mercury and compounds	2.5	0.7	Botany, Yarraville
Methanol	48	47	Kooragang Is, Mt Maunganui, Deer Park
Methyl ethyl ketone	1.4	0.4	Rocklea, Padstow, Gracefield
Methyl isobutyl ketone	0.7	0.5	Rocklea, Gracefield
Methyl methacrylate	1.5	0.1	Laverton – Dulux (Vic)
Nitrogen to water	1000	940	Kooragang Is, Gibson Is, Mt Maunganui
Nitrogen oxides	4100	2900	Monclova, Gibson Is, Kooragang Is, Yarwun, Altona, Laverton – AV, Deer Park
Particulate matter	680	560	Kooragang Is, Carseland, Gibson Is, Laverton – AV, Altona, Yarwun, Clayton (Vic), Deer Park
Phosphorus to water	6.9	5.4	Kooragang Is, Gibson Is, Mt Maunganui
Sulphur dioxide	1030	120	Port Kembla (NSW), Yarwun, Gibson Is, Lorena
Tetrachloroethylene	9.8	10.4	Brownsburg
Toluene	7.0	7.1	Rocklea, Padstow, Gracefield
Trichloroethane	3.2	3.2	Botany
Vinyl chloride	6.6	2.1	Laverton – AV, Altona, Botany
Xylenes	4.5	2.8	Rocklea, Gracefield
Zinc and compounds	0.9	0.6	Kooragang Is

This list of chemicals is based on the Table 2 of the Australian National Pollutant Inventory. However trace combustion products have not been included. Chlorine used in water treatment of cooling tower water, etc has not been included. No report is given for releases less than 0.05 tonnes.

The number of chemicals listed this year is significantly less principally as a consequence of transfer of some production at Botany to Qenos and Huntsman Chemical Co.

The increase in acetone and lead releases is related to increased production.

The apparent reductions in releases of sulphur dioxide, nitrogen oxides and glycol ethers were also a consequence of transfer of production at Botany.

The significant reductions in ammonia and particulate matter are a consequence of the urea granulation upgrade at Gibson Island (see page 11).

Reduction in hexane, methyl ethyl ketone, methyl isobutyl ketone and xylene releases is part of the general reduction in solvent use and improved containment.

The reduction in release of methyl methacrylate is due to the cessation of production of resins at Padstow.

Orica's performance improvement goals

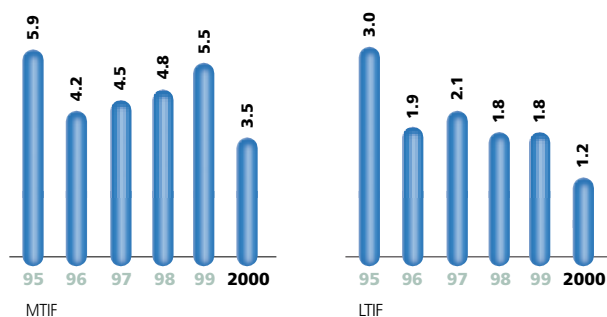
Challenge 2000

In 1995 Orica set itself tough safety, health, environment and product stewardship objectives for the next five years.

These objectives and associated targets were called Challenge 2000 and are shown below along with a description of the progress between 1995 and 2000.

Challenge 2000 – Safety

- The number of medical treatment injuries per million hours worked (MTIF) will be no more than 3.0.
- The number of lost time injuries per million hours worked (LTIF) will be no more than 1.0.



Although the targets were not achieved, the charts indicate a reduction in MTIF and LTIF of 41% and 60% respectively in the period 1995 to 2000.

Lost time injuries are injuries that result in the person involved missing at least one day or one shift of work. Medical treatment injuries includes lost time injuries plus injuries that require some form of medical treatment eg sutures, prescription medications, etc. In October 1998 Orica adopted the more comprehensive US Occupational Safety and Health Administration (OSHA) system for recording injuries and illnesses.

Challenge 2000 – Health

- We will sustain full compliance with the company's health assessment and occupational hygiene programs.
- There will be no new cases of work related allergies or noise induced hearing loss.
- Health promotion programs will be available to all employees.

In this period the percentage compliance with the company's own health assessment and hygiene programs was raised from the seventies to the nineties and this was accompanied by a significant reduction in reported occupational illnesses. In particular, the number of work related, noise induced hearing losses reported this year was one compared to 20 in 1995, and the number of work related allergies this year was zero compared to four in 1995. Health promotion programs are now commonplace on company sites.

Challenge 2000 – Environment

- We will measure, report and take the necessary steps to significantly reduce the impact of our operations on the environment.
- We will improve our energy efficiency per tonne of production by 10% of the 1995 base level.

In this period Orica has more than halved the number of serious releases from its operations from 25 in 1995 to 8 in 2000.

In addition, the company has reduced the environmental burden from licensed releases in two important areas of potential environmental impact, namely toxic chemicals to air and ozone generation chemicals (smog precursors) to air. In the former there has been 89% reduction and the latter a 64% reduction.

Energy efficiency has improved significantly and reductions have been achieved well in excess of the 10% target along with the associated reduction in emissions of greenhouse gases.

Challenge 2000 – Product stewardship

- All our businesses will have detailed product stewardship programs.
- All our businesses will have sustained compliance with all relevant regulations in all countries in which their products are sold.

All businesses have in place product stewardship programs and have assigned individuals to act as product stewards to promote and monitor performance. Orica also has its own rigorous 'product stewardship index' which measures compliance with best practice. In 1995 the company average index score was 50% and by 2000 is in excess of 75%. Some businesses have exceeded the 2000 target of more than 90%.

Overall, even though some of the objectives were not quite achieved, it is clear that Challenge 2000 has led to a much improved SH&E performance, and has provided a basis for further improvement in the future.

'The fact that our company set itself challenging targets meant that not all of the objectives were achieved. However, in every case, because of the striving to achieve step change improvements, we accomplished more than we initially might have thought was possible.'

Graeme Liebelt, SH&E director



Consumer Products' businesses, Dulux and Selleys, assisted art students from Whitireia Community Polytechnic (North Island, New Zealand) in the creation of this road safety mural for the local community

Challenge 2005

The ultimate goal is for Orica to conduct its business with zero injuries, zero illnesses, zero losses of containment of chemicals and zero wastes.

However, it is recognised that this will not be easily achieved and so the company has set itself performance improvement objectives with milestones it wants to reach and preferably pass by the year 2005. Here is a list of objectives and, where appropriate, measures and milestones.

Challenge 2005 – Safety and health

- We will reduce the rate of injuries and illnesses by at least half in this five year period.
- High compliance will be maintained in the illness prevention programs.

Measure and milestones:

The number of injury and illness recordable cases per 200,000 hours worked is currently 1.26. The 2005 milestone is less than 0.63.

The recordable cases are as per the US OSHA system and rates relate to 200,000 hours worked which is equivalent to the hours worked by 100 people in a year.

Challenge 2005 – Environment

- We will continue our program of restoring land and groundwater affected by past activities.
- We will eliminate the risk from the storage of hazardous materials in underground tanks.
- We will at least halve the number of accidental losses of containment of chemicals at our sites.
- We will improve the use of resources, increasing energy efficiency (reducing greenhouse gas emissions) and increasing water consumption efficiency.
- Individual sites will set their own waste reduction objectives based on site specific environmental impacts.

Measures and milestones:

The number of significant releases of chemicals at our operations in 2000 was 8. The 2005 milestone is no more than 4.

The energy efficiency related to production will be increased by at least 10%.

The water consumption efficiency related to production will be increased by at least 10%.



Challenge 2005 – Product stewardship

- We will at least halve the number of distribution incidents involving the company's products.
- Life cycle risk assessments will be completed for all major product groups. These will review potential impacts of products from their origin to their disposal.
- Businesses will set their own specific objectives aimed at the more efficient use of materials.

Measure and milestone:

The number of significant distribution incidents involving company products was 23 in 2000. The 2005 milestone is no more than 10.

Challenge 2005 – Social responsibility

- All our major sites will issue site safety, health and environment reports to their local communities.
- All employees will be encouraged to participate in customer and community safety outreach programs.

At present Orica sites, businesses and individuals share our safety knowledge and expertise with schools, family members, customers and the general public. In this five year period we plan to considerably increase the level of this activity.

Behind these company objectives and measures there will be many internal measures, including positive performance indicators, set by the various businesses and operating sites. The businesses and operating sites are aligning their long term plans with the Challenge 2005 milestones and objectives.

The Challenge 2005 objectives have been established to promote a significant improvement in the company's overall SH&E performance. They are consistent with our commitment to sustainability – to manage all our activities with concern for people and the environment, and to conduct our business for the benefit of society without comprising the quality of life of future generations.

'If we achieve what we have set out to achieve and reach or pass the milestones we have set our sights on, then Orica will be a safer and better place to work and we will be more highly regarded by the community.'

Philip Weickhardt, managing director and CEO

Orica's safety charter was translated into Indonesian for Adhesives & Resins team at Samarinda (East Kalimantan, Indonesia)

Mining Services

Orica is the world's leading supplier of commercial explosives and blasting services.



**Graeme Liebelt
Executive Director, CEO
of International Explosives**

The past year has been a mixed year in safety for the Explosives business. Our underlying injury performance continued to improve, but the tragic deaths at work of two of our

employees, one driving on a country road and the other operating a forklift at a mine site, gave that performance a deeply saddening overtone. These were the first employee fatalities since the formation of the Orica Explosives international business in 1998.

I would like to recognise, however, the efforts of all our employees and contractors who have worked safely, in particular those in Argentina, Chile, China, Dubai, France, Malaysia, New Zealand, Papua New Guinea, Singapore, Spain and a number of regions in our Australian operations, who have been free of injury and illness for long periods.

In this past year we have placed emphasis on occupational health issues such as conservation of hearing, ergonomics and safety at home. We have also been busy with environmental remedial activities at many sites where, for example, we have removed underground storage tanks and treated contaminated soil.

Our first priority remains the safety of our workers, customers and the community and this is illustrated by special product development and safety management and awareness programs we conduct on our sites. It is with a continued focus on improvement, combined with training and education, monitoring, and setting tough objectives, that we will continue on our journey to our goal of 'No Injuries to Anyone, Ever'.

Some like it hot...some like it cold

Orica's explosives products and blasting systems are tailored to the task and conditions at hand. Extreme conditions can be encountered in various parts of the world as illustrated by the examples below, but the emphasis is always on safety, product stewardship and customer satisfaction.

Ammonium nitrate, the main ingredient of modern explosives, can react with rocks containing iron or copper sulphides. This can lead to premature detonation of the explosives and be a significant hazard to blast crews. Orica's technology centre at Kurri Kurri (New South Wales, Australia) has developed the Eclipse range of explosives using inhibitors to slow down the reaction between the ammonium nitrate and the sulphides. If the rocks are both reactive and hot then the Powergel Vulcan range of explosives are brought into action.

However, before using these specially designed explosives the rocks are tested to determine optimum conditions in the blasting process. The most extreme example of their use is at the Lihir gold mine in Papua New Guinea where the rock is not only reactive but also geothermally heated to 150 degrees Celsius.

At the other end of the temperature spectrum, freezing cold conditions dramatically reduce the sensitivity of standard explosives and this presents problems for the ski industry which uses explosives to initiate controlled avalanches. Powergel Alpine, a new product developed by Orica Explosives New Zealand in consultation with the local ski industry, has been designed specifically for use in sub-freezing conditions. The product provides a safe means of achieving controlled avalanches to improve the safety of skiers and those who live or travel in the mountains.



Safety first

Our Explosives business has several hundred small sites around the world mainly in remote locations. Clear and rigid safety management systems are critical in providing a safe working environment and a robust audit system is required to maintain them.

We are always looking for ways of promoting safety. The Asia Pacific business has developed a reward and recognition program that encourages and enables everyone to participate in proactive safety initiatives. In this program, called the General Manager's Safety Shield, points are awarded to individuals for positive activities such as participation in safety meetings, audits and toolbox talks or for doing safety observations or reporting incidents. The number of points an individual collects equates to the number of chances they get to win a monthly and annual cash prize.

In the Safety Shield, although teams who have a recordable injury cannot collect points for a period of a month, the overwhelming thrust is to promote positive safety activities. Since the introduction of the program there has been a fivefold increase in such activities and this level is being sustained. What is more, everyone is talking about safety.

Safety audits

To further enhance safety on some of our larger sites we conduct 'significant risks' audits. The first step in these audits is to identify the significant risks and to rank them in importance. In this context significant risks include fires, explosions, chemical exposures, soil and ground water contamination, as well as more specific risks from activities such as the pumping of explosives and operation of forklifts. An audit is then undertaken on the measures in place to control the risks. Regular audits such as these are important to maintain safety, health and environmental awareness at our sites.

The recently launched i-kon™ electronic detonator system delivers greater safety, as well as great accuracy and flexibility with blasts

Agricultural Chemicals



Ammonium nitrate tote bags at our Copiopo (Chile) site

Orica's agricultural chemical interests are represented by Incitec, one of Australia's largest manufacturers of fertilizers and Crop Care, a crop protection business.



Greg Witcombe Managing Director Incitec Ltd

This year has seen another major improvement in safety performance in Agricultural Chemicals. This is demonstrated by the reduction in the number of injuries and illnesses from 25 last year to 16 this year.

This significant reduction has been achieved because of the high commitment of our people to work safely. Obviously we will not be satisfied until we achieve our goal of zero injuries, and to this end we will continue to pursue a vigorous program to ensure our people have the appropriate equipment, work instructions, skills and training as well as the right behavioural approach to work safely at all times.

We are increasingly aware of our responsibility to be a good neighbour in the communities where we operate. The \$45 million investment in a world class urea granulation facility at Gibson Island (Queensland, Australia) has resulted in a step change reduction in the quantity of emissions from this plant to both the atmosphere and waterways.

As a key player in the rural industry, we are only too aware of the safety health and environment challenges that the industry faces. As such, we continue to focus on the key area of product stewardship, with Crop Care leading the way in the development and implementation of 'cradle to grave' product cycle plans to ensure that our crop protection products are used safely and effectively. In the fertilizer area, we have taken the step of introducing a program to increase the safety focus on all aspects of the handling of one of our key fertilizer products (Big N) by our customers.

Gibson Island works emission reduction

The successful commissioning of a state of the art urea granulation facility at Gibson Island works in December 1999 has resulted in a major reduction in emissions. Urea dust emissions have been reduced by more than 90%, and ammonia emissions have been reduced by approximately 75% of previous levels. In total this equates to a reduction of emissions to the atmosphere of 8,000 tonnes.

Excessive nitrogen in our waterways can stimulate algal growth. Another benefit from the new granulated urea facility is that Incitec has reduced total nitrogen in wastewater discharged from

Gibson Island works to the Brisbane River by 90% to an average of 130 kg/day, thus reducing our impact on algal growth in the local waterways. Incitec has also signalled its intent to continue to reduce emissions by signing in June this year the Healthy Waterways Agreement, a joint initiative with the Queensland Environment Protection Authority (EPA) and the Brisbane City Council. Two of the three initiatives undertaken as part of the agreement have already been realised. The third, to undertake a feasibility study into the treatment and reuse of all wastewater from the Gibson Island works and Pinkenba (Queensland, Australia) primary distribution centre sites, is in progress.

As a result of these environmental improvements, Incitec won the 2000 PACIA Environment Award and has been nominated by the Queensland EPA for an award as a part of the Healthy Waterways program.

Big N Grower Safety program

Incitec Fertilizers has designed and implemented a Grower Safety Awareness program to support the use of one of its key products, Big N. Big N is a high nitrogen fertilizer (anhydrous ammonia) that is directly injected into the ground at low temperature. If not handled correctly, it can cause burns from its extreme cold or respiratory difficulties if inhaled. The program's key focus is based on the premise that the safety of the grower – our customer – is paramount, and the program has been developed with three key objectives:

- To ensure that all Big N users have safe equipment that complies with statutory and Incitec guidelines.
- To ensure that all growers and operators are trained and competent in all safety and operational aspects of handling and applying Big N, and
- To ensure that all growers are aware of or are supplied with and use the appropriate personal protective equipment, including the right clothing, hand protection and respiratory protection, when handling Big N.

The package revolves around a series of accreditation processes. Firstly, there is an inspection and equipment certification stage, followed by a safe handling training and accreditation program, and finally a personal protective equipment program. Big N sales are heavily reliant on its safe use, and the Big N Grower Safety program is a major element in ensuring the future growth and profitability of this key product.



Consumer Products

Orica is the leading manufacturer and supplier of paint and paint preparation products in Australia, New Zealand and South West Pacific.



Jerry Adams
General Manager
Consumer Products

The Consumer Products business fell short of the milestones for safety and health we set ourselves for the year and this is, of course, disappointing. Nonetheless, we achieved a

15% reduction in our injury rate this year and a number of our sites are to be commended for achieving long periods free of injury and illness. In fact, in a number of ways, this was our best year yet as we continued to progress a number of safety issues, both in our workplaces and with our customers.

The biggest safety issue we are facing is manual handling throughout our business – in production, in our warehouses, in stores and with our customers:

- *We have continued investment in upgrading the layout and manual handling equipment in stores, plants and warehouses alike, including automated filling lines at Rocklea (Queensland, Australia) and Gracefield (New Zealand).*
- *We are progressively introducing across our manufacturing and warehouse operations the behavioural safety programs ('OBSERVE') as well as continuing the OBSERVE focus within the Dulux stores.*
- *As part of our responsibility to our customers, Dulux Australia has introduced to the Trade and Retail markets a 15 litre pail to replace the much heavier 20 litre packs (that typically exceeded 25 kg). This was a milestone for the Australian paint industry and an initiative that directly benefits our customers and employees alike by reducing the risk of manual handling injuries across all stages of the products' use.*

We will continue to drive for significant improvements in our safety, health and environment performance in the coming year, with a focus on our behavioural safety programs, risk assessments and the development of plans to meet the Orica Challenge 2005.

Dulux adds colour

Dulux New Zealand is providing paint at no cost for Habitat for Humanity in New Zealand, a global non-profit organisation that helps build homes for those who could otherwise not afford them. The partnership means Dulux will provide more than 18,000 litres of paint and stains over the next three years, enough to paint 144 homes.

Cabarita remediation

In December 1998, on-site remediation work was completed at Dulux's former manufacturing site at Cabarita (New South Wales, Australia). The work, which took four years to complete, involved thoroughly cleansing and chemically stabilising over 100,000 tonnes of soil containing low levels of lead, introduced to the soil through over 70 years of paint manufacturing by BALM Paints and later by Dulux. With the site successfully remediated, Dulux set its goals further and sent individual letters to local residents inviting them to participate in voluntary investigations into lead levels within their homes and backyards. As a result of the investigations remediation work was undertaken at a number of properties.

Dulux's community focused approach to the Cabarita project was applauded by the NSW Environment Protection Authority.

Rocklea wash water recycling

Consumer Products operations at Rocklea (Queensland, Australia) manufacture over 40 million litres of paint a year. The production process uses a substantial quantity of water for washing paint mixing vessels and filling equipment. Costs associated with the purchase of the water and the disposal of the effluent are significant and, in 1999, up to 130,000 litres was disposed of from the Rocklea site every month.

Steps were taken to reduce wastewater disposal and in December 1999 a recycling plant was commissioned at Rocklea. The process first segregates wash water into recyclable 'white' water and into non-recyclable 'coloured' water. The 'white' water is then quarantined while bacterial tests are conducted before being made available for recycling and reuse in the water-based paint manufacturing process. Biocide dosing and strict quality control checks ensure the quality of the finished paint is not compromised.

After eight months of operation, about 50% of the wash water is being recycled. It is anticipated one million litres less water will be discharged to the sewer a year with a cost saving of at least \$200,000.



Dulux Weathershield X10 offers 10 year protection through all weather conditions

Chemicals



Working at Chemicals' Timaru (South Island, New Zealand) site

Orica is the leading supplier of a broad range of industrial chemicals in Australia and New Zealand.



Barbara Gibson General Manager Chemicals

The Chemicals business has manufacturing and distribution operations in Australia, New Zealand, Fiji, Papua New Guinea and Indonesia, and has 700 employees.

During 2000 there has been a significant improvement in employee and contractor safety performance, which is particularly pleasing in a period where there has been intense construction activity associated with several projects – MIEX at Deer Park (Victoria, Australia) and the new chlorine plants at Laverton (Victoria, Australia) and Botany (New South Wales, Australia). The severity of injuries was also markedly reduced with only one lost workday case for employees and contractors in the year. However, distribution incidents continue to be a source of concern, and considerable effort is underway to improve transport safety in areas such as industry carrier accreditation, load restraint and loading activities.

The thrust on product stewardship in Chemicals is being maintained with the introduction of the Chlorine Safeguard program adding to our already successful Ammsafe and Solvent Care programs. The various businesses are correctly giving closer scrutiny to life cycle risk assessments of the major product groups.

Immediate challenges for the business over the next year revolve around maintaining our safety performance, particularly during the commissioning of the new chlorine plants, and also meeting the compliance requirements of the major hazard facilities legislation in each of the Australian jurisdictions.

Chlorine Safeguard

In 1999 Orica Watercare reviewed its product stewardship of chlorine and realised that the chlorine training provided to customers was under-resourced and was not tailored to the needs of customers. This review, together with a recognition of the hazards posed by improper chlorine use, prompted the business to set a chlorine leak target of zero. This target related to customers' installations as well as Orica's facilities and led to the development and introduction of the Chlorine Safeguard program.

The Chlorine Safeguard program aims to provide consistent, professionally presented information and to deliver a step change in customer training and technical support for chlorine. In particular, the

program intends to make chlorine training accessible to all 3000 customers in Australia. The program also aims to develop a full safety package at customer installations including process design and layout, audits to Australian standards, quantitative risk assessments and incident investigations as well as development of procedures and the promotion of safe behaviours.

Chlorine Safeguard was launched in March 2000 and within six months over 100 operators have been trained, audits have been completed on bulk installations and an emergency exercise conducted with a major water board. Importantly, Orica Watercare believes that it has succeeded in influencing the safety culture of the chlorine market.

The Orica Watercare team won the 2000 TG Crane/PACIA Health and Safety Award for the Chlorine Safeguard program.

Samarinda Safety Squad

When the Adhesives & Resins business bought a decommissioned resins plant at Samarinda (East Kalimantan, Indonesia) the challenge was to get it operating to Orica's safety, health and environment standards. Construction and commissioning projects present special hazards to overcome, but the situation at Samarinda was compounded by language barriers, harsh site conditions, remoteness and a lack of infrastructure.

High hazard work activities and practices were identified and targeted for action. Site inductions, training, discussion groups and incentives for safe working were introduced for the large team of up to 400 contractors, along with a mentoring system set up to foster a safety working culture. The outcome was an injury free construction, commissioning and start up over a 13 month period involving 630,000 working hours. This was a remarkable achievement and it has left the Samarinda plant with a strong safety culture and a commitment to the vision of 'No Injuries to Anyone, Ever'.

The Samarinda Safety Squad won the Orica SH&E Excellence Award in December 1999.



Orica is committed to the Chemical Industry's Responsible Care Program

How Orica manages SH&E

'No injuries to anyone, ever.'

Vision and commitment

Orica aspires to be among the best performers internationally in safety, health and environment (SH&E) consistent with the company Vision of

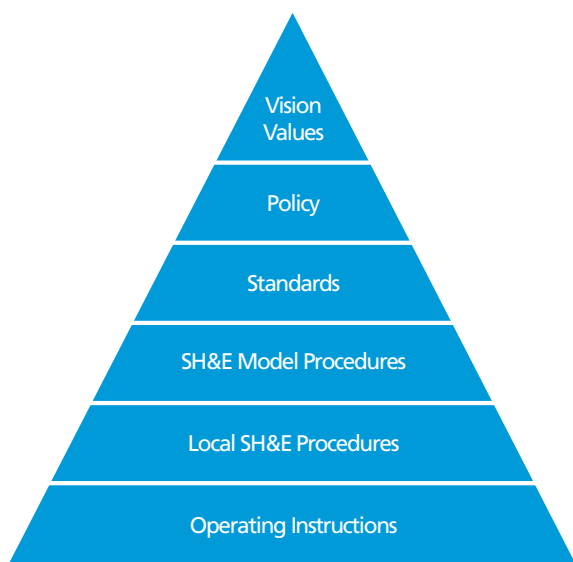
'Winning against the world's best'.

The first of the company Values is to operate to the highest standards of safety, health and care for the environment. Orica's SH&E Vision is

'No Injuries to Anyone, Ever'

This symbolises Orica's commitment to eliminate all work related injuries, illnesses, environmental incidents, product complaints and other adverse SH&E incidents and acknowledges the belief that all such incidents are preventable. Orica's aim is to continually reduce the number of injuries and other incidents and the impact of its operations and products on the environment.

The Orica SH&E Policy expresses a commitment to manage all activities with concern for people and the environment, and to conduct business for the benefit of society without compromising the quality of life of future generations. The policy is backed by the 19 Orica Group SH&E Standards, which describe the performance to be achieved, and the SH&E Management System.



SH&E strategy

Orica's strategy for meeting its SH&E commitments and for achieving the Vision is to have in place:

Plant and equipment

Equipment and materials designed and maintained fit for purpose.

Orica's plant and equipment are designed, constructed and operated to provide and maintain the engineering integrity and inherent safety required to minimise workplace SH&E risks.

To achieve this Orica:

- uses hazard analysis and risk assessment and management techniques in design and construction and in operation.
- applies local and international standards as well as meeting statutory requirements.
- sustains integrity by effective preventative maintenance systems and modification procedures.
- identifies critical systems and equipment and ensures their sustained integrity.
- uses raw materials and produces intermediates and products only if they can be handled safely.

Behaviours

Well communicated values and behaviours that promote continuous SH&E performance improvement through leadership and personal responsibility.

Orica seeks to foster a culture which promotes excellent SH&E performance through:

- targeted selection and training of people to desired competencies.
- line management leadership.
- clear expectations for all employees and contractors.
- rigorous adherence to company procedures.
- participation in SH&E performance improvement.
- promotion of SH&E awareness.
- personal responsibility and a prevention mindset, and
- encouraging SH&E awareness outside of the workplace.

Each year all employees or supervised contractors together with their line managers are expected to sign on to the Orica SH&E Charter. The charter describes the company's expectations of line managers and supervisors as well as of individuals and is an integral part of all job performance assessments. The SH&E performance of employees is a major factor in their performance assessment and advancement.



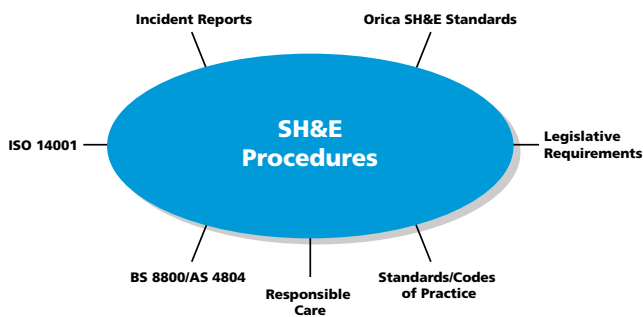
Loading a mobile manufacturing unit at the Satui (Indonesia) site

Systems

SH&E management procedures describe systems of work that ensure the integrity of equipment and materials and people-based control measures are sustained.

The Orica SH&E Management System has been developed to manage the interaction between people and the work environment and to ensure sustained compliance with legislative requirements, the 19 Orica SH&E Standards, the Responsible Care Codes of Practice and other external standards. A review by KPMG Consulting of Orica's SH&E procedures in accordance with KPMG's 'EMS Test' found that the procedures were consistent with the International Standard for Environmental Management Systems (ISO 14001).

The SH&E Management System consists of over 100 procedures which define the key requirements of the SH&E Policy and Standards and provide guidance on how the requirements can be met. The procedures also capture and spread good practice across the company. The procedures are regularly updated to reflect changes in legislation and standards, best practice and learnings from incidents.



Strategy focus

Central to Orica's strategy is that:

- SH&E is a line management responsibility. Ownership and accountability for SH&E performance are embedded in the line at all levels.
- there is a consistent risk-based approach to SH&E management. Resources are allocated and activities prioritised on the basis of risk and
- appropriate training is in place to equip all personnel to carry out their tasks safely.

Management responsibility

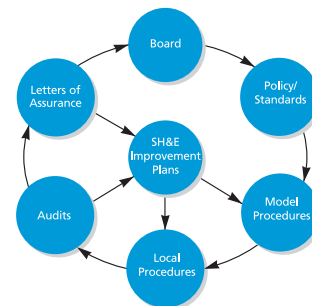
Line managers are responsible for providing SH&E leadership and for development and implementation of SH&E management plans for their areas of responsibility.

SH&E direction and guidance is provided at three levels – Executive Team (SH&E Council), General Management Team and Site/Business Management Team.

The Orica SH&E Council consists of members of the Executive Team plus the Corporate SH&E manager, Patrick Hanrahan, and is chaired by the executive director with special responsibilities for SH&E, Graeme Liebelt. The SH&E Council is the forum for strategy development and for SH&E governance of the company. The SH&E Council drives SH&E performance improvement throughout Orica.

Due diligence

The effectiveness of the SH&E Management System and the level of compliance with the SH&E Standards, the key requirements of the model procedures and other requirements are continually assessed through a combination of internal and independent audits.



Each year letters of assurance are prepared by all operations and businesses declaring their compliance with the SH&E Policy and the 19 SH&E Standards. These letters of assurance, which draw from internal and independent audit reports, are reviewed by the Board Audit Committee. The letters of assurance are an important part of the process of due diligence in SH&E management and they form the basis of SH&E improvement plans.

Implementation of the SH&E Management System, together with the letters of assurance and system audit reports, provides the basis for discharging the company's responsibility to be duly diligent with respect to SH&E performance.



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