

RESPONSIBLE CARE

Report 2005



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RESPONSIBLE CARE PLEDGE

The Guiding Principles are the foundation of the Responsible Care ethic. They summarise each member's commitment to health, safety and environmental responsibility in the management of processes and chemicals. When signing the Responsible Care commitment the CEO of the member company pledges to:

- *Conduct our operations in a manner that minimises adverse environmental impacts and protects the health and safety of our employees and the public.*
- *Recognise and respond to community concerns about our operations and our chemicals.*
- *Promote the principle of sustainable development in the conduct of our operations and strive for continuous improvement in health, safety and environmental performance.*
- *Integrate health, safety and environmental considerations into our planning for new products and processes.*
- *Report information on relevant chemical-related health or environmental hazards promptly to appropriate authorities, employees, customers and any affected sectors of the public and recommend protective measures.*
- *Give advice to customers and other affected parties on the safe use, storage and transportation of our chemicals as well as the safe disposal of any residues and containers.*
- *Increase knowledge by conducting and/or supporting relevant research on the health, safety and environmental effects of our products, processes and waste materials.*
- *Co-operate with customers, authorities and affected parties to resolve problems created by the handling and disposal of chemical substances considered hazardous.*
- *Participate with government and others in developing regulations and standards to safeguard the community, our employees and the environment and we will endeavour to ensure that such laws are based on scientifically supported data and/or opinion.*
- *Promote the principles and practices of Responsible Care by sharing experiences and offering assistance to others who produce, handle, use, transport or dispose of chemicals.*
- *Ensure that where chemicals used or produced in our operations are controlled in terms of international conventions to which South Africa is a party, we will institute appropriate internal measures to facilitate compliance.*



STATEMENT FROM NEVILLE CROSSE, CHAIRMAN OF THE CHEMICAL AND ALLIED INDUSTRIES' ASSOCIATION



The Responsible Care initiative is managed globally by the International Council of Chemical Associations (ICCA), who undertook a review in 2004. As a result of the review the ICCA adopted a more globally harmonized approach to Responsible Care by adopting a Global Responsible Care Charter and Global Product Strategy. CAIA signed the Global Responsible Care Charter in 2005.

In line with the Global Responsible Care Charter, CAIA has reviewed its implementation of the initiative and in consultation with our Voluntary Advisory Forum have decided that the results of implementation of Responsible Care should be more widely disseminated.

I believe that CAIA has made excellent progress in the implementation of Responsible Care over the last three years.

Reporting on quantitative indicators of performance continues to increase. The disabling injury rate shows a continuous decline since 2002 and compares favourably with performance in other countries like USA, EU, Canada and Japan.

Independent auditing of hauliers of dangerous goods is now a routine operation and CAIA continues to work with state institutions on reducing transport incidents involving chemicals. The steady improvement demonstrated in storage, distribution and transportation performance reflects these efforts

Initiatives to improve community interaction also continue to increase, with 75% of signatories operating community advisory committees. 91% of signatories have established a complaints procedure and 97% have emergency response plans in place. 78% of signatories also now have a waste management programme in place.

CAIA is one of the few national associations that has introduced an independent audit of Responsible Care performance to replace the traditional self assessment process. This report is thus the last that will contain unaudited implementation status data.

As the South African economy grows and supports the call for a better life for all, the volume of the products required of the chemical industry will continue to grow, new products will be in demand, and better management of chemicals over their lifecycle will be demanded. This will necessitate the introduction of cleaner production methods and minimization of the potential environmental impact of current processes. CAIA is addressing this challenge through a number of initiatives.

Implementation of the Energy Efficiency Accord signed with the Minister of Minerals and Energy is supported by energy use data collected through the Responsible Care initiative.

CAIA has also initiated a project with the National Cleaner Production Centre to build on Responsible Care to promote the introduction of cleaner production technologies.

Responsible Care is an initiative that promotes continuous improvement. The report demonstrates this trend in most areas covered. However there is a clear recognition by the CAIA Board that much more needs to be done to ensure that the benefits of chemicals in society are enjoyed, while at the same ensuring safe management throughout their lifecycle.

Responsible Care provides the platform for the chemical industry to contribute to a variety of safety, health and environmental initiatives. CAIA has worked closely with government and international agencies to facilitate implementation of the GHS and continues to support government in its contribution to the Strategic Approach to International Chemicals Management and the OECD chemicals committee.

We are pleased with progress in implementation of the verification system and hope to have most signatories audited by 2008. A list of the haulier and chemical companies that have been successfully audited is available on our website.

We at CAIA are proud of the progress that has been made over the last three years and have initiated a range of initiatives to improve engagement with our stakeholders and to further improve Responsible Care performance particularly in the area of product stewardship.

I hope that you will find this report interesting and invite you to provide us with your ideas for improvement and areas that you believe should be covered in future editions of the report.



MESSAGE FROM PHILIP LLOYD, CHAIRMAN OF THE VOLUNTARY ADVISORY FORUM

The purpose behind the Voluntary Advisory Forum has been to stimulate greater public participation in the implementation of Responsible Care. Members of the Forum have come from a wide range of backgrounds, and all have given valuable inputs as to what they expected from Responsible Care. However, those expectations have run into the harsh reality that Responsible Care is itself voluntary.

Members of the industry subscribe to Responsible Care with what is, no doubt, the best intentions in the world. However, it has proved frustratingly difficult for industry to provide the information which Responsible Care requires. Continual improvement is a core feature of Responsible Care. But demonstrating continual improvement means regularly making available data on performance. The data should be in a consistent format, so that it can be collated readily and publicised widely once collated.

The range of data that industry has seen fit to release has been very limited. It is often not submitted timeously to CAIA, and often not in a consistent format. As a result, reports on progress are usually too late to have any impact, and surprisingly incomplete as well. Industry undoubtedly has had ongoing improvement in its performance, but demonstrating that improvement, in a way that would bring credit to the industry, seems almost beyond its abilities.

That is not to say that there has been no progress. This Report shows how more and more companies have moved further and further along the path to complete reporting. However, progress has been very slow. I believe the wider public, to whom this Report is addressed, has every right to question why it is not more comprehensive and more complete.

An area of particular concern has been the transport of chemicals. Industry has made great strides in recent years. Insistence on training of drivers, and on only employing haulage contractors who can demonstrate high standards of competence, seems to have had a significant effect on the incidence of large spills. There remains great concern about what happens further down the distribution chain. Internationally, the chemical industry has battled to give effect to cradle-to-grave control over chemicals. South Africa is not alone in the problems of the farther reaches of the distribution chain. There has been a lot of discussion, but no action. I believe the time has come when the industry should look seriously at a few pilot projects, designed to show where the real difficulties lie.

I have had the fascinating challenge of chairing the Voluntary Advisory Forum for seven years, and am certain that it is now time for me to move on. I would like to thank the CAIA officials for all their assistance. The industry has been fortunate to find such a loyal and dedicated band of officers. I trust it will continue to recognise the efficient way in which they have looked after the affairs of the industry in the wider arena of public affairs.



STATEMENT FROM ALAN ROTH, CHAIRMAN OF THE RESPONSIBLE CARE STANDING COMMITTEE

The Responsible Care Standing Committee (RCSC) comprises representatives from all categories of membership and from large and smaller member companies. During the period under review, the committee, together with CAIA staff, reviewed and then revised the terms of reference of the committee

Terms of Reference (as revised and approved by the CAIA Board) are:

- to offer advice on emerging issues so that CAIA and its members can anticipate effectively and be proactive in formulating solutions and responses more in line with expectations of the public;
- to respond to CAIA requests for advice or assistance on issues of concern, strategies, proposed plans and other areas of activity;
- to introduce and broadly discuss topics of concern related to chemicals in society;
- to advise CAIA on how it might expand the influence of Responsible Care more effectively to users of chemicals;
- to advise CAIA on matters relating to Responsible Care Management Practice Standards (MPSs) and their revision processes for monitoring and evaluating progress and policy;
- to assist CAIA in evaluating lessons learned in other jurisdictions in the implementation of Responsible Care and their possible application in the SA context; and
- to advise on the effectiveness of the Responsible Care verification process and possible improvements.

Activities in the last few years include:

- Development of the third-party verification procedure and its introduction in 2005.
This initiative, whereby Responsible Care signatories are subjected to audit by qualified third parties, is a significant step. In the past, only self-assessment of compliance with Management Practice Standards has been undertaken by signatories themselves. Understandably, the results of such self-assessments can be treated with some scepticism by members of the public and by authorities. The third-party audits go a long way toward overcoming such scepticism and enhancing the credibility of Responsible Care.
- Development of audit guidance documents for use by auditors and as self-assessment for new signatories. This replaces the previous Self-assessment Questionnaires.
- Collaboration with a training service provider to train Environmental and Health and Safety auditors in Responsible Care and approval of auditors to audit Responsible Care based on criteria set by CAIA.
- Recognition of verified members on the CAIA website.
- The effectiveness of the Responsible Care initiative was being questioned and in response the ICCA undertook to reassess it. The result was the publication of the Responsible Care Global Charter in 2005 and evaluation of CAIA's compliance. The CAIA programme complies well. The charter was endorsed by CAIA and by South African companies with international operations.
- Revision of the Management Practice Standards to ensure relevance and to eliminate duplication and repetition. This included the development of the Process Safety MPS in 2004 followed by self-assessment in 2005. An audit guidance document has been developed for inclusion in third-party verification shortly.
- QIP questionnaires were regularly updated to include additional indicators in compliance with the ICCA requests. Modification of these questionnaires for haulier members was also undertaken.



- Regular workshops on new and relevant E, H & S issues which affect the chemical industry, were organised by CAIA and were well attended
- CAIA staff were involved with government and the SABS in the revision and development of legislation and national standards.
- Participating in the introduction of the Globally Harmonised System for the classification and labelling of chemicals through the development of a national standard.

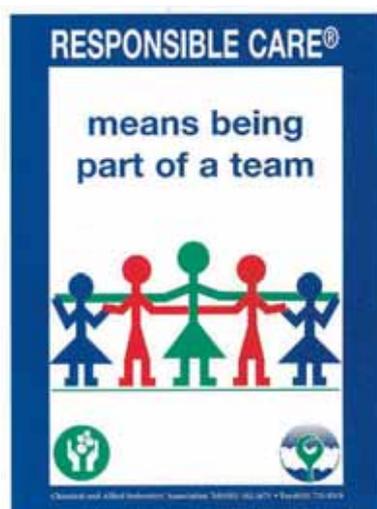
Member companies have assisted in many of these projects and progress would not have been possible without their assistance.

The challenges for the future are:

- ensuring compliance with the third-party verification requirement by all signatories;
- to achieve 100% return of the QIP questionnaires;
- communicating the Responsible Care message, and the integrity of all signatories to a wider stakeholder audience, thereby increasing the profile of Responsible Care;
- encouraging the introduction of Responsible Care at tertiary institutions;
- the introduction of the Global Product Strategy; and
- guidance to members in complying with International Conventions to which SA is party.

In the spirit of the Guiding Principles of Responsible Care, CAIA relies on its members to assist in achieving its goals, and the RCSC is the conduit through which this assistance is channelled.

I must thank all of those persons, both as representatives of member companies and as staff of CAIA, who gave of their time, knowledge and experience to advance the status of the Responsible Care initiative.



Introduction

Responsible Care is essentially a philosophy; a way of doing business which incorporates a set of business ethics which are characterised by doing what is right rather than only what is legally required. It is based on chemical companies making a voluntary public commitment to operate in accordance with the guiding principles of Responsible Care. In today's international business environment where non-tariff barriers to trade are becoming increasingly real for South African companies, it is a strategy for survival and growth. The initiative is essential to the maintenance of competitive advantages, to the reduction and elimination of risks, and to the pursuit of sustainable development.

Responsible Care was started in South Africa in 1994. Fifty two countries around the world, largely in the Americas, Asia and Europe, are currently signatories. At the end of 2005 CAIA had 127 signatories to Responsible Care. The Chief Executive Officer of each participating company to Responsible Care signs the pledge at a public ceremony in which he commits his operations to the 11 Guiding Principles that form the foundation of the Responsible Care ethic. In addition, there are eight other fundamental features in implementing the initiative:

- Establish and implement a set of **Guiding Principles** that member companies sign.
- Adopt a **title** and **logo** that are consistent with Responsible Care.
- Implement **management practices** through a series of systems, codes, policies or guidance documents to assist companies to achieve better performance.
- Develop a set of **performance indicators** against which improvements can be measured.
- **Communicate** with interested parties inside and outside the membership.
- Share best practices through **information networks**.
- **Encourage** all association member companies to commit to and participate in Responsible Care.
- Introduce and apply systematic procedures to **verify** the implementation of the measurable elements of Responsible Care by member companies.

In response to a decision by the International Council of Chemical Associations (ICCA), the international authority for managing, administering and guiding Responsible Care worldwide, that third-party auditing should be introduced as a means of verifying Responsible Care, CAIA has been actively pursuing the process. Auditing protocols for seven of the Management Practice Standards listed on page 15 have been developed, piloted, reviewed, workshopped and aligned with ISO 14001 and OHSAS 18000. Large companies are required to be audited by the end of September 2006, and small and medium member companies by September 2007. As a consequence of this, self-assessment has fallen away. However, new signatories will not be required to undergo third-party verification for the first two years but are expected to complete one round of self-assessment during that time.

Quantitative Indicators of Performance (QIPs) are still reported annually. Note that due to changes in the total number of signatories in any year percentages fluctuate. For 2002 103 members (82%) submitted QIPs, 2003, 114 (90%), 2004, 119 (88%) and 2005, 116 (87%). The number of manufacturers reporting is 78 (2002); 79 (2003), 74 (2004) and 82 (2005). Reporting is a particular challenge for the smaller companies with their limited resources.

Based upon improvements in performance of Responsible Care as reflected in the QIPs and a site audit, a Responsible Care Award was started in 2003. This consists of a floating trophy and certificate for the winner and certificates for the two runners-up.



Responsible Care Award Winners 2005



Health and Safety

Quantitative Indicators of Performance for Health and Safety are shown in Figures 1 and 3 for the years 2002, 2003, 2004 and 2005, with Figure 2 a comparison of employee statistics with sister Responsible Care associations in the world. No figures are as yet available for CEFIC and the JCIA for 2005. The disabling incident rate for both employees and contractors has decreased over the period. Contractors are defined as those providing a service on site. The target should be to achieve zero disabling injuries for both categories. A significant improvement in incident rate for occupational disease is noticeable from 2002. Occupational diseases is defined in terms of Schedule 3 of the Compensation for Occupational Injuries and Diseases Act No.130 of 1993 (the COID Act).

Figure 1: Disabling Injury incident rate

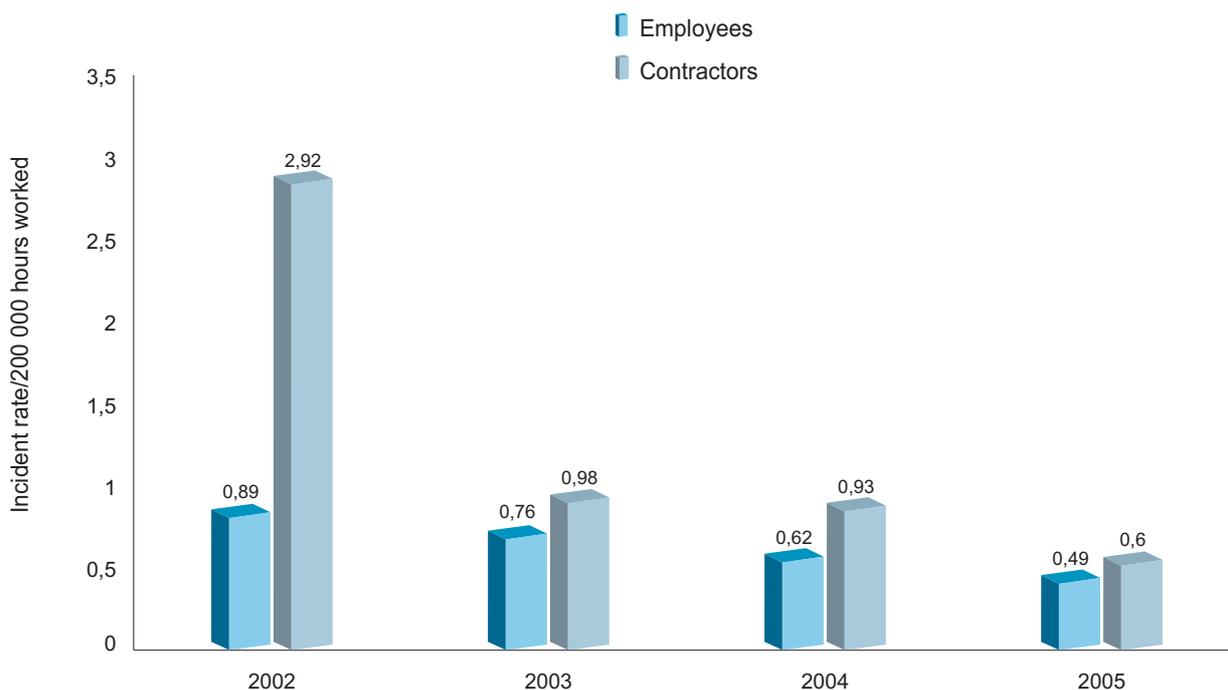
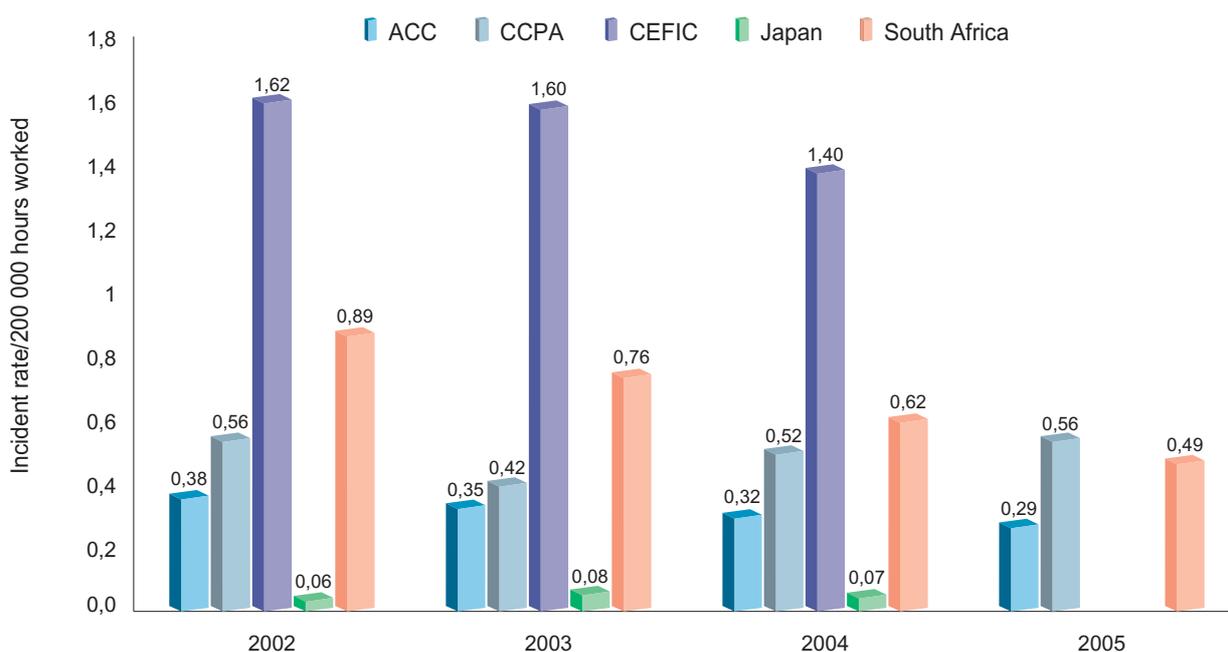


Figure 2: Comparison of disabling injury rate for Employees



Key:

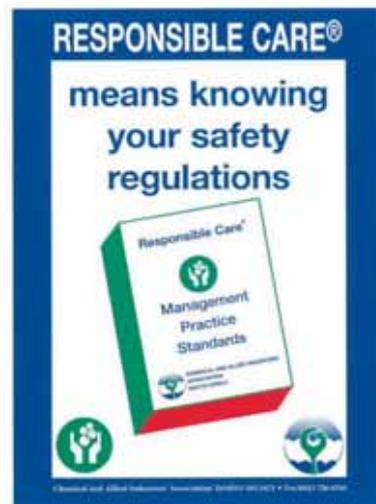
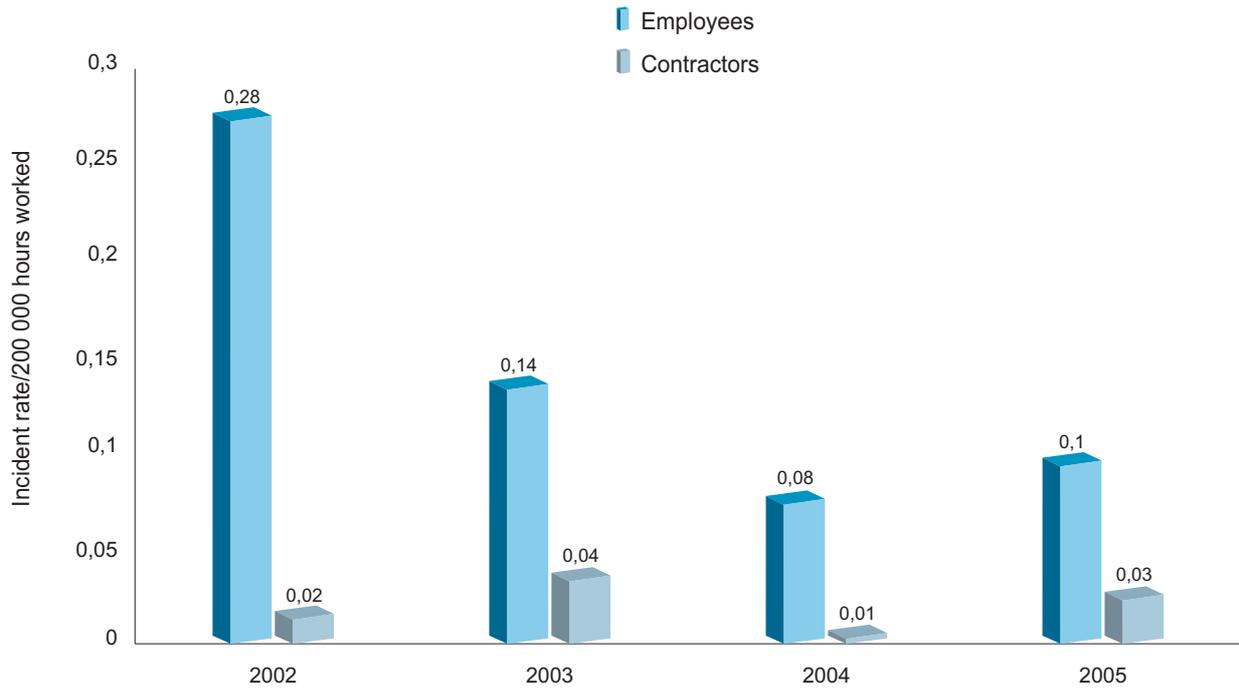
ACC – American Chemical Council

CCPA – Canadian Chemical Producers Association

CEFIC – European Chemical Industry Council



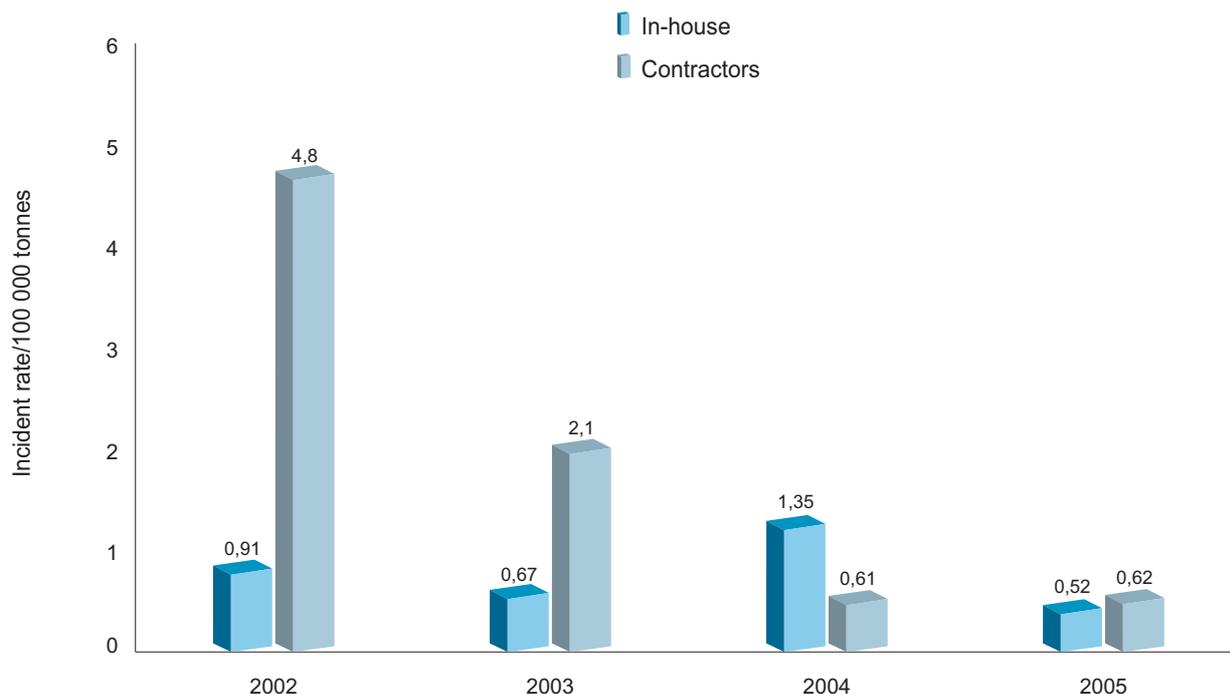
Figure 3: Occupational disease incident rate



Storage and Distribution

Figure 4 shows the number of storage incidents during the period 2002 to 2005. There is a significant downward trend in the incident rate per 100,000 tonnes handled by contractors. Contractors are defined as those providing a service on site. The upward trend in-house in 2004 is disappointing, but improved again in 2005. The target must be to achieve zero incidents for both categories.

Figure 4: Incident rate for material handled in storage

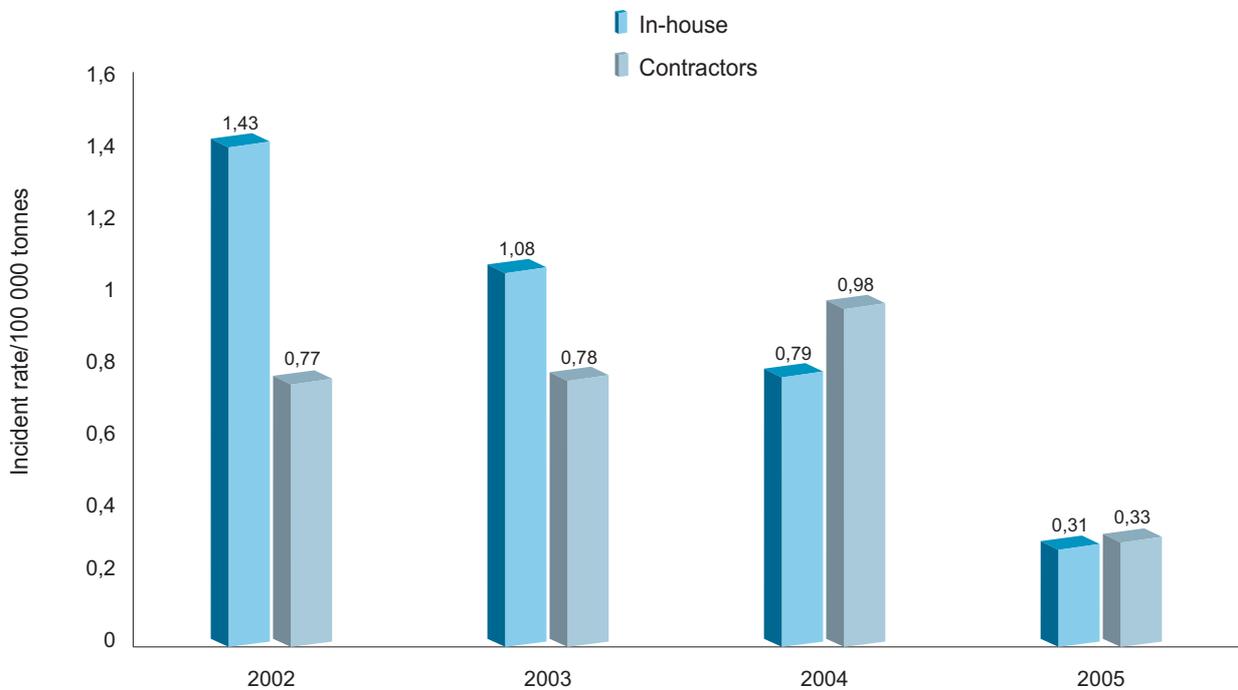


Transportation

The incident rate per 100,000 tonnes transported is shown in Figure 5. The downward trend in incident rate for member companies in particular is encouraging. Contractors in this context are haulier companies only. The target again must be zero incidents.

Not unexpectedly, the biggest contributor to transportation incidents is on the road. To address this state of affairs, the Association introduced in 2003 the directive that chemical companies using road hauliers to transport chemicals should be Responsible Care signatories and comply with the requirements of the Safety and Quality Assessment System (SQAS). Since the launch of SQAS and until the end of 2005, **98** hauliers had been audited of which **70** attained preferred supplier status and **28** provisional supplier status. In addition, **19** hauliers had become signatories to Responsible Care. The significant improvement in the incident rate from 2004 to 2005 is a sign of the initiative having an effect.

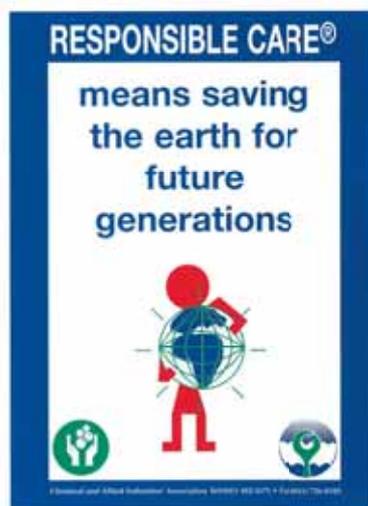
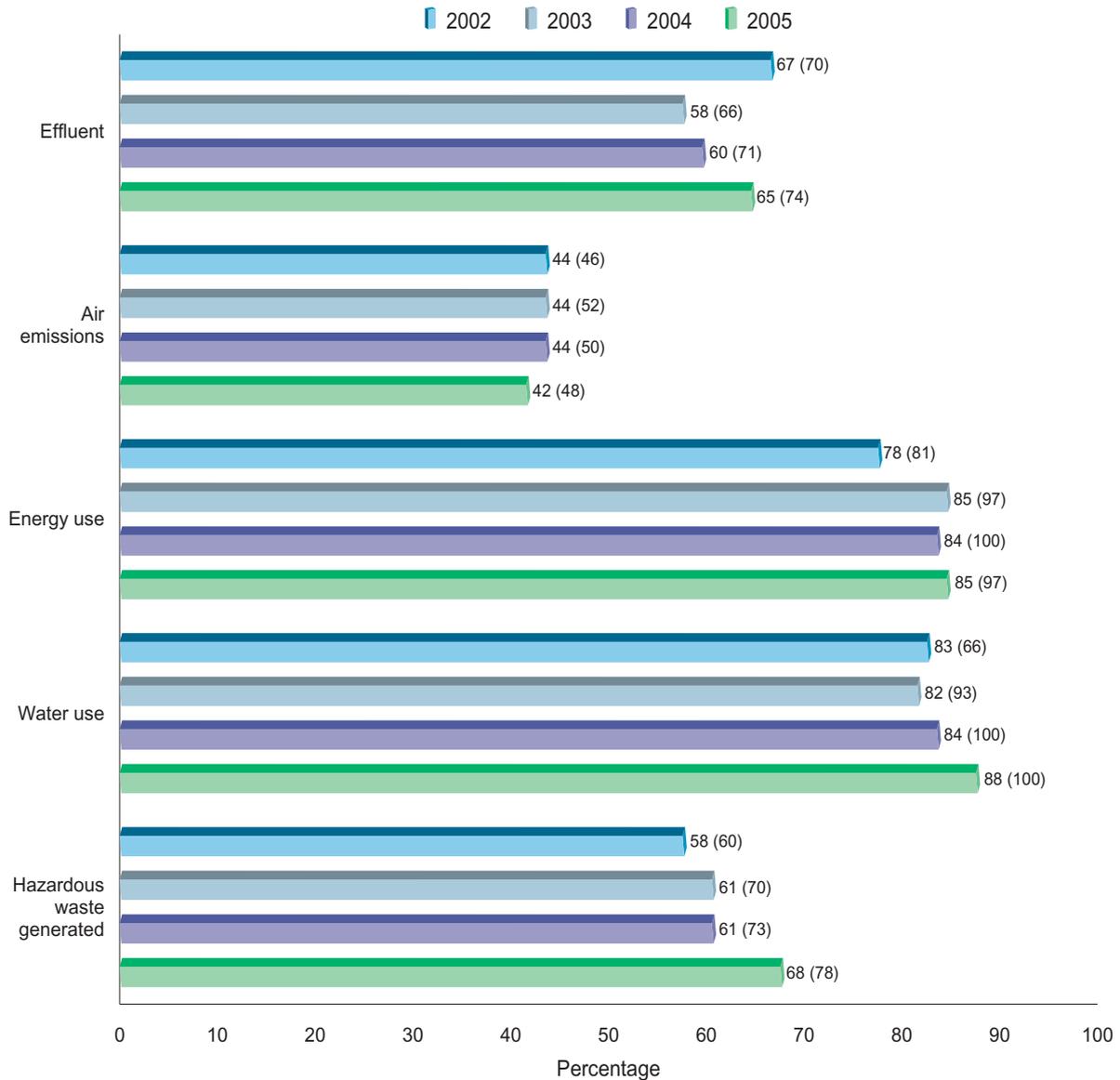
Figure 5: Incident rate for material transported



Pollution Prevention and Resource Efficiency

The percentage of sites reporting on effluent, air emissions, energy and water usage, and hazardous waste generated is recorded in Figure 6 for the period 2002/2005. The figure in brackets is the number of sites reporting. For air emissions it is the number of production sites.

Figure 6: Percentage of sites reporting on hazardous waste, water, energy, air emissions and effluent



Air emissions per tonnes of chemical production for nitrogen oxides, sulphur oxides and carbon dioxide are shown in Figures 7 and 8. The upward trend is disappointing. The significant increases for sulphur oxides and nitrogen oxides from 2002 are due in part to higher emissions and in part to new members reporting. The decrease for carbon dioxide from 2004 to 2005 is very encouraging.

Figure 7: Air emissions

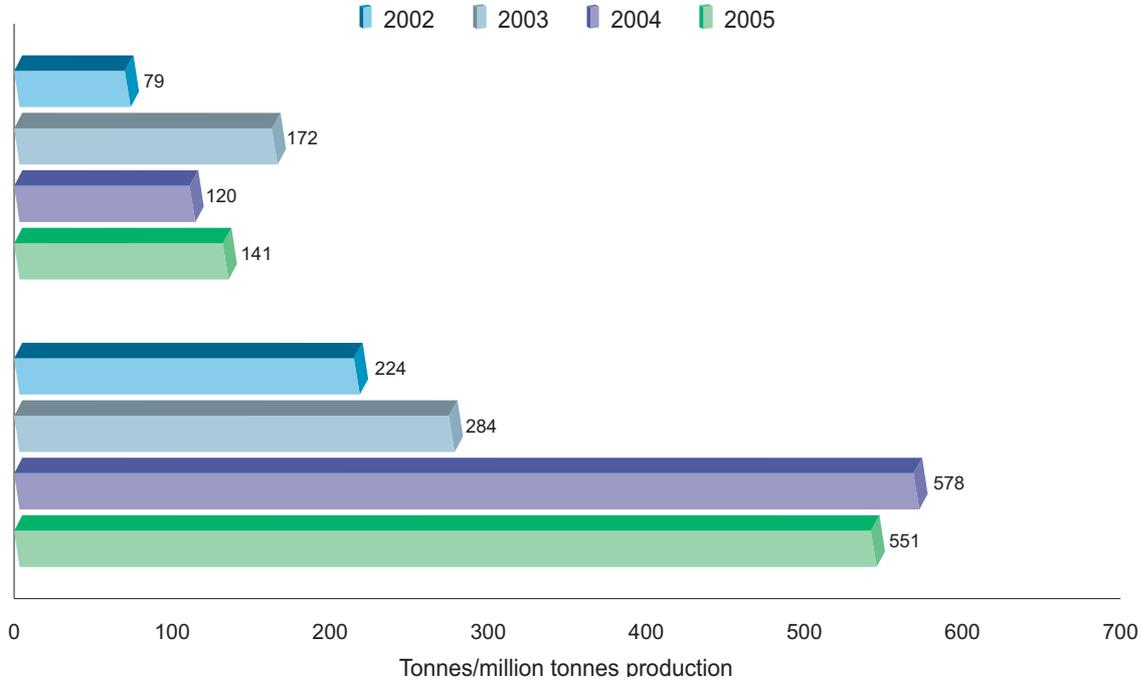
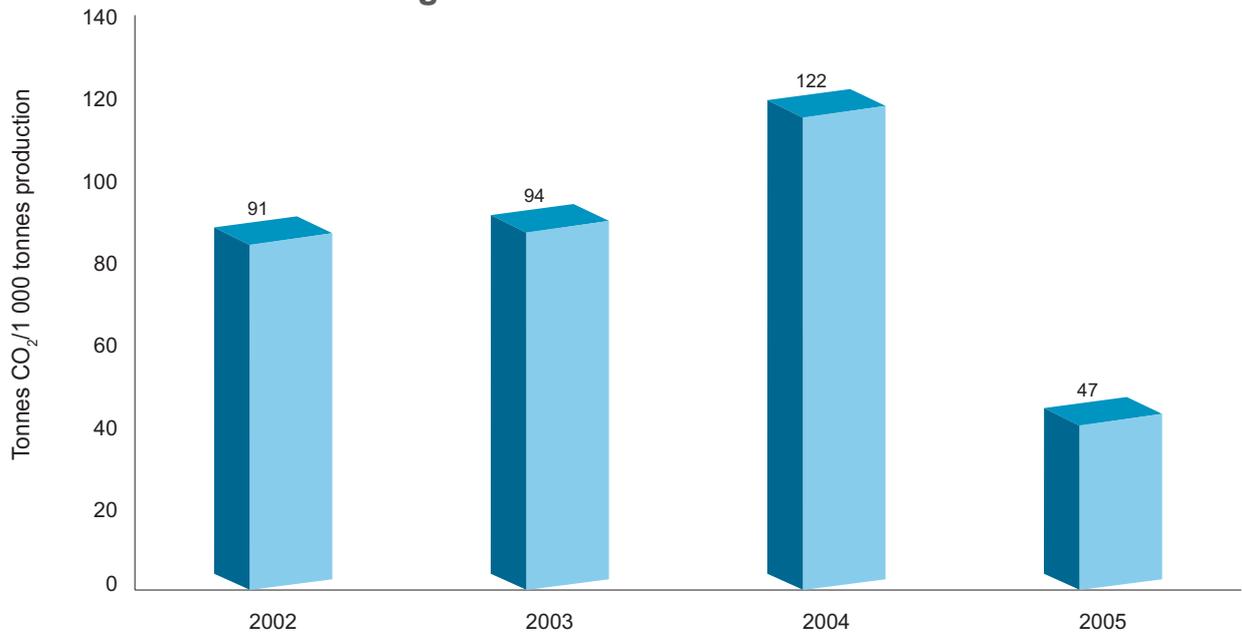
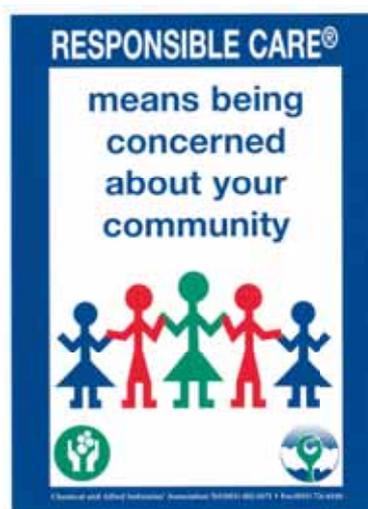
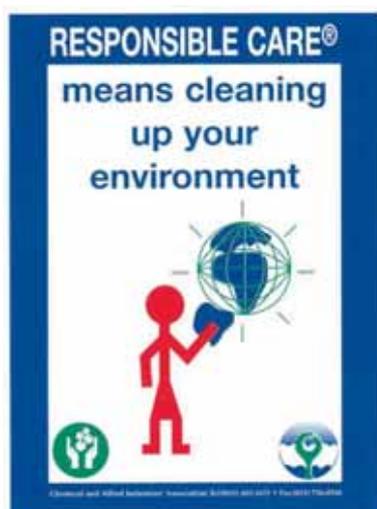
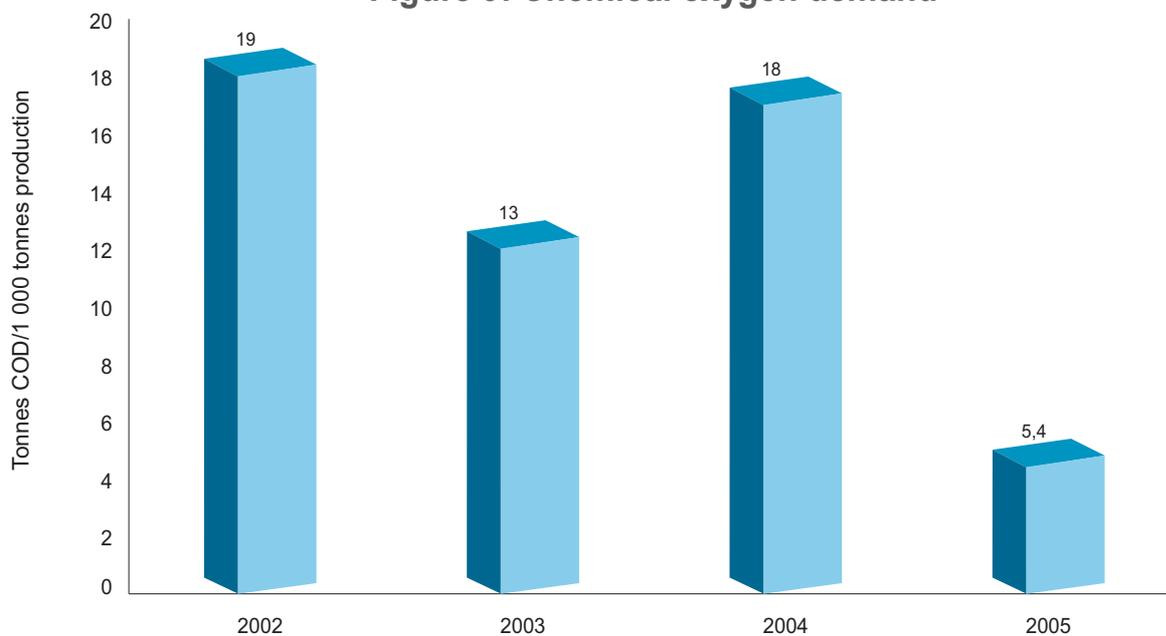


Figure 8: Carbon dioxide emissions



The chemical oxygen demand (COD) provides an indication of organic load discharged into the municipal sewer, rivers, dams and the ocean. The COD per tonnes of production is shown in Figure 9. The reason for the dip in 2003 and then the increase in 2004 is one member reporting for the first time in 2004. The figure in 2005 again shows improvement.

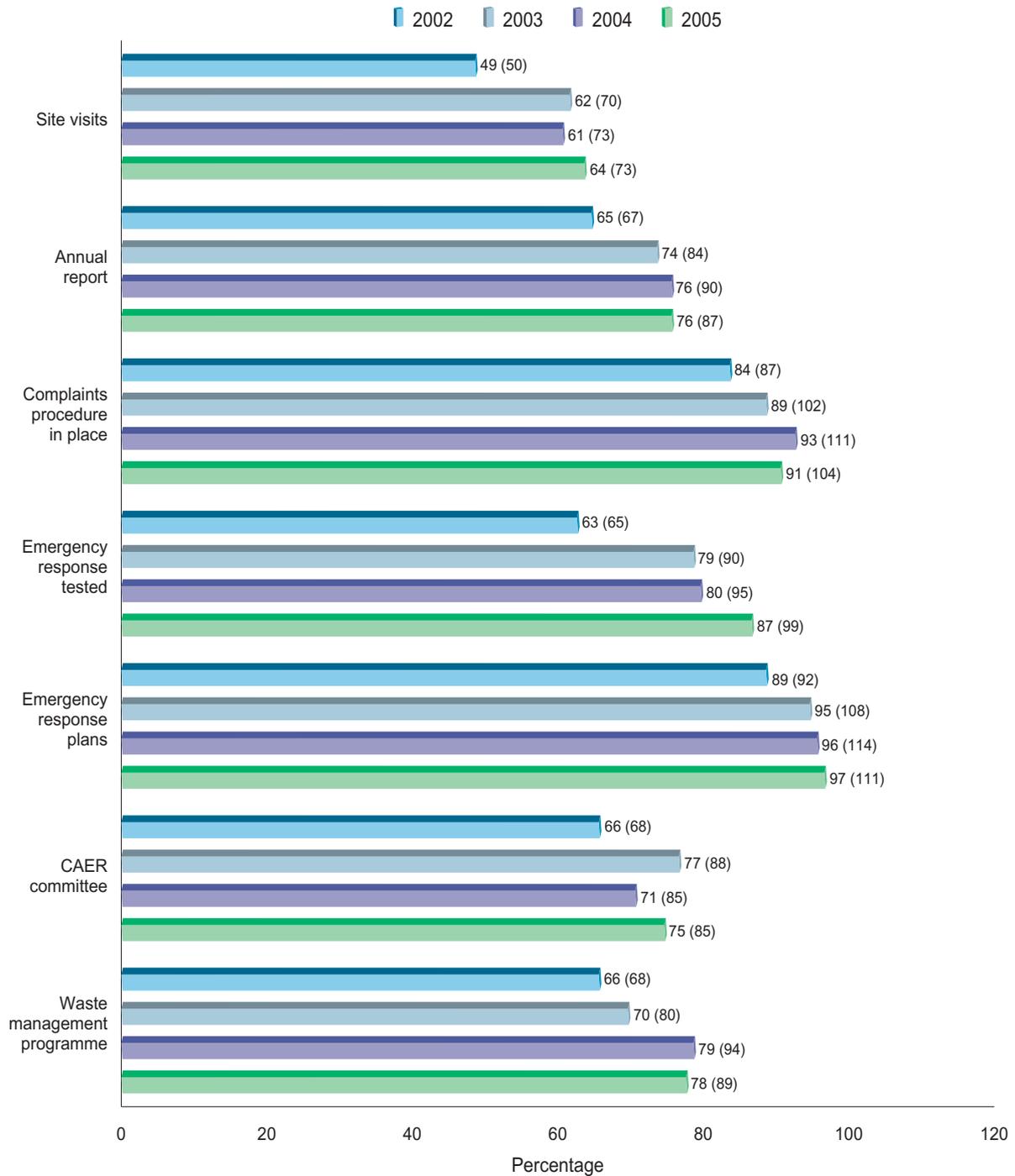
Figure 9: Chemical oxygen demand



Community interaction and emergency response

The percentage of sites reporting on various community awareness and emergency response initiatives for each year under review is shown in Figure 10. The figure in brackets is the number of sites reporting. The upward trend is indicative of the focus on and commitment to this aspect during this period.

Figure 10: Percentage of sites reporting on CAER structures



Third-Party Verification of Responsible Care

In line with the ICCA directive, CAIA continued to develop a procedure for the Third-party Verification of the Responsible Care implementation status of CAIA Responsible Care signatories during 2003 and 2004. The objective is to provide credible demonstration of the chemical industry's commitment to the continuous improvement of safety, health and environmental performance in South Africa.

Pilot audits were carried out to test the audit protocols which had been developed for seven of the eight Management Practice Standards listed below, and based on this the protocols were revised during 2003. In February 2004 a workshop was held in which an implementation plan and the audit protocols were presented to members for discussion. The possible consideration of auditing other Health, Safety and Environmental management systems in conjunction with Responsible Care verification was also discussed and met with approval.

Based on the workshop outcomes, the audit protocols were further revised during 2004 and compatibility matrices between Responsible Care, ISO 14001, OHSAS 18001 and the NOSA system (a South African health and safety management system) were constructed to cover the synergies between these other management systems and Responsible Care. This allowed the simultaneous auditing of the other management systems and Responsible Care, thereby reducing the auditing time and cost to the members.

The implementation process was revised to cover the timeframe for implementation, multiple outcome auditing, a procedure to identify which Management Practice Standards are applicable to the different categories of members, an indication of the cost implications, and the criteria for service providers and auditors.

The revised documents were circulated for approval in September 2004, at which time large member companies, defined as those with more than 250 employees or an annual production of 1 million tonnes, also became eligible for verification of their Responsible Care implementation status by September 2006, and small and medium companies by September 2007. This later date serves to give smaller companies more time to comply. Any other companies willing to have verification audits were not precluded from the process. Thereafter verification audits are to be implemented over a two-year cycle.

In collaboration with a training organisation, work commenced on the development of a training course to train environmental, health and safety auditors in Responsible Care. Training courses commenced in 2005.

The self-assessment process has been discontinued excepting for new Responsible Care signatories, who will be given two years after signing their commitment to complete Self-assessment Questionnaires for each of the Management Practice Standards while commencing Responsible Care implementation. Thereafter verification will be mandatory as for all other signatories of Responsible Care.

Management Practice Standards

- Management commitment
- Health and safety of persons
- Storage, distribution and transportation of chemicals
- Community interaction
- Emergency response
- Pollution prevention and resource efficiency
- Process safety
- Product stewardship



RESPONSIBLE CARE SIGNATORIES

The following signatories responded to the Quantitative Indicators of Performance questionnaire in the period 2002-2005

777 Logistics (Pty) Ltd	Dow Agrosciences
AECI Coatings (Pty) Ltd	Dow Plastics
AECI Ltd –(Dulux, Heartland Leasing)	Enviroserve (Pty) Ltd
African Explosives Ltd	Fine Chemicals Corporation
Agfa (Pty) Ltd	Freight Dynamics
Air Products SA (Pty) Ltd	Freight Haul
Akulu Marchon (Pty) Ltd	Fuelogic (Pty) Ltd
Algorax (Pty) Ltd	Gazelle Testing Services
Anchor Chemicals	Geochem (Pty) Ltd
Arch Water Products SA	Gold Reef (Pty) Ltd
Arrow Bulk Carriers	Huntsman -Tioxide SA (Pty) Ltd
Associated Chemical Enterprises (Pty) Ltd	Idwala Sales & Distribution (Pty) Ltd
Bayer (Pty) Ltd	Illovo Sugar Ltd
Buckman Laboratories (Pty) Ltd	Impala Platinum Ltd - Refineries
Bulk Mining Explosives	Improchem (Pty) Ltd
CH Chemicals	Industrial Oleochemical Products
CHC Elastogran (Pty) Ltd	Industrial Urethanes
Cargo Carriers (Pty) Ltd	Intertek Testing Services (Caleb Brett)
Central African Road Services	Island View Storage
Chemfit Industrial Holdings (Pty) Ltd	Karbochem (Newcastle and Sasolburg)
Chemfit Fine Chemicals (Pty) Ltd	Koppers Arch Wood Protection
Chemical Initiatives (Pty) Ltd	Lake International Technologies (Pty) Ltd
ChemiPhos (Pty) Ltd	Lanxess (Pty) Ltd (Isithebe and Merebank)
Chemquest (Pty) Ltd	Lanxess Mining (Pty) Ltd
Chemserve Perlite	Liquid Fuel Supplies t/a Fuel-Tec
Chemserve Systems	Lucite International
Cognis SA (Pty) Ltd	M3 Carriers
Crest Chemicals (Pty) Ltd	Manline (Pty) Ltd
Degussa Peroxide Africa (Pty) Ltd	Merck (Pty) Ltd



Merisol RSA	Safcor Panalpina
National Starch & Chemical (Pty) Ltd	Sasol Chemical Industries
NCP Chlorchem (Pty) Ltd	Sasol Nitro (Explosives & Fertilizers)
NCS Resins	Sasol Oil
Omnia Fertilizers	Sasol Polymers
Omnia Specialities	Sasol Synthetic Fuels
Orkila (Pty) Ltd	Senmin (Pty) Ltd
Pelichem	Servochem (Pty) Ltd (Cape and Natal)
Performance Masterbatch & Custom Colour	Shell Chemicals
Plaaskem	Sika (Pty) Ltd
Plastamid	Speciality Minerals SA
Protea Industrial Chemicals (Cape, Inland and Kwa Zulu Natal)	Spill Response Team
Protea Mining Chemicals,	Spoornet
Protea Speciality Chemicals	Stobel Deliveries cc
Protea Polymers	Sued Chemie Water & Process Technologies
Protea Bulk Resources	Suprachem (Pty) Ltd
Reef Tankers	T & C Water Treatment SA (Pty) Ltd
Rennies Distribution Services	Tanker Services
Resinkem (Pty) Ltd	Thuthukani Warehousing & Distribution
Rohm & Haas	Unitrans Freight Fuel & Chemicals (Pty) Ltd
SA Bioproducts (Pty) Ltd	Value Logistics/Freightpak (Pty) Ltd
SA Paper Chemicals (Pty) Ltd	Vopak Terminal SA (Pty) Ltd
	Yellow Jacket (Pty) Ltd



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