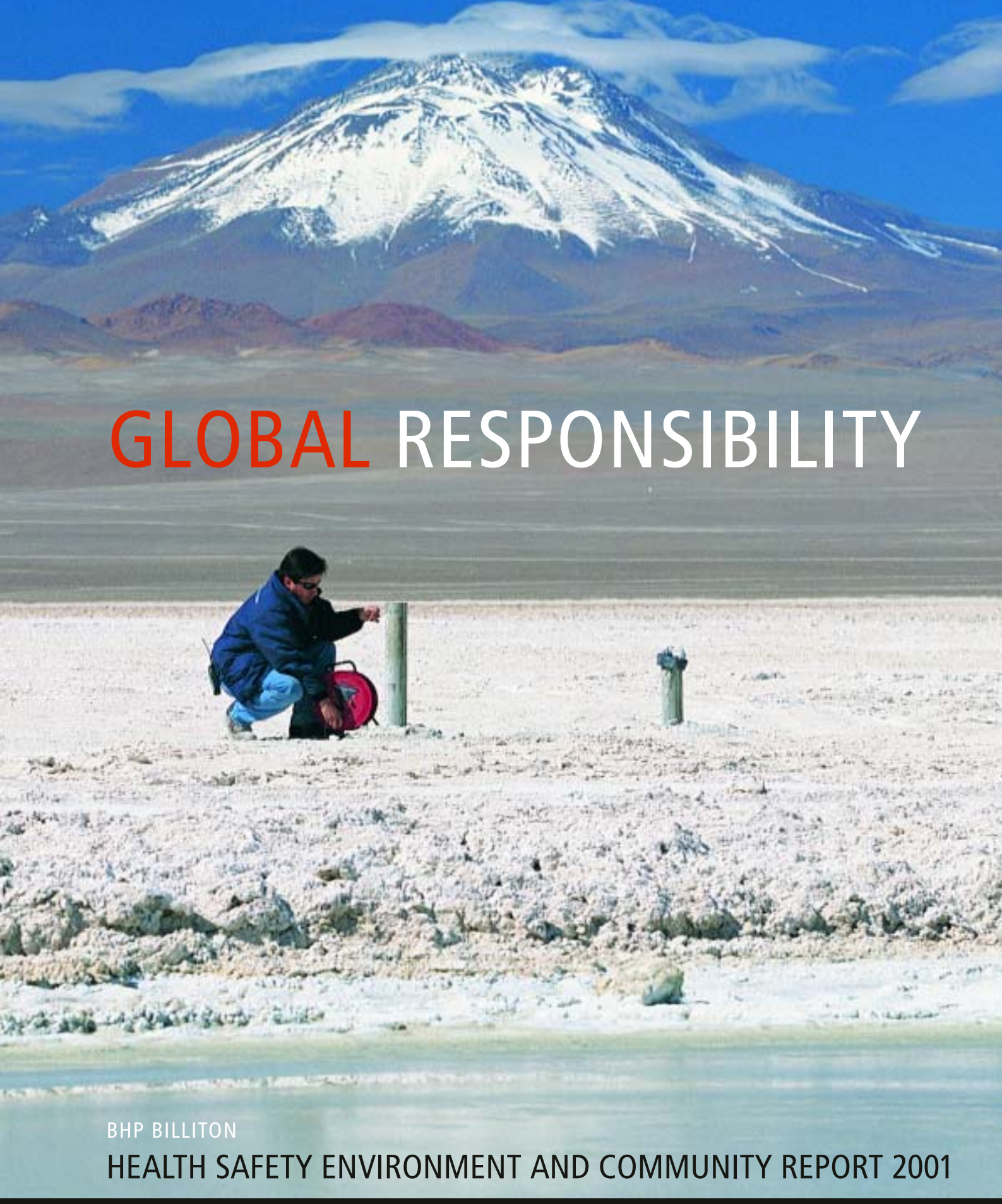


GLOBAL RESPONSIBILITY

BHP BILLITON

HEALTH SAFETY ENVIRONMENT AND COMMUNITY REPORT 2001

bhpbilliton

Our cover: *The Co Llullaillaco volcano provides a dramatic backdrop as consultant Rodrigo Bartolo tests salar water levels near the Escondida copper mine in Chile.*

CONTENTS

About this Report

This Health, Safety, Environment and Community (HSEC) Report for BHP Billiton is presented in four sections.

Section One includes a message from the CEO and Managing Director, Paul Anderson, and Deputy CEO, Brian Gilbertson, and provides a profile of the Company, its Charter, HSEC Policy, standards and systems, and HSEC targets.

Section Two presents a summary of the HSEC performance of BHP Billiton Limited (formerly BHP Limited) for 2000/01, together with the relevant Appendices and Auditor's verification statement.

Section Three presents a summary of the HSEC performance of BHP Billiton Plc (formerly Billiton Plc) for 2000/01, together with the relevant Appendix and Auditor's statement.

Section Four presents the finalists and winners of the HSEC Awards for 2001, with brief descriptions of their projects.

The HSEC performance summaries are necessarily presented separately, as during 2000/01 BHP Billiton Limited and BHP Billiton Plc were operating independently, with their own HSEC policies and reporting systems.

Under the terms of the Dual Listed Companies (DLC) merger concluded on 29 June 2001, BHP Billiton Limited and BHP Billiton Plc continue to exist as separate companies, but operate as a combined group known as BHP Billiton.

The global headquarters of the combined BHP Billiton Group and the headquarters of BHP Billiton Limited are located in Melbourne Australia. BHP Billiton Plc is located in London, United Kingdom.

Entities in the DLC structure that are referred to throughout this Report are as follows:

- BHP Billiton and BHP Billiton Group refers to the combined entity including both BHP Billiton Limited and subsidiary companies and BHP Billiton Plc and subsidiary companies.
- BHP Billiton Limited Group refers to the parent entity that is BHP Billiton Limited (formerly BHP Limited before the DLC merger) and its subsidiary companies.
- BHP Billiton Plc Group refers to the parent entity that is BHP Billiton Plc (formerly Billiton Plc before the DLC merger) and its subsidiary companies.
- BHP Billiton Limited refers to the parent entity that was formerly BHP Limited before the DLC merger.
- BHP Billiton Plc refers to the parent entity that was formerly Billiton Plc before the DLC merger.

BHP Billiton is continuously improving its reporting systems and endeavours to present useful and accurate information. However, some reporting systems are still being developed and anyone seeking to rely on any representation made in this report should first verify the information with the Group.

BHP Billiton Limited ABN 49 004 028 077. Registered in Australia. Registered Office: 600 Bourke Street Melbourne Victoria 3000 Australia.
BHP Billiton Plc Registration Number 3196209. Registered in England and Wales. Registered Office: 1-3 Strand London WC2N 5HA United Kingdom

WWW.BHPBILLITON.COM

A UNIFIED APPROACH

Paul Anderson, Chief Executive Officer and Managing Director (right), with Brian Gilbertson, Deputy Chief Executive Officer.

OUR MESSAGE

Since the publication last year of the Health, Safety, Environment and Community Reports for BHP Limited and Billiton Plc, a significant change has occurred. Our two companies have merged under a Dual Listed Companies structure to create one of the world's largest diversified resources groups.

One thing that has not changed, however, is our shared commitment to environmental and social responsibility. While an outstanding feature of BHP Billiton is our diversification, both geographically and in our range of assets, we are unified in our global approach to corporate social responsibility.

The trend towards globalisation and industry consolidation has also continued during the past year and our merger is a reflection of this fact. Along with the shareholder benefits delivered through globalisation, global companies have a responsibility to apply consistently high environmental and social standards for the benefit of other stakeholders. Our commitment is reflected in the BHP Billiton Charter.

Underpinning the Charter is our Health, Safety, Environment and Community (HSEC) Policy, 'Working Responsibly at BHP Billiton', which in turn is supported by detailed HSEC Management Standards. The Policy and Management Standards were in place throughout the new Group from our very first day of operation.

A further reflection of our commitment to sustainable development is that health, safety and environment governance resides at the highest level. The Health, Safety and Environment Committee is a sub-committee of the Board of Directors. The Committee is chaired by a non-executive Director of the Group, and members include health, safety and environment experts who are otherwise completely independent of the Group.

HSEC functional management is coordinated and monitored through the HSEC Forum, chaired by the Vice President Health, Safety and Environment. The Forum steers the activities of our HSEC professionals located within each of our Customer Sector Groups. This is a collaborative approach focusing on continuous performance improvement.

OUR MESSAGE CONTINUED

Through the merger integration process, HSEC Policy development revealed shared philosophies and commitments, all of which have been retained or strengthened. Of particular note are the following areas:

- **Zero harm to people and the environment — our goal**
  We have set health and safety targets that continually reduce the risk of harm to our employees, to contractors and to visitors to our sites. We also have unified our approach to reducing the environmental impacts of our activities.
- **Consistent HSEC management systems**
  Recognising that we are a global company with operations throughout the world, our Policy prescribes consistent HSEC management systems wherever we operate, while enabling each site to respond effectively to local issues.
- **Human rights**
  We are committed to supporting the fundamental human rights of people with whom we work, consistent with the United Nations Universal Declaration of Human Rights.
- **Community programs**
  We seek opportunities to share the success of our operations with the communities in which we operate. Our target is to contribute, in aggregate, 1 per cent of our pre-tax profit on a rolling three-year average to sustainable community development programs.

In addition, the Policy reinforces our approach to risk management, regular reviews, assessments and reporting.

We have set five-year targets to keep our focus on improved performance, and to allow others to monitor our progress towards sustainable development. Those targets are presented in this Report.

Looking back over the year under review, we have achieved much during a period of great change, but a lot of work remains to be done. With great regret, we report that 16 people lost their lives while working at BHP Billiton Limited or BHP Billiton Plc during the year. We are working relentlessly to achieve our goal of zero fatalities, and several new initiatives have been implemented to help us meet this objective.

Many other challenges remain as we continue the process of integrating our operations around the globe, while endeavouring to exceed the targets we have set to improve our HSEC performance. We will continue to be open and transparent about the way we report our progress.

This Report, in our transition year, must necessarily include separate performance summaries for the two companies. However, we reiterate that the requirements of our HSEC Policy and Management Standards apply to all BHP Billiton sites and operations throughout the world. Just as we are unified in our commitment, so too are we now unified in our reporting, as we strive towards continued progress in our HSEC performance across the Group.

Paul Anderson
Chief Executive Officer and Managing Director

Brian Gilbertson
Deputy Chief Executive Officer

BHP BILLITON CHARTER

WE ARE BHP BILLITON, A LEADING GLOBAL RESOURCES COMPANY

Our purpose is to create value through the discovery, development and conversion of natural resources, and the provision of innovative customer and market-focused solutions.

To prosper and achieve real growth, we must:

- Actively manage and build our portfolio of high quality assets and services.
- Continue the drive towards a high performance organisation in which every individual accepts responsibility and is rewarded for results.
- Earn the trust of employees, customers, suppliers, communities and shareholders by being forthright in our communications and consistently delivering on commitments.

We value:

- **Safety and the Environment** – An overriding commitment to health, safety, environmental responsibility and sustainable development.
- **Integrity** – Doing what we say we will do.
- **High Performance** – The excitement and fulfilment of achieving superior business results and stretching our capabilities.
- **Win-Win Relationships** – Having relationships which focus on the creation of value for all parties.
- **The Courage to Lead Change** – Accepting the responsibility to inspire and deliver positive change in the face of adversity.
- **Respect for Each Other** – The embracing of diversity, enriched by openness, sharing, trust, teamwork and involvement.

We are successful in creating value when:

- Our shareholders are realising a superior return on their investment.
- Our customers and suppliers are benefiting from our business relationships.
- The communities in which we operate value our citizenship.
- Every employee starts each day with a sense of purpose and ends each day with a sense of accomplishment.

Paul Anderson
Chief Executive Officer and Managing Director

Brian Gilbertson
Deputy Chief Executive Officer

bhpbilliton

29 June 2001

Elena Calderon at the ore preparation unit at Cerro Matoso nickel mine in Colombia.

EXECUTIVE SUMMARY

BHP Billiton was formed on 29 June 2001, through the Dual Listed Companies (DLC) merger of BHP Limited and Billiton Plc.

This Report presents a profile of BHP Billiton and its unified approach to Health, Safety, Environment and Community (HSEC) policies and systems. The Report necessarily contains separate performance summaries for BHP Billiton Limited (formerly BHP Limited) and BHP Billiton Plc (formerly Billiton Plc) for 2000/01 as the companies were managed independently during this period.

BHP Billiton remains committed to sustainable development as reflected in the BHP Billiton Charter, and HSEC responsibilities are integral to the way we do business. Underpinning the Charter is our HSEC Policy, which in turn is supported by detailed HSEC Management Standards.

The new HSEC Policy and associated management standards were developed by dedicated teams of HSEC professionals from the two companies to ensure best practices were shared and priority issues and cultural sensitivities addressed. The Policy and management standards reflect a consolidation of the strongest commitments from both companies and there are no instances where commitments have been relaxed. In addition to ensuring that BHP Billiton started operating with a clear Policy (and management standards) in place, the integration process ensured that the Company's HSEC function was aligned around the key elements and priorities.

The Charter, HSEC Policy and HSEC Management Standards were rolled out on the first day of operation of the merged company and promote a commitment to act with honesty, integrity and fairness in dealings with our stakeholders. They are backed by a rigorous program of integrated HSEC audits and assessments of HSEC risks for new projects and existing operations.

BHP Billiton has affirmed its commitment to maintaining and promoting dialogue with stakeholders in the resources industry and remaining responsive to the global community's concerns and aspirations. We are an active member of the Global Mining Initiative, which was established to research and promote sustainable development in mining.

A further demonstration of our commitment to sustainable development is that HSE governance resides at the highest level — the HSE Committee, a sub-committee of the Board of Directors.

The Company's Forum on Corporate Responsibility brings together representatives of our senior management team, the leaders of several key non-government organisations and community opinion leaders to discuss and debate social and environmental matters.

We have set five-year targets to keep our focus firmly centred on improved performance, and to allow others to monitor our progress towards sustainable development and advancement to our ultimate goal of zero harm to people and the environment. The targets specify our objectives around management standard implementation; legal compliance; risk management; health and safety; energy use; greenhouse gas emissions; water use; land management; product stewardship and community interactions.

As can be seen in the detailed performance summaries for BHP Billiton Limited and BHP Billiton Plc, good progress has been made in a number of areas including implementation of management standards and certification to ISO 14001, community development programs, reducing significant environmental incidents and reducing greenhouse gas emissions. Progress, however, has been inconsistent in the safety area and, regrettably, during the year 16 people lost their lives while working for us.

Resolution of our involvement in the Ok Tedi copper mine progressed to the point where the shareholders reached agreement regarding the Company's exit. Our shareholding will be transferred to a development program that will provide social benefits to the people of Papua New Guinea and particularly the Western Province, while responsibly managing the environmental impacts.

Next year, our HSEC Report will include a unified performance summary for the BHP Billiton Group, operating under a single HSEC Policy and set of HSEC Management Standards.

Environmental engineer Huzen Suryawardana is in charge of rehabilitation at the Satui coal project in South Kalimantan, Indonesia.

BHP BILLITON PROFILE

Figure 1: Key Financial Information for the BHP Billiton Group

Year ended 30 June 2001	US$m
Group turnover*	19 079
Earnings Before Interest and Tax (EBIT)	
- excluding exceptional items	3 627
- including exceptional items	2 539
Attributable profit*	
- excluding exceptional items	2 189
- including exceptional items	1 529
Net operating assets*	21 712
Taxation paid	587
Dividends paid	751

*Including share of joint ventures and associates

Figure 2: Earnings Before Interest and Tax (EBIT) by Customer Sector Group (excluding exceptionals) Year ended 30 June 2001

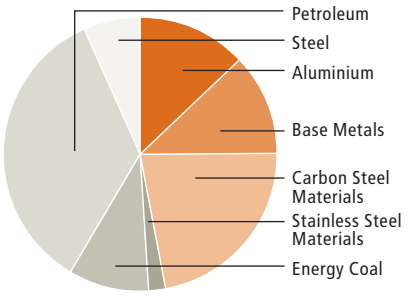
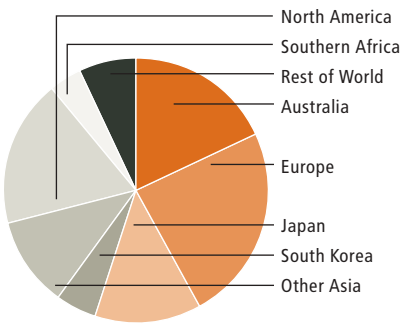


Figure 3: Turnover by Geographical Market Year ended 30 June 2001



Overview

BHP Billiton is one of the largest diversified resource groups in the world, with a portfolio of high-quality, long-life assets.

The Company was formed on 29 June 2001, following shareholder and government approval of the Dual Listed Companies (DLC) merger between BHP Limited and Billiton Plc. Under the terms of the DLC merger, BHP Billiton Limited and BHP Billiton Plc have identical Boards of Directors and are run by a unified management team. Both companies have retained their separate corporate identities and maintained their stock exchange listings. The BHP Billiton Group reports on a fiscal year basis ending 30 June.

BHP Billiton has an annual turnover of around US$19 billion, attributable profit of approximately US$2 billion, and an enterprise value of over US$35 billion (July 2001). Key financial information is presented in Figure 1. At 29 August 2001, the number of shareholders was 298 000. Around 60 000 people are employed by the Group.

The headquarters of the Group are in Melbourne, with a major corporate management centre in London and other offices in Johannesburg and Houston.

Customer Sector Groups

The major operating assets are grouped around customer sectors, with a focus on understanding our markets and customers so as to provide them with innovative solutions. Each Customer Sector Group (CSG) manages a range of related operations, so that production, processing, marketing and delivery are more streamlined. The CSGs are:

- Aluminium (bauxite, alumina, aluminium)
- Base Metals (copper, silver, lead, zinc)
- Carbon Steel Materials (iron ore, metallurgical coal, manganese)
- Stainless Steel Materials (nickel, chrome)
- Energy Coal (coal)
- Petroleum (oil, gas, liquefied natural gas)
- Steel (flat and coated products)

BHP Billiton operates in more than 35 countries (see map at the back of this Report). The Company's diversity in terms of major commodities and markets is presented in Figures 2 and 3.

BHP Billiton has a presence in every key mining geographic area. Sales are largely balanced between the key markets, with customers drawn from a diverse base.

WORKING RESPONSIBLY AT BHP BILLITON: OUR HEALTH, SAFETY, ENVIRONMENT AND COMMUNITY POLICY

At BHP Billiton, we are committed to sustainable development. Health, safety, environment and community responsibilities are integral to the way we do business.

We commit to continual improvement in our performance, efficient use of natural resources and aspire to zero harm to people and the environment.

Wherever we operate we will:

Develop, implement and maintain management systems for health, safety, environment and the community that are consistent with internationally recognised standards and enable us to:

- identify, assess and manage risks to employees, contractors, the environment and communities;
- strive to achieve leading industry practice;
- meet and, where appropriate, exceed applicable legal requirements;
- set and achieve targets that include reducing and preventing pollution;
- develop our people and provide resources to meet our targets;
- support the fundamental human rights of employees, contractors and the communities in which we operate;
- respect the traditional rights of indigenous peoples;
- care for the environment and value cultural heritage; and
- advise on the responsible use of our products.

Seek opportunities to share our success by:

- working with communities to contribute to social infrastructure needs through the development and use of appropriate skills and technologies; and
- developing partnerships that focus on creating sustainable value for everyone.

Communicate with, and engage, employees, contractors, business partners, suppliers, customers, visitors and communities to:

- build relationships based on honesty, openness, mutual trust and involvement; and
- share responsibility for meeting the requirements of this policy.

We will review regularly and report publicly our progress and ensure this policy remains relevant to the needs of our stakeholders. We will be successful when we achieve our targets toward our goal of zero harm and are valued by the communities in which we work.

Paul Anderson
Chief Executive Officer and Managing Director

Brian Gilbertson
Deputy Chief Executive Officer

bhpbilliton

29 June 2001

HSEC POLICY, STANDARDS AND SYSTEMS

Introduction

BHP Billiton is one of the first companies in the world to combine health, safety, environment and community matters in one policy and one set of management standards. As a consequence, wherever we operate, all these matters are addressed in our decision-making processes, alongside other business considerations.

Knowing that much of our success as a global company depends on how effectively we work with our employees and the communities in which we operate, we see the HSEC Policy as being central to our future success. The policy underpins our management systems worldwide and sets the foundation from which we operate. It is based on the principles contained in our Charter. This means that, while we strive to deliver strong financial returns to shareholders, we do not lose sight of our wider responsibilities to our stakeholders.

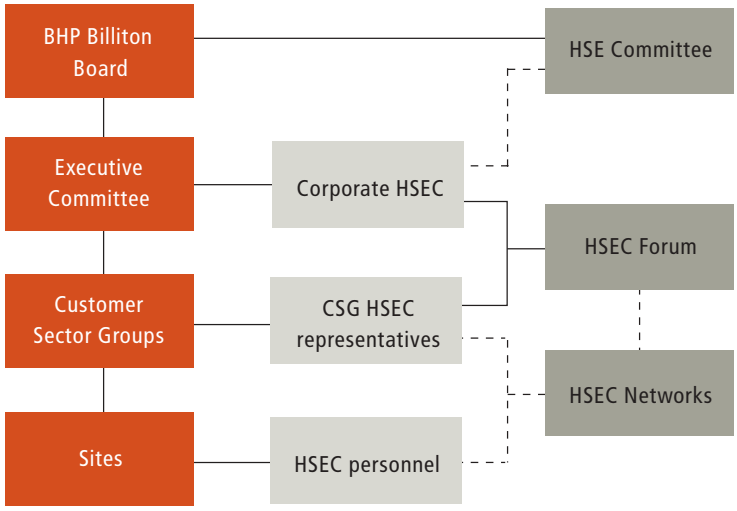
Structure and responsibilities

At every level in the organisation, from the Board through to the site operations, line managers are ultimately responsible for health, safety, environment and community matters. Within Corporate and the Customer Sector Groups, and at the operational level, line managers are supported by functional personnel who provide specialist advice and support in managing all aspects of HSEC.

As shown in Figure 4, BHP Billiton's peak Health, Safety and Environment governance body, the HSE Committee, is a sub-committee of the Board. Membership of the committee comprises one executive Director, two non-executive Directors (one of whom is committee Chairman) and recognised international experts in the fields of safety, occupational and community health, and the environment. Their task is to overview the minimisation of HSEC risk and the implementation of performance improvements across our businesses. They exercise a 'hands-on' approach to dealing with strategically significant HSEC issues and even undertake independent reviews and evaluations using external resources.

HSEC management across the Company is coordinated and monitored through the peak functional body, the HSEC Forum. Corporate representatives, HSEC functional heads from each of the Customer Sector Groups, line managers and sustainable development staff are involved in setting direction for the function; identifying priority issues to be addressed through network task groups; monitoring HSEC performance and building consensus for the way forward. Development of HSEC practices and the response to issues of Company-wide significance are managed through specialist networks made up of committed personnel from the groups and operations.

Figure 4: HSEC Organisation Structure



HSEC POLICY, STANDARDS AND SYSTEMS CONTINUED

Standards and systems

As an indication of the commitment to responsible standards in the areas of health, safety, environment and the community, the HSEC Management Standards were among the first management initiatives introduced when BHP Billiton was formed. Following a significant amount of development work, they were in place from the Group's first day of operation.

The Standards were developed to ensure consistent interpretation and implementation of the HSEC Policy. They form the basis for the development and application of HSEC management systems at all levels of the Group. The scope of the Standards covers all operational aspects and activities that have the potential to affect, positively or negatively, the health and safety of people, the environment, or the community. They cover the entire life cycle of our assets, from exploration through to commissioning, operation, decommissioning, closure and rehabilitation.

The objectives of the Standards are to:

- provide a risk-based HSEC management system framework, broadly consistent with ISO 14001, OHSAS 18001, SA 8000 and other internationally recognised standards, supporting the implementation of the Charter and the HSEC Policy across the Group;
- clearly set out and formalise the expectations of the Group for the progressive development and implementation of more specific and detailed HSEC management systems at all levels of the Group;
- provide auditable criteria against which HSEC management systems across the Group can be measured; and
- provide a basis from which to drive continuous improvement towards leading industry practice.

The requirements of the Standards apply to all BHP Billiton sites and operations throughout the world. These include facilities that are owned or operated by us; development projects, acquisitions and divestments; and major activities by contractors on our sites or under our management.

Where we have no operational responsibility but have an equity stake, or where significant BHP Billiton assets are involved, the Standards are made available to the operator so that comparable HSEC management standards can be applied.

There are 21 HSEC Management Standards, each of which includes a set of clear performance requirements. The Standards are to be reviewed annually by the HSEC Forum and, if required, revised and reissued. The Standards are listed in Figure 5.

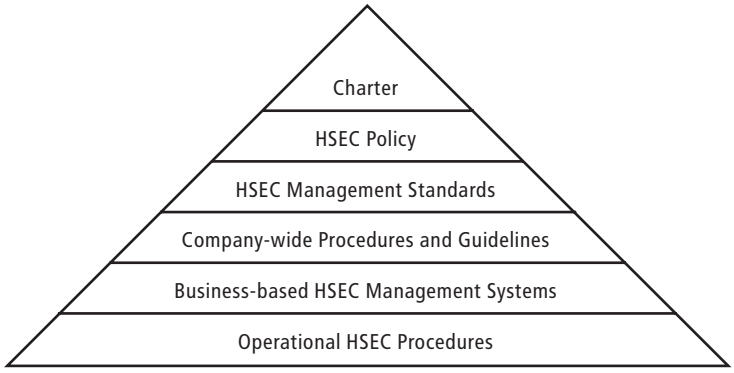
Figure 5: HSEC Management Standards

1	Policy, Leadership and Commitment
2	Responsibility and Authority
3	Risk Management
4	Legal and Other Requirements
5	Planning and Objectives
6	Projects and Major Business Transactions
7	Plant and Equipment Integrity
8	Management of Change
9	Training, Awareness and Competence
10	Suppliers and Contractors
11	Human Rights and Indigenous Affairs
12	Communication, Consultation and Participation
13	Product Stewardship
14	Documentation, Records and Document Control
15	Work Procedures and Operational Control
16	Emergency Preparedness and Response
17	Performance Measurement, Monitoring and Reporting
18	Incident and Non-Conformance Investigation and Management
19	Safe Behaviour
20	Health and Occupational Hygiene
21	Audit, Self-Assessment and Management Review

Hierarchy of systems and documents

The BHP Billiton Charter, HSEC Policy and HSEC Management Standards are mandatory at all our sites and operations, under a hierarchical management system where systems and documents must meet and support the requirements of those of higher levels, as shown in Figure 6.

Figure 6: Hierarchy of Systems and Documents



Part of the global community

BHP Billiton is committed to maintaining and promoting dialogue with stakeholders in the resources industry and remaining responsive to the global community's concerns and aspirations.

Last year, we established the Forum on Corporate Responsibility (FCR), which brings together representatives of our senior management team, the leaders of several key non-government organisations and community opinion leaders to discuss and debate social and environmental matters. Members of the FCR have an opportunity to provide advice and challenge the views of our senior management on broader sustainable development and corporate social responsibility issues. While the Company is not bound by its advice, the FCR does provide a means for direct and open dialogue with members of the wider community.

We are also a member of the Global Mining Initiative (GMI), which was established in late 1998 to research and promote sustainable development in mining.

The GMI work program includes the Mining Minerals and Sustainable Development study, an independent detailed analysis of the industry's performance in its transition to sustainable development. An independent organisation, the International Institute for Environment and Development (IIED), has been commissioned to oversee this study. The IIED has sought to engage stakeholders from many countries, including non-government organisations, governments, specialist experts, various United Nations agencies, and industry. The main study is scheduled to provide results in time for the Earth Summit +10 in 2002.

BHP Billiton is also a member of the World Business Council for Sustainable Development (WBCSD), a coalition of 150 international companies that share a commitment to the environment and to the principles of economic growth and sustainable development.

We are involved with a wide range of other industry groups, participating in meaningful discussions and debate on health, safety, environmental and community issues. These include the International Council on Mining and Metals (ICMM) and various associations and bodies in countries in which we operate, such as the Business Council of Australia, the Minerals Council of Australia, the UK's Business in the Environment program, and the South African National Coordinating Committee on Climate Change.

We collaborate with governments, non-government organisations and academic institutions worldwide to undertake and support research on improving health, safety, environmental and community performance. For instance, we are actively working on a malaria control program with the governments of Mozambique, South Africa and Swaziland, in partnership with the World Health Organization.

Our individual businesses are also active through their sectoral organisations at national and international levels.

Local farmers in Montelibano, Colombia attending a workshop on the use of a new bio-fertiliser, as part of a community program supported by Cerro Matoso nickel mine.

HSEC POLICY, STANDARDS AND SYSTEMS CONTINUED

Stakeholder dialogue

Our Charter, HSEC Policy and HSEC Management Standards all promote a commitment to acting with honesty, integrity and fairness in dealings with our stakeholders — shareholders, employees, contractors, customers, suppliers and the communities in which we operate.

The Standards require that processes be in place to identify internal and external stakeholders and to collaboratively determine their HSEC concerns, information needs and aspirations for community development. To facilitate understanding and informed discussion, they also require that local context and cultural factors are taken into consideration.

We also seek to consult with governments, authorities and other organisations in order to contribute to the development of public policy, relevant legislation, improved industry performance and educational initiatives.

Any concerns or complaints related to HSEC aspects of our operations are recorded as incidents and are investigated, according to the level of risk involved and the extent of concern. Conflict resolution is initially undertaken through direct consultation with stakeholders or their intermediaries.

The Standards also require that the effectiveness of our communication, consultation and participation processes be regularly reviewed in collaboration with stakeholders to effect continual improvement.

Business ethics

To support the values, principles and procedures defined in our Charter, HSEC Policy and HSEC Management Standards, we have developed a Charter Discussion Guide for everyday use by employees, and a Guide to Business Conduct, which sets out our approach to business integrity.

The Guide to Business Conduct applies to all our employees, regardless of their specific job or location. It provides clear directions and advice on conducting business internationally, interacting with governments, communities and business partners, and general workplace behaviour. It also states our position on such issues as conflicts of interest, financial inducements and bribery.

Resolution of business conduct issues will be decentralised, taking into account the increased diversity of countries, cultures and languages across assets. In the event that issues cannot be resolved at a local level, next points of contact will be regional delegates located in Johannesburg, Melbourne and Houston. The final point of escalation will be via the Corporate office and an Ethics Panel.

Indigenous relations

We aim to work cooperatively with indigenous peoples to ensure that our presence provides lasting benefits and causes as little disruption as possible to their communities. We will ensure we respect the rights of indigenous peoples to keep their culture, identity, traditions and customs. We strive to ensure that host communities benefit from our operations being sited there.

Indigenous relations principles are embedded in our Charter, HSEC Policy and HSEC Management Standards. The HSEC Policy specifically states, 'Wherever we operate we will . . . respect the traditional rights of indigenous peoples . . . and value cultural heritage'.

Our HSEC Management Standards detail the performance expectations for all operations in this area.

Auditing

Our HSEC Management Standards include a requirement for an auditing process to be implemented to check that the Standards are being applied and to verify performance. The audits are designed to address the degree of implementation of our HSEC management systems, and their effectiveness in meeting the Group's needs and those of the business being audited. Recommendations for improvement are to be made if required.

We are also putting in place a system of annual self-assessments at each site. These are to be based on the requirements of the HSEC Management Standards, together with other requirements specific to the business or site. Based on these self-assessments, an annual Statement of Assurance is to be prepared by each business.

New corporate programs and procedures for conducting HSEC audits are to include the scope and method; the protocol; required auditor competencies and responsibilities; requirements for reporting results to management; responsibilities for follow-up on recommendations and corrective actions, including timeframe; and frequency of audits and assessments based on the significance of risks and previous results.

Annual management reviews are also to be conducted at each business level to determine the continuing suitability, adequacy and effectiveness of HSEC management systems.

HSEC TARGETS

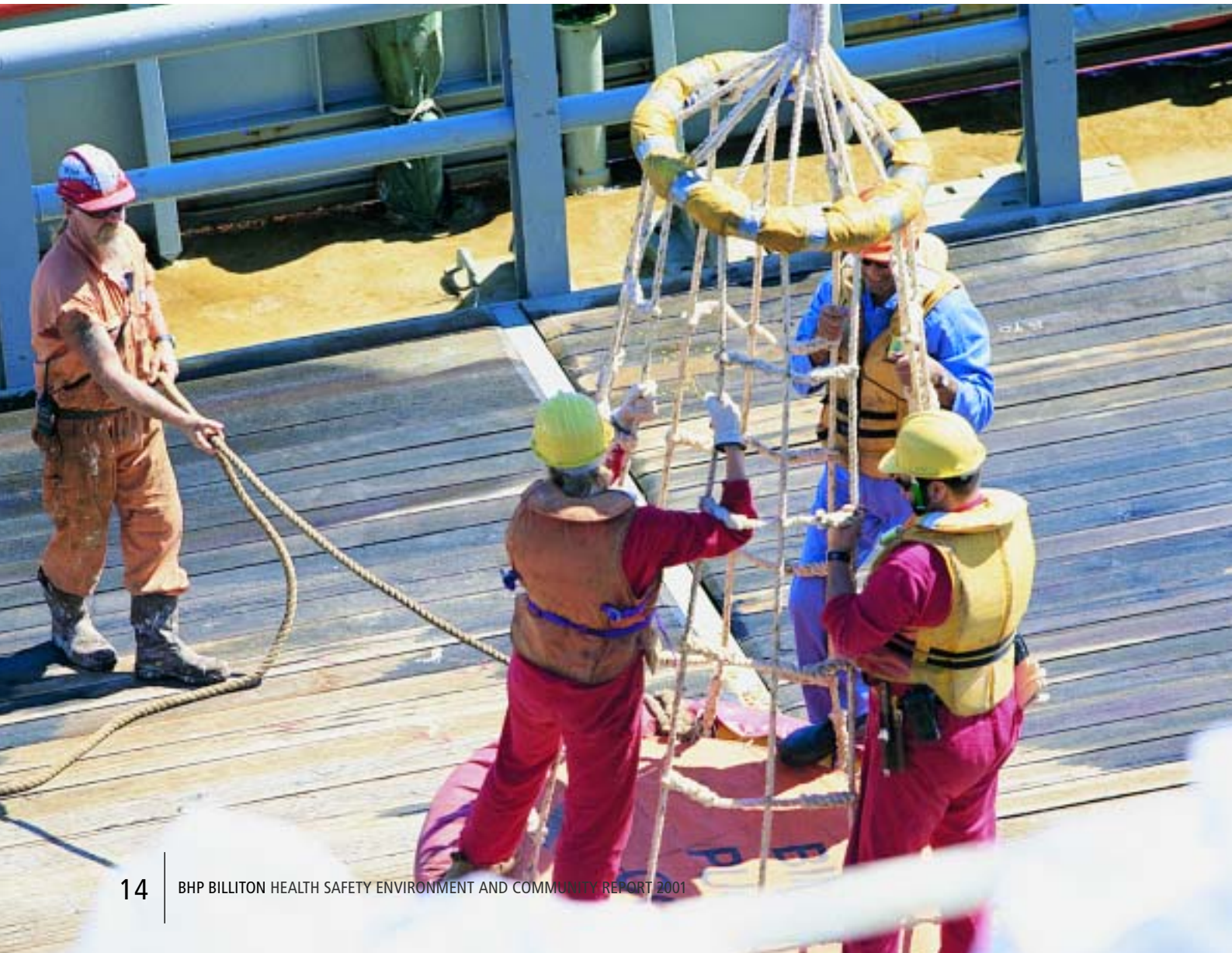
HSEC targets have been established for BHP Billiton commencing 1 July 2001, as set out in Figure 7. This HSEC Report presents a review of the performance results achieved to 30 June 2001 by BHP Billiton Limited and BHP Billiton Plc as separate companies. These are detailed in the Performance Summary sections.

As stated in our HSEC Policy, our ultimate goal is zero harm to people and the environment. Targets are set at all levels of the organisation to measure our progress towards this goal.

The health and safety targets we set are designed to drive the continual improvement of our performance and to progressively reduce the risk of harm to our employees, contractors and visitors to our sites.

With regard to the environment, we use a risk-based approach in the management of our operations, activities, services and products, with the objective of ensuring our environmental impacts are neither serious nor long-lasting. We also participate in collaborative research activities to improve industry processes, practices and technologies that will reduce our impacts on the environment and may help us achieve our goal of zero harm.

Safety is a priority on board the 'Griffin Venture' FPSO (floating production, storage and offloading vessel) offshore from Onslow on the north-west coast of Australia.



HSEC TARGETS CONTINUED

Figure 7: BHP Billiton HSEC Targets

Category	**BHP Billiton Target** (Baseline – 1 July 2001 to 30 June 2002)
Management Systems	All sites to have undertaken self-assessments against the BHP Billiton HSEC Management Standards by 30 June 2002, and have plans to achieve full conformance against the Standards by 30 June 2005.
	All sites to achieve ISO 14001 Certification by 30 June 2003.
Legal Compliance	Zero fines and prosecutions.
Risk Management	Risk registers in accordance with the BHP Billiton Risk Management Manual to be in place at all sites by 31 December 2002; and within BHP Billiton businesses and Corporate by 30 June 2003.
Health and Safety	Zero fatalities.
	50 per cent reduction in injury frequency rate (excluding First Aid treatments) at sites by 30 June 2007.
	All sites to complete a baseline survey on occupational exposure hazards and establishment of an occupational hygiene monitoring and health surveillance program by 30 June 2003.
	Reduction of occupational exposures below internationally accepted limits by 30 June 2004 and 20 per cent reduction in incidence of occupational disease by 30 June 2007.
Environment	Zero significant incidents (i.e. rated 3 and above) on the BHP Billiton Consequence Severity Ranking Table.
Energy	All sites to have energy conservation programs in place with specific targets by 30 June 2003.
Greenhouse	All sites to have greenhouse gas management programs in place by 30 June 2003.
	Aggregate Group target for reduction in greenhouse gas emissions per unit of production to be set by 30 June 2002.
Water	All sites to have water management plans in place by 30 June 2003.
	Aggregate Group target of 10 per cent reduction in fresh water consumption per unit of production by 30 June 2007.
Waste	All sites to have waste minimisation programs in place by 30 June 2003.
	Aggregate Group target of 20 per cent reduction in waste (excluding waste rock, tailings, coal reject and slag) per unit production by 30 June 2007.
Land Management	All sites to have land management plans in place by 30 June 2003 to protect and enhance agreed beneficial uses.
Product Stewardship	Life cycle assessments prepared for all major BHP Billiton minerals products by 30 June 2004 (incorporating participation in industry programs as appropriate).
Community	Public HSEC performance reporting at a local level (including incidents, community complaints and relevant site specific emissions) by 30 June 2002.
	All sites to have a Community Relations Plan in place by 30 June 2002.
	No transgressions within the Group's activities of the principles embodied within the United Nations Universal Declaration of Human Rights.
	Aggregate contribution to community programs, including in-kind support, of a target of 1 per cent pre-tax profits, calculated on a three-year rolling average.

These targets apply to BHP Billiton operated facilities only.
Note: Some targets have already been achieved at some facilities.

BHP BILLITON LIMITED PERFORMANCE SUMMARY

Huan Galleguillos, shift foreman, at Escondida copper mine, Chile.

This section of the Report provides a summary of the HSEC performance of BHP Billiton Limited (formerly BHP Limited) for the year 2000/01, and is followed by the relevant Appendices and Auditors' verification statement. Amounts included are presented in Australian Dollars (A$).

This section does not include details of the performance of BHP Billiton Plc (formerly Billiton Plc), which is covered in a later section commencing on page 46.

Introduction

The performance of BHP Billiton Limited in the areas of health, safety, environment and community (HSEC) has been driven by the company's commitment to continuously improve overall business performance, as these areas are integral to the company's values and success measures.

This section describes some of the key aspects of BHP Billiton Limited's HSEC performance in 2000/01, and includes a discussion of performance trends in key areas as well as case studies that describe significant HSEC initiatives, projects and programs.

The performance by several of BHP Billiton Limited's sites and their contributions to health, safety, environment and the community have been recognised by external groups and organisations during the period. A list of these awards can be found at the BHP Billiton web site, **www.bhpbilliton.com**.

Risk management, audit and reviews

The development and adoption of rigorous and consistent approaches to management of HSEC risks as components of overall business risk continued over the year. HSEC risks were routinely assessed as part of BHP Billiton Limited's planning and approval processes for new capital projects and major upgrades.

BHP Billiton Limited's Health, Safety and Environmental Risk Management Guidelines were further developed and piloted at a number of site-based workshops to assist sites to identify HSE risks, establish risk registers and develop mitigation plans. The majority of sites reported having environment risk registers (or risk registers that include HSE risks) either already in place or under preparation. However, there were some variations noted in the quality of the risk registers and the extent to which these have been used to drive the development of HSEC plans and programs at the sites.

Environmental audits and reviews conducted across BHP Billiton Limited varied in scope, duration and frequency but generally focused on management systems, regulatory compliance and internal improvement programs. In addition to the audit activities described below for BHP Billiton Limited's main businesses, all sites completed self-assessments against the BHP Billiton Limited Environmental Management Standards and Safety Management Standards during the past year.

In summary:

- Petroleum's HSEC audit program focused on compliance against internal management standards and legal requirements, and included a small number of specialist audits and reviews in areas such as waste and community development.
- Steel continued with its program to follow up management system audits against the requirements of ISO 14001 using an external independent auditor, as part of the objective of obtaining certification of management systems by 2002.
- Transport and Logistics' integrated safety, environment and quality management system was the subject of an ongoing program of internal and external independent audits. This program included vessels being audited against relevant maritime standards to maintain their operating certification.
- All Minerals' sites undertook self-audits as part of the progressive implementation of management standards, and ongoing maintenance and continual improvement of their environmental management systems. In addition to due diligence audits for potential acquisitions, there were only a few business-level environmental management system audits conducted during the year. The business-level audit program had been deferred pending the introduction of the Company-wide integrated HSEC audit program.

Last year, BHP Billiton Limited's Cannington operation invited the North Queensland Conservation Council (NQCC) to conduct an independent audit of the silver/lead/zinc mine's environmental performance and long-term sustainability. The NQCC evaluated the processes, personnel, values and performance of the mine, rail and port facilities.

Undertaken in a spirit of partnership, the appraisal project was given the title 'Broadening our Horizons'. This year, the Cannington operation has been acting on the key recommendations arising from the detailed audit. This has included developing product life cycle analysis and stewardship protocols in collaboration with non-government organisations, fostering greater community involvement in risk assessment and review, and undertaking further environmental research.

This commitment to improving environmental performance and developing positive relationships with the local community has been recognised by the 'Broadening our Horizons' project winning a Prime Minister's Award for Excellence in Community Business Partnerships.

The Cannington/NQCC audit process has been adopted as a model for community involvement in the rehabilitation process at the Beenup mine site in south-west Western Australia. A rehabilitation plan, approved by the State Government, has been in place at Beenup since closure of the mineral sands mine in 1999. The Beenup Consultative Committee, which comprises representatives from local community and business groups, conservation bodies, local councils and BHP Billiton Limited, has been providing community input into the closure process.

This year, BHP Billiton Limited sought interest from the Committee to conduct an independent community audit on the progress of work against the rehabilitation plan, based on the Cannington appraisal project. The Committee has been evaluating the proposal and considering submissions from consultants to undertake the audit.

Dendrobium coal project

In the Illawarra region of New South Wales, Australia, BHP Billiton Limited owns and operates underground coal mines and is developing a proposal for a new mine, named the Dendrobium Project after a local orchid. A feature of the project has been the high level of stakeholder and community involvement in the environmental impact statement (EIS) process. It has helped shape the design of the mine.

The mine is required so that our Port Kembla Steelworks can continue to be supplied from Illawarra with a prime metallurgical coal that is integral to the blend used by the steelworks. Supplies of this type of coal (from our Elouera mine) will be exhausted by 2004. The only alternative would be to import the coal from Queensland or overseas, which would impact on the economic performance of the Port Kembla operation.

Through the EIS process, community, government and environmental consultant input has been integral to the design development, with stakeholder input being incorporated into the project as it has progressed.

The numerous activities to identify stakeholder concerns and allow input have included a project website, various community forums, letterbox drops of project newsletters to residents, newspaper articles, and information booths at shopping centres. During the EIS public exhibition period, a shop front in the main shopping mall was staffed six days a week by project team representatives. The input has been captured on a database to ensure that all issues are analysed and followed up.

As a forum for community involvement, the Dendrobium Consultative Group was established in October 2000. Members include representatives of local conservation and community action groups, residents, regional councillors and BHP Billiton Limited. Other stakeholder communication has included fortnightly workshops involving the Wollongong City Council, Environment Protection Authority, Department of Mineral Resources and Department of Urban Affairs and Planning.

Issues and concerns raised during the consultation process included road and rail traffic, noise and vibration, ground instability and subsidence, hydrological impacts, and socio-economic impacts.

These concerns and other input from the community and government agencies has resulted in significant changes being made to the project including:

- during construction of the access tunnels, removing coal via a tunnel rather than trucking through residential areas;
- relocating the coal wash emplacement to a non-residential area;
- minimising emissions from the energy coal drier by using gas as a fuel source rather than energy coal;
- upgrading the rail system to reduce train noise and the number of train movements, particularly at night;
- changing shift times to minimise traffic during local school start and finish times; and
- implementing a driving code of practice for employees, contractors and suppliers.

BHP Billiton Limited sees continuing community consultation as a critical element of ongoing project development.

Left to right: Doug Boleyn – Contracts Manager, Tony Ryan – Engineering Manager, Libby Ferrari – Environmental & Community Relations Coordinator, Peter Whittall – Mine Manager, Wendy Tyrrell – Environment Manager Illawarra Coal, and Keith Partridge – Project Manager, discuss the Dendrobium Project.

Mario Zurek (left) and Steve Kazantsis at the BHP Coated Steel Australia Service Centre in Sunshine, Victoria, undertake safety audits to keep their workplace safe.

Towards zero harm: an initiative to involve all employees in undertaking safety audits

In June 2000, BHP Steel began a program aimed at involving its 12 000 employees in undertaking site safety audits. The initiative is based on the premise that the best people to identify hazards and unsafe practices in the workplace are the workers themselves. It's a matter of helping each other to achieve the goal of zero harm.

When the BHP Steel safety management team met in mid 2000 to determine priority programs for the coming year, the decision was made to focus on increasing involvement in safety auditing. It has led to one of the most ambitious safety initiatives ever undertaken by the business — to have 100 per cent of employees undertaking at least one site safety audit per quarter. Up to that point, only around 10 per cent of BHP Steel employees were undertaking audits, which were seen as the domain of supervisors or managers.

An awareness and good practice sharing program has been rolled out, with resource kits being supported by training sessions. While the goals are common, the leaders and Occupational Health & Safety (OH&S) committees at each site can implement the program in a way that suits local operations.

The results to date have been outstanding. Within just six months, 60 per cent of employees had undertaken at least one audit within a quarter. After the first 12 months, the figure had risen to over 90 per cent. The target now is to achieve, and maintain, 100 per cent involvement and to work towards improving auditing quality. The response has been so positive that many sites are choosing to do audits more frequently than one per person per quarter.

One site that has reached the 100 per cent goal is the BHP Coated Steel Australia Service Centre in Sunshine, Victoria. The OH&S Committee has organised a safety audit roster so that within each month each of the 70 staff and operators conducts an audit. First-time auditors are provided with coaching. This type of audit generally takes at least half an hour and is seen as 'a conversation about safety', focusing on potential hazards, risks associated with the task being undertaken and health issues. Following the audit, a supervisor reviews the report.

In the OH&S meeting room is a map of the plant on which incidents and areas of concern are represented by dot stickers. A cluster of dots identifies 'hot spots', and these become a focus for further audits and implementation of preventative measures. Safety performance has improved, with a record number of days without injury being achieved.

Health and Safety

Management systems

The BHP Billiton Limited Safety Management Standards were originally released in 1998 to address a range of generic management areas, such as performance measurement and reporting, as well as specific safety issues. These included managing hazardous materials and critical safety risks. Each business has been required to demonstrate that the management systems in use at its operations comply with the performance requirements of the 23 Safety Management Standards. Assurance that the operational safety management systems satisfied the Standards has been provided through a combination of compliance statements based on self-assessments and a hierarchically structured audit program.

Beyond the requirement to have robust safety management systems, a number of BHP Billiton Limited's operations, and Steel sites in particular, placed increasing emphasis on addressing behavioural aspects of safety. Programs aimed at involving employees in safety behavioural audits proved to be very effective in raising safety awareness and, as a consequence, improving performance.

BHP Billiton Limited's approach to safety and health management increasingly adopted risk management practices to identify, assess and mitigate operational safety and health risks at its facilities. Safety Cases based on quantitative risk assessments of critical safety risks are well established in the oil and gas industry. These same techniques were also applied to assess process safety risks in new Minerals operations, such as the Hot Briquetted Iron (HBI) plant in Port Hedland, Western Australia, and the new underground development at the San Juan coal mine in New Mexico.

Another feature of BHP Billiton Limited's safety management initiatives was the adoption and promotion of a standard technique for the investigation of significant incidents and near misses, the Incident Cause Analysis Method (ICAM).

Demonstrating a case for safe operation — The *Griffin Venture* FPSO

BHP Billiton Limited operates the *Griffin Venture* FPSO (floating production, storage, and offloading vessel) offshore from Onslow on the north-west coast of Australia. The Company has prepared an update of the operating Safety Case, and this has incorporated many enhancements for the workforce, to improve its clarity and accessibility.

Each offshore facility in Australia must have a Safety Case accepted by the local regulator. This is a series of documents that shows how well the facility understands the risks to which its workers are exposed and how it has developed its operations and safety programs to manage those risks. The *Griffin Venture* has been through the process of updating the Safety Case during the last year.

One of the main objectives of the update was to promote understanding and implementation of the Safety Case as part of the operational decision-making on the facility. This will help the *Griffin Venture* workforce manage hazards on their facility.

In producing this fourth revision of the Safety Case, a new initiative is an electronic version that has been developed to accompany the document. Compiled onto a CD-ROM, it breaks new ground by giving the operations personnel a powerful new tool to interrogate the Safety Case, either while on the facility or on shore. The CD-ROM has been designed to be quick and simple to navigate, making the Safety Case details easier to understand than the sometimes dry presentation of the printed document.

As our workforce becomes accustomed to this new presentation of the operating Safety Case, we will gather feedback from them to determine how use of such contemporary tools can be applied to further enhance safety management on the *Griffin Venture* and at other BHP Billiton Limited facilities.

The adoption of ICAM in turn supported initiatives to communicate and share the lessons learned regarding the root causes and contributory factors in significant incidents and near misses.

Safety performance

Figure 8 shows BHP Billiton Limited's record of fatalities for the period 1994/95 to 2000/01.

Regrettably, six people (three employees and three contractors) lost their lives in separate accidents at BHP Billiton Limited operations during the year. Two of the six fatalities were associated with mobile equipment (as were all five contractor fatalities last year), and this remains a key area of concern for the organisation going forward. Efforts concentrated on raising people's awareness of the issue and addressing attitudinal and behavioural aspects of the safe operation of mobile equipment, including light vehicles. (See case study: 'Mobile equipment safety initiative' in 'ICAM safety investigations'.)

Safety performance across BHP Billiton Limited continued to improve during 2000/01, meeting the Company's target of 20 per cent per annum reduction in Lost Time Injury Frequency Rate (LTIFR). This is illustrated in Figure 9, which shows the LTIFR for employees and contractors over the last seven years. In 2000/01, the LTIFR for employees was 2.89, down from 3.60 the previous year, while the LTIFR for employees and contractors combined was 2.49, down from 3.45 the previous year. Much of the improvement can be attributed to the greater attention given to demonstrating personal commitment to safety at all levels, and to specific initiatives designed to increase employees' awareness of safety issues and to seek their involvement in developing innovative ways of addressing these issues.

Figure 8: Fatalities
1994/95 to 2000/01

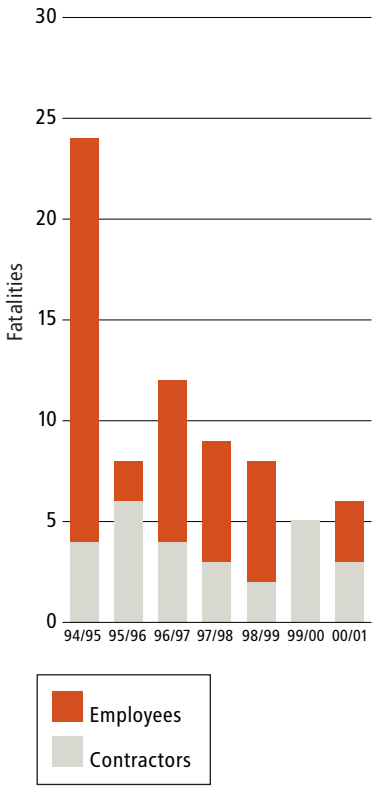
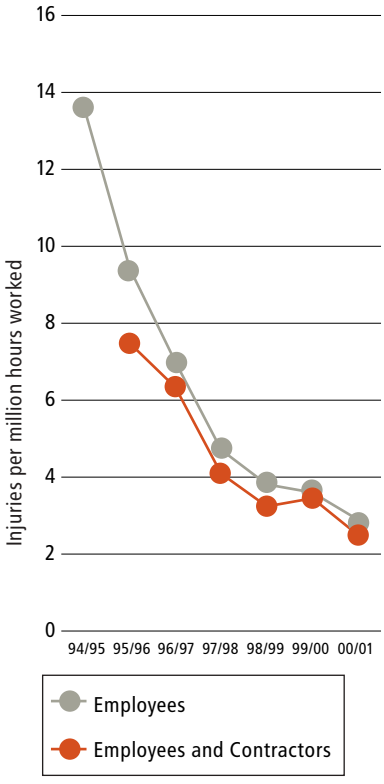


Figure 9: Lost Time Injury Frequency Rate (LTIFR)
1994/95 to 2000/01



ICAM safety investigations

A new approach to safety occurrence investigation is being introduced throughout BHP Billiton Limited. The Incident Cause Analysis Method (ICAM) has been designed as a uniform investigation and data analysis method that is easy to apply and can quickly identify the root causes of an incident. The principal objective of ICAM is to prevent recurrence and to advance safety.

ICAM is a logical process that addresses hazards and risks rather than human failings. This approach gains the support of employees and allows practical safety improvements to be implemented.

Most sites are now utilising ICAM to investigate incidents above Level 4 (those that could cause a fatality or severe irreversible disability or impairment). A simplified version, Minicam, applies to lower level incidents and near misses.

Introducing ICAM to a site involves briefings and training sessions for employees and contractors. A suite of training tools is supplied, together with support material including a comprehensive ICAM Incident Investigation Guide and a Minicam Guide. An ICAM intranet website has also been established.

ICAM is aligned with today's business practices and complies with BHP Billiton's Safety Management Standards. Considered current best practice, the methodology has been adopted by other companies in the resource sector and in other industries, such as aviation and road and rail transport.

Mobile equipment safety initiative

ICAM has been utilised in an extensive study of incidents involving mobile equipment, the major cause (nearly 40 per cent) of fatalities across BHP Billiton Limited.

Most fatalities involved light vehicles, followed by rolling stock, forklifts and haul trucks. Common factors were seat belts not being worn and drivers falling asleep. A disturbing finding is that the study revealed general complacency and passive tolerance of minor safety infringements. Also highlighted was the number of innocent bystander fatalities (50 per cent of victims), indicating that everyone, regardless of their role, is potentially at risk.

We are establishing network groups across the Company to focus on mobile equipment safety issues, with the objective of instituting effective control mechanisms specific to site circumstances and needs.

Load restraint innovation

Improving safety in the transport of products is a continual process. Through goal-oriented teamwork, a combined taskforce from our Transport and Logistics and Steel businesses has developed an innovative solution for the road transport of steel coils, providing easier and safer loading and unloading, greater product protection and improved load restraint.

After investigating various vehicles, the taskforce chose a B-double carrier (prime mover with two trailers) and developed a sliding canopy that opens and closes with a concertina action. Unlike curtain-sided trucks, this allows loading and unloading by overhead cranes as well as by forklifts.

The height of the sliding canopy was minimised to neatly fit the largest coil. This means the canopy weighs less and provides lower wind resistance than for a conventional tautliner vehicle. Sliding the canopies closed is a simple one-person operation that can be managed from the ground and takes around five minutes, compared with up to an hour for fitting two conventional tarpaulins.

As securing and covering a load no longer involves climbing on the truck to fit heavy tarpaulins, the chance of backstrain and falls is reduced. Working in wet and windy weather is also less hazardous. For those times when access to the deck is required, tubular steel ladders have been fitted to the trailers.

To restrain the coils efficiently and reliably, an innovative system of purpose-designed racks was devised. Called RoboRacks (after taskforce member Mike Robertson who developed the concept), the racks are adjustable and removable. They greatly reduce the potential for mistakes and injuries related to securing and unchaining loads, one of the biggest contributors to driver Lost Time Injury rates. A coil of up to 16 tonnes mass can be secured with a single chain that only needs to be hand-tightened. Previously up to four tensioned chains were required per coil.

The sliding canopy trucks with RoboRacks have been widely hailed in the transport industry. Six of the units are in operation on the Port Kembla–Sydney run, four on the Western Port–Melbourne run and one in Brisbane on a local shuttle run. The RoboRack system has also been adapted for rail, with 40 platforms carrying large steel coils between BHP Billiton Limited steel plants in Thailand and Malaysia. As well as being considered for use at other BHP Billiton Limited sites, the concept is being adopted by other sectors of the industry for use in Australia and overseas.

One of the new B-double carriers fitted with the innovative sliding canopies and RoboRacks, loaded with steel coils at Port Kembla Steelworks, New South Wales, Australia.

Zamzama community program

The Zamzama gas field in southern Pakistan commenced test production in March 2001, following the discovery of gas in 1998. As part of the environmental impact assessment process, a community program was initiated to meet a broad range of local needs. The fledgling Zamzama community affairs team is learning from current projects to ensure future investment is focused on sustainable outcomes for the community.

The Zamzama gas field (BHP Billiton Limited 47.5 per cent) is located north of Karachi near the towns of Dadu and Johi. The community development program is aimed at alleviating some of the problems faced by the people in the arid and impoverished region around the site.

In developing the program, the primary needs of local communities were assessed in collaboration with the provincial government, local non-government organisations and other community-based organisations. Priority needs were identified as drinking water, health care, education, and support for the social and economic advancement of women.

Based on this information, the Zamzama community affairs team initiated a broad program supporting a range of projects. A health clinic, employing a doctor and ten local support staff, has been established to service 20 villages in the region. A micro-credit scheme provides loans for local women to develop income-generating initiatives and to benefit from training in such aspects as operating a small business, marketing and selling products. Other projects have supported schools and child development organisations.

To address the desperate requirement for drinking water, the Zamzama community affairs team set about installing a community well in a neighbouring village. While worthwhile and well-intentioned, the initiative provides a valuable lesson in developing sustainable projects — the Zamzama team discovered that technical 'solutions' will not always meet local needs in a sustainable way.

Initially the solution seemed simple — build a shallow well with a hand-operated pump. It was only when drilling began that the problem became better understood. The water at shallow depth was found to be contaminated, requiring a deeper aquifer to be tapped. It was then necessary to install a power supply to operate a submersible pump. The resultant deep well and its associated technologies may be an unsustainable solution for the community.

As Zamzama moves from the development phase to production, more funds will become available to expand the community program. The Zamzama community affairs team, having undertaken a review of its current projects, is looking to increase the level of community development expertise within the team. Their goal is to ensure ongoing sustainability of each project in the expanded community program — providing continuing benefits to the people of the region.

A young villager at Mithoo Khan Lashari in southern Pakistan delights in the cool water from the new well (developed under the Zamzama community program) as it flows along an open channel to irrigate the local vegetable garden.

Community

Social performance

BHP Billiton Limited has recognised the importance of collecting and reporting social and community data to better understand and manage the social aspects of its operations. However, data collection continued to be challenging in terms of comprehensive social metrics. Options for improved systems continued to be investigated.

One area identified for improvement was community key performance indicators (KPIs). Only a few sites had locally negotiated KPIs (other than number/resolution of complaints), although some sites did pro-actively set KPIs in terms of local or indigenous employment. (See case study: 'Aboriginal employment initiative'.)

Recognising that social performance extends well beyond operations, last year BHP Billiton Limited made a commitment to uphold the fundamental human rights of people with whom the Company works, consistent with the principles contained in the United Nations Universal Declaration of Human Rights. In coming to terms with this commitment, the Company continued to collect data on child labour; wages and working hours; indigenous and local employment; diversity and gender; Community Relations Plans and complaints; community consultation and interaction; and economic benefits, such as taxes, royalties and community contributions. Data on business ethics were also collected.

Ok Tedi Sustainable Development Program

BHP Billiton Limited is a 52 per cent shareholder in the Ok Tedi copper mine in the Western Province of Papua New Guinea. As has been well documented, mine tailings and waste rock have been delivered directly to the river system after initial attempts to construct conventional waste retention structures failed in 1983/84. The environmental impacts associated with this practice have exceeded initial predictions and, given the topography, seismic activity and extremely high rainfall in the region, a means of significantly mitigating further impacts has not been found. Our preferred course of action would have been to close the mine early, however, this option has not been accepted by the PNG Government or the other private shareholder. We have therefore decided to exit our shareholding through the creation of a development program that will provide social benefits to the people of PNG and particularly the Western Province, while responsibly managing the environmental impacts.

The PNG Government is of the view that the social and financial benefits of the mine will continue to outweigh the environmental impacts. Community groups in the Western Province support the Government view.

Through the establishment of a dedicated Sustainable Development Program (the Program), BHP Billiton Limited wishes to support effective and sustainable community development in the region. The Program will have both short-term and long-term (beyond mine life) components.

The Program's funding guidelines will prescribe the type of projects that will be eligible for funding. It is anticipated that approved projects will fall within the broad categories of health and education, food production and agribusinesses, forestry and small to medium-sized enterprises.

Projects could be delivered through contractors, third-party service providers or local organisations such as churches, local government and non-government organisations. The Program's funding guidelines will govern the proportion of income that will be distributed each year to approved projects.

The Program will be managed by an independent Board comprising internationally recognised people of high standing in business or social development. An independent review process will verify that projects are being delivered in accordance with approved proposals.

The discharge of tailings to the river system that has led to our withdrawal from Ok Tedi was not the proposed method of waste disposal when the mine was being developed. Construction of a conventional tailings dam was well advanced before two massive landslides made completion impossible. Subsequent engineering investigations concluded that the area's topography, high rainfall, seismic activity and geotechnical instability meant a dam could not be constructed to acceptable safety standards in the vicinity of the mine.

Shareholders were left with the choice of disposing of the waste via the rivers or stopping further development of the mine. The decision to proceed at the time was based on evidence that the downstream aquatic ecosystem was well adapted to recovering from natural inputs of massive amounts of sediment. Predicted environmental impacts were based on the best available knowledge at the time. A governing factor in the decision not to stop development was the significant economic and social benefits the mine would bring to the people of PNG.

By establishing the Program, BHP Billiton Limited's equity in Ok Tedi Mining Limited (OTML) will continue to contribute such benefits to the country.

Another positive outcome of the Ok Tedi project is that it has helped shape the principles of our environment and community policies, and led to the requirement that our capital project review processes have rigorous social and environmental assessments. BHP Billiton Limited has also publicly stated that it would no longer consider investing in new projects using riverine tailings disposal.

Although it has not been possible to resolve the fundamental issue of mine waste retention, OTML has continued to pursue opportunities to minimise the impact of continued operations. A dredging operation in the lower Ok Tedi is continuing with localised benefits and research continues at the mill to improve the recovery of copper in the processing operations.

A flotation test cell at Ok Tedi's Folomian ore processing plant, where a research team is investigating the removal of sulphides from the mill tailings stream.

Aboriginal employment initiative

BHP Billiton Iron Ore began mining the Mt Whaleback iron ore body in the Pilbara in the mid 1960s and now operates several mines in this remote region of Western Australia. As part of its new Investment in Aboriginal Relationships Program, BHP Billiton Iron Ore has made a commitment to increase Aboriginal employment in its operations and the wider community to 12 per cent by 2010.

This goal reflects the proportion of indigenous people in the Pilbara population. Of the 45 000 people, some 12 per cent are Aboriginal. Most live in the larger towns, such as Port Hedland, Newman, Nullagine and Marble Bar, or in small Aboriginal communities. With current levels of indigenous employment at BHP Billiton Iron Ore at around 3 per cent, this is a significant undertaking.

Backed by a considerable increase in funding by BHP Billiton Iron Ore, the Investment in Aboriginal Relationships Program is a long-term initiative that recognises Aboriginal communities as key stakeholders. While driven by the BHP Billiton Charter and HSEC Management Standards, the program is based on local issues and opportunities. Senior management personnel have been involved in developing the program and are committed to its implementation. It will be subjected to BHP Billiton Limited's formal validation and auditing processes.

The program focuses on education, training and employment. An indigenous traineeship scheme is being developed, with several new administrative and trade apprenticeship positions to be made available each year at Newman, Port Hedland and Perth. Further support for Aboriginal trainees and employees is being provided through the employment of a specialist trainer as a mentor. Contractors are also being encouraged to develop indigenous employment and training programs.

In conjunction with the Education Department and local indigenous community members, BHP Billiton Iron Ore is developing and supporting educational, vocational and life skills programs aimed at increasing the retention and success of indigenous students at high school, as well as the number of Aboriginal students advancing to tertiary education. Workplace experience and access to role models is also being provided.

Other initiatives include expansion of BHP Billiton Iron Ore's cross-cultural training program to include all members of the workforce in Newman and Port Hedland. Through this program, employees learn more about the history and culture of local Aboriginal groups and explore cross-cultural issues. Local Aboriginal stakeholders play a key role in these programs as presenters.

To further demonstrate commitment to the Investment in Aboriginal Relationships Program, in April 2001 BHP Billiton Iron Ore signed a Memorandum of Understanding with the Federal Government's Department of Employment, Workplace Relations and Small Business, undertaking to increase employment opportunities for indigenous people as outlined in the program. This agreement supports an earlier undertaking with the Federal Government by BHP Billiton Limited, as a signatory to the Corporate Leaders for Indigenous Employment program.

Graeme Hunt, President BHP Billiton Iron Ore, with (left to right) Newman apprentice William Egan, Port Hedland trainee Larissa Thompson and Port Hedland apprentice Arthur Ramirez.

Employees

Demographics

The number of BHP Billiton Limited employees at 30 June 2001 was 27 675, fewer than the previous year, primarily due to the public listing of OneSteel. Contractor numbers totalled 28 051 (full-time equivalents), a marginal increase on the previous year.

Child labour

BHP Billiton Limited continued to monitor practices in relation to this issue. All employees were above the minimum legal age of employment. The age of the youngest employees was 17 years. These employees were apprentices whose ages were above the minimum legal working age, working at Ok Tedi in Papua New Guinea and a number of Minerals sites in Australia, including Goonyella Riverside, Hay Point Coal Terminal, Mt Whaleback, Nelson Point Terminal and Peak Downs.

Wages and working hours

Wages payments and working hours were monitored so that fairness and equity issues could be assessed. Records show that all employees earned the minimum wage or above in countries where the Company operates.

The average working week for employees ranged from 35 hours at the operations in Algeria and Australia (Illawarra Coal, South Blackwater, Peak Downs and Saraji Mines) to 56 hours at the Cannington operation in Queensland, Australia (based on 12-hour shifts, 14 days on, 7 days off).

Indigenous and local employment

Indigenous employment remained important in ensuring that local communities share the benefits of BHP Billiton Limited operations. Sites did not formally collect data on racial or ethnic background; but based on voluntary self-classification by employees, it was estimated that indigenous people comprised approximately 12 per cent of the workforce.

As reported last year, some operations were obligated to monitor and report their performance against agreed targets. This year, for example, the Navajo Coal Mine in New Mexico, United States, increased the number of its employees that are indigenous (from the local Navajo nation community) from 85 per cent in the last reporting period to 95 per cent.

In terms of local employment, some sites actively set out to recruit from the local area. For example, Blackwater Mine in Queensland, Australia, achieved its target of recruiting 100 per cent of its apprentices from the local population.

Gender

The number of women remained a small percentage of the overall workforce at 7 per cent, which is consistent with other companies in the resources industry. In Australia, BHP Billiton Limited has been required by legislation to report annually on Equal Opportunity for Women in the Workplace.

Primary issues for this reporting period included:

- average salaries for females are below that of males;
- representation of females in senior management positions is lower than that of males; and
- average turnover of female employees is higher than that of males.

Measures to counter these imbalances included policy development, training, development, and research initiatives to identify underlying causes. BHP Billiton Limited's affirmative action and equal employment opportunity policies continued to be revised and updated as required.

Illegal coal mining in Kalimantan

BHP Billiton Limited has an 80 per cent interest in three energy coal projects, located at Senakin and Satui in South Kalimantan and at Petangis in East Kalimantan. Since development of the mines began, the coal resource has been subjected to significant intrusion by illegal miners. As much as 5 million tonnes of coal have been illicitly taken from our Senakin and Satui concessions.

In recent times, the problem has reached unprecedented levels in Indonesia. More than 60 000 illegal miners are estimated to operate across the country, twice the number of people employed in legal operations. As well as coal, they are extracting gold, diamonds and tin.

The illicit mining is at its worst in South Kalimantan, with our coal projects being among the most seriously affected. More than 81 illegal mine sites have been reported along the Satui coal seam. The problem involves a substantial loss of resource and revenue for BHP Billiton Limited and also deprives local communities and the Indonesian Government of income that would have been gained through royalties and revenue sharing. Another serious issue is the damage to the environment caused by the raiders, who have no regard for environmental standards or regulations.

Local indigenous groups are not the perpetrators; they are large operators backed by wealthy and powerful interests thought to be working in collusion with corrupt bureaucrats and military officials. They enter our Contract of Work areas, seek out exposed coal seams and bring in excavators and bulldozers that rip out the coal to a depth of about 25 metres — as deep as their equipment can reach. After trucking out the mined coal, the illegal operators depart. No rehabilitation of the site is attempted.

The extracted coal is transported by hundreds of trucks on public roads, stockpiled along the banks of the region's main waterways, and carried by barge from numerous illegal ports. It is then shipped by barge to customers in Java and Sulawesi or transferred to ships destined for overseas markets. Buyers of the coal are usually aware of its origins or illegality, but turn a blind eye as the illicit operators and government officials falsify permits, quality classifications and export documents.

Our dilemma is that little direct action can be taken by BHP Billiton Limited. We operate under Contracts of Work issued by the Indonesian Government, which grant us an exclusive right to extract the coal in that area. From a legal perspective, the coal is owned by the government; and under the contract, they have the obligation (and we do not have the right) to expel the illegal miners. The Indonesian Government acknowledges the widespread existence of illicit mining, and points to state-owned businesses that are also affected. The government has issued orders instructing officials to deal with the problem.

Company employee Bayu Wicaksono surveys environmental damage at an illegal mine site at the Satui coal project in South Kalimantan, Indonesia.

Community

Community Relations Plans and complaints

A total of 31 BHP Billiton Limited sites had a Community Relations Plan in place, either informal or formal. This represented 58 per cent of the total number of sites and was a marginal increase from the previous year.

Complaints mechanisms were in place at 46 sites (87 per cent). Complaints varied, but most reflected issues around dust, noise, odour, land access, vehicle movements in residential areas, and other locally relevant issues. There was a variance in terms of formal tracking and resolution, as this was generally done informally and on a case-by-case basis.

Consultation and interaction

A total of 45 sites (85 per cent) had a BHP Billiton Limited representative responsible for community relations. Many of these people also had other responsibilities, and some sites in the same area used one representative. While no year-to-year comparison can be made as no data were recorded in 2000, the figure indicates that sites were dedicating resources to improve performance in this area.

A formal or informal consultation process was in place at 38 sites (72 per cent), representing a slight increase on last year, even though several sites and development projects with consultation forums were divested. These consultation processes varied, from formal public forums and local community meetings to one-on-one discussions and meetings.

Taxes and royalties

During the period, BHP Billiton Limited sites and operations paid a total of A$609 million in taxes and A$456 million in royalties throughout the world, lower than the previous year, reflecting depressed commodity prices. Royalties are effectively an economic rent paid on the basis of the value of products generated by BHP Billiton Limited businesses. They help ensure host countries share in the Company's success.

Community contributions

Community support programs are operated at sites and at the corporate level of BHP Billiton Limited. In 2000/01, BHP Billiton Limited's contributions to community-based organisations totalled A$19.3 million, which represents 0.97 per cent of BHP Billiton Limited's pre-tax profit on a three-year average. It includes in-kind assistance in the form of products or equipment, although this is the first time in-kind data have been collected and it is incomplete. Contributions to the Escondida Foundation in Chile and the Fly River Development Trust in Papua New Guinea are included in the amount.

Business ethics

The BHP Billiton Limited Business Conduct Helpline dealt with more than 290 individual issues from employees worldwide. Significant issues reported and actioned included inappropriate use of e-mail and the Internet, compliance with Company policy on avoidance of conflicts of interest, and fraud, as shown in Figure 10.

During the year, the Global Business Conduct Forum reviewed BHP Billiton Limited's Guide to Business Conduct. The new Guide includes revised reporting procedures for handling conduct breaches and takes into consideration changes in competition law, employment law, human rights, and the handling of foreign payments (to reinforce the Company's zero-tolerance stance on corrupt payments). BHP Billiton Limited is a member of Transparency International Australia and funded the development of that organisation's National Integrity Audit and Business Integrity Systems audit.

Figure 10: Business Conduct Helpline Issues

2000/01	%
Misuse of information technology	19
General inquiries	18
Conflict of interest	10
Individual conduct	9
Discrimination and harassment	8
Travel and accommodation	8
Policy, including compliance	7
Theft, fraud, corruption	7
Business conduct	6
Gifts	4
Safety	2
Shares/stock	2

Le Huynh Ngoc Ngan, Le Huynh Bang Chi and Le Thi Bao Ngoc at their new school, constructed as part of a BHP Steel Building Products community program in Vietnam.

Contributing to community aid programs in Vietnam

BHP Steel Building Products has recently been involved with the Red Cross and AusAid in a number of significant community programs in Vietnam, contributing steel products for the manufacture of more than 11 000 low-cost buildings, mostly as a response to emergency situations.

In the Mekong Delta, frames and roofs for as many as 3 000 flood-resistant houses have been supplied, following flooding in southern provinces. The frames are designed so that the walls can be built in the local style to maintain cultural integrity.

Also in the Mekong Delta, a prototype for a new school building was developed for a community program by AusAid and the Red Cross. Materials for construction of more than 260 of the buildings have since been supplied.

In the central province of Hue, 400 homes have been completed at Ha Tinh, where flash flooding caused devastation in late 2000. Materials for around 40 other buildings have been supplied to central provinces for emergency use in the flood season.

BHP Steel Building Products has also sponsored production of the Red Cross Workplace Safety Manual, which has been distributed to around 100 000 companies throughout Vietnam.

Steel recycling initiative in Shanghai

BHP Steel Building Products in Shanghai, China, has developed an innovative scheme for recycling strips of steel left over from Zincalume® and Colorbond® coil after edge slitting. Once perceived as scrap, the strips are now being recycled as a high-quality component in suitcase manufacture.

The strips have been found to be particularly useful for securing the handles of the suitcases. They are an ideal width, can easily be cut to size and punched, and have good corrosion resistance properties.

Arrangement for their supply to a local suitcase manufacturer has been negotiated through the facility's contracted scrap merchant. Previously, the strips were collected along with other scrap and supplied to steel-makers for recycling as furnace feed. However, being a low-value item, they were taken reluctantly by the merchant.

It is a true win-win situation. For the suitcase manufacturer, the strips are seen as a high-value component that has helped simplify the production process, while for BHP Steel Building Products and the scrap merchant, the financial return is significantly higher.

Zhu Xinzhong, manager of Xinzhong Suitcase Accessory Company, with fabricated steel off-cuts used in the manufacture of suitcases.

'Revive our Wetlands' community program

BHP Billiton Limited has been actively developing its community programs, with a focus on establishing sustainable partnerships that foster community engagement and employee volunteerism. A major initiative in Australia was launched in March 2001, with the commencement of a three-year partnership program with Conservation Volunteers Australia (CVA).

Titled 'Revive our Wetlands', the program aims to protect and revitalise 100 of Australia's most important wetlands by building the skills and knowledge of local communities. Wetlands are among the most important life support systems on earth and are vital for ecological sustainability. Since European settlement, it is estimated that more than half of Australia's wetlands have been destroyed. The wetlands targeted in the 'Revive' program include coastal wetlands, river systems, lakes, watercourses, alpine marshes and floodplains.

Over the three-year program, thousands of volunteers will be involved in local wetlands conservation activities, such as planting native grass species, fencing, removing weeds, clearing rubbish and building walking tracks and boardwalks. Those participating will include students, families, retirees, BHP Billiton Limited employees and other interested community members.

CVA is Australia's largest conservation organisation, annually managing volunteers in more than 1 500 projects. BHP Billiton Limited is providing A$1.5 million in funding and in-kind support to the 'Revive' program, enabling the design of a monitoring system, employment of a wetlands environmental officer in each state, and documentation of the projects.

A pilot project for the 'Revive' program was undertaken in Queensland at the Townsville Town Common, a world-renowned conservation park and habitat for thousands of migratory birds. The 3 245-hectare site is a few kilometres from the centre of Townsville. Inappropriate land use in the past, exotic weed invasion and limited staffing and maintenance resources led to the area becoming severely degraded. A one-year program commenced in early 2000 to identify and undertake priority tasks for preservation and restoration, source local volunteers, and establish a plan with Queensland Parks and Wildlife Services for ongoing sustainability and management of the site. The results of the pilot were very encouraging, with extensive involvement and a real sense of project ownership by the community.

While the details of the 'Revive' agreement and program were being developed, BHP Billiton Limited provided support for CVA in an initiative that enabled young Australians to participate in CVA World Conservation Programs. Thirteen young conservationists were selected to participate in an exchange program with the Californian Conservation Corps, the world's largest conservation corps, providing them with unique training in practical conservation management.

Mick Roche (right) and Christine Williamson of BHP Billiton Limited's Cannington operation, with Dave Watson, Project Officer for the Common Interest Program at Town Common, a pilot project for the 'Revive our Wetlands' community program.

Response to Liverpool Bay oil spill assists ISO 14001 certification

The Liverpool Bay oil and gas field is located in the Liverpool approaches of the Irish Sea. Improvements to HSEC systems and procedures have assisted the Liverpool Bay facilities in achieving ISO 14001 certification in environmental management.

It has taken two years and enormous commitment for the 500-strong Liverpool Bay team to gain ISO 14001 certification via Lloyd's Register Quality Assurance. The oil and gas field is located near popular holiday resorts in view of millions of people and in an area of biodiversity comprising vulnerable wildlife habitats.

An oil spill occurred in June 1998 as oil was being offloaded from an offshore storage installation to a shuttle tanker. BHP Billiton Petroleum pleaded guilty to the spill charge and in November 2000 was fined £40 000.

In this normally routine operation, oil is transferred to the shuttle tanker via a loading hose, which is fitted part way along its length with a marine breakaway coupling. In the event of tanker drift or a surge in oil pressure, the coupling is designed to 'break away' to protect the hose. As the coupling parts, self-closing petals at the break points seal off the ends of the hose. In such an event, a very small amount of spillage may occur as the petals close.

The incident resulted from two mechanical failures. A spike in oil pressure occurred when a valve on the manifold connecting the hose to the shuttle tanker suddenly shut off due to a failure in the valve locking system. The surge in oil pressure caused the coupling to break away, but the petals did not seal the hose adequately, and 55 000 litres of oil escaped.

Audits of the vessels, systems and procedures were immediately undertaken. Mechanically, the solution has been to install two new systems. To cater for tanker drift, the breakaway coupling has been replaced with a 'quick connect/disconnect' system with positive activated valves that seal the hose ends. Secondly, on the offshore storage installation, a surge relief system has been installed that, in the event of a pressure spike, allows the oil to flow safely back into the holding tanks.

Operationally, new guidelines for high-risk areas have been formulated and issued, including Contractor and Supplier Selection and Management Guidelines and Incident Notification and Reporting to the Policy Committee Procedures.

Both the onshore and offshore facilities at Liverpool Bay have subsequently been awarded ISO 14001 certification. The ongoing principle behind ISO 14001 is to demonstrate continuous improvement, to set environmental standards and objectives every year and to demonstrate to independent assessors that the business has delivered on those improvements at each annual audit.

While the 1998 incident was regrettable, Liverpool Bay has gone on to prove that it can gain this global certification under rigorous criteria in one of the most environmentally sensitive fields in the industry.

The sun sets on an offshore drilling unit operating in the Liverpool Bay oil and gas field located in the Irish Sea off the Welsh coast.

Environment

Standards and systems

BHP Billiton Limited's Environmental Management Standards were introduced in 1999. They comprise 20 Standards covering generic management activities (such as planning and objectives; management of change; and reviews, audits and inspections) as well as eight Guidelines that cover environmental issues of Company-wide significance (including energy and greenhouse; natural and cultural heritage; and wastes, emissions and hazardous materials). These internal standards were consistent with the requirements of externally recognised standards and codes, including ISO 14001 (the international standard for environmental management systems) and the Australian Minerals Industry Code for Environmental Management.

BHP Billiton Limited was a signatory to the Code for Environmental Management when it was launched by the Minerals Council of Australia in 1996, and contributed to its review and revision in 2000. The Code is a significant step by the minerals industry to address its environmental performance and public accountability. Signatories to the Code commit to:

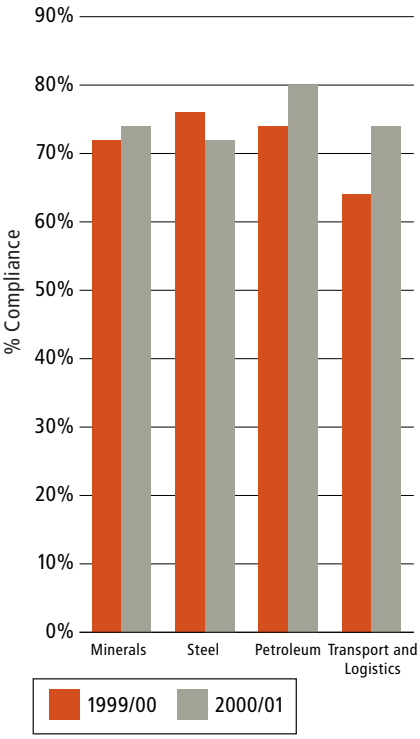
- accepting environmental responsibility for all our actions;
- strengthening our relationships with the community;
- integrating environmental management into the way we work;
- minimising the environmental impacts of our activities;
- encouraging responsible production and use of our products;
- continually improving our environmental performance; and
- communicating our environmental performance.

Other obligations under the Code include production of an annual environment report, which has been met through the publication of this HSEC Report. To assess progress in implementing the Code principles, an annual Code implementation survey must also be completed and verified by an accredited auditor. This year, BHP Billiton Limited scored 61 per cent on self-assessment, which, while indicating the need for improvement, compared favourably with the signatory average of 46 per cent.

Annual site-based self-assessments using a tiered scale have been conducted to monitor implementation of the Environmental Management Standards. The results of the self-assessments indicate where gaps in performance against each Standard and Guideline existed and where improvements were required.

The results of the site-level self-assessments have been consolidated into an overall aggregate average score for each Business Group and are shown in Figure 11. The apparent reduction in the level of self-assessed compliance with the Standards in the Steel division arose due to the substantial change in Steel assets following the public listing of OneSteel, and does not indicate a worsening in compliance with the Standards by the remaining Steel operations.

Figure 11: Self Assessed Compliance Against the Environmental Management Standards
1999/00 to 2000/01



BHP Billiton Limited has been working towards a target of obtaining ISO 14001 certification at all of its major assets. Consistent with this aim, by June 2001 four sites had their environmental management systems certified against ISO 14001. (See case study: 'Response to Liverpool Bay oil spill assists ISO 14001 certification'.)

Spending on the environment

The estimated environmental expenditure by BHP Billiton Limited for 2000/01 was approximately A$117 million. The amount includes the direct functional costs, including labour and consultants' fees, of running various environmental programs and studies across the organisation. It does not, however, include the various process or activity costs that have environmental consequences, such as treatment of atmospheric emissions, discharges to water, waste management or rehabilitation, and it does not include any provision for closure.

Environmental incidents, fines and prosecutions

No significant environmental incidents were reported by any of BHP Billiton Limited's operations during the reporting period 2000/01. This compares with six significant incidents during 1999/00 and 17 significant incidents during 1998/99. This result exceeded the Company target of a reduction in the number of significant environmental incidents of 20 per cent per annum.

The trend in the number of significant environmental incidents over the last four years for each Business Group is shown in Figure 12.

Environmental incidents include oil spills and other accidental discharges of hydrocarbons to the environment. Figure 13 shows the total amount of hydrocarbons spilled and discharged to marine and fresh waters since 1995/96.

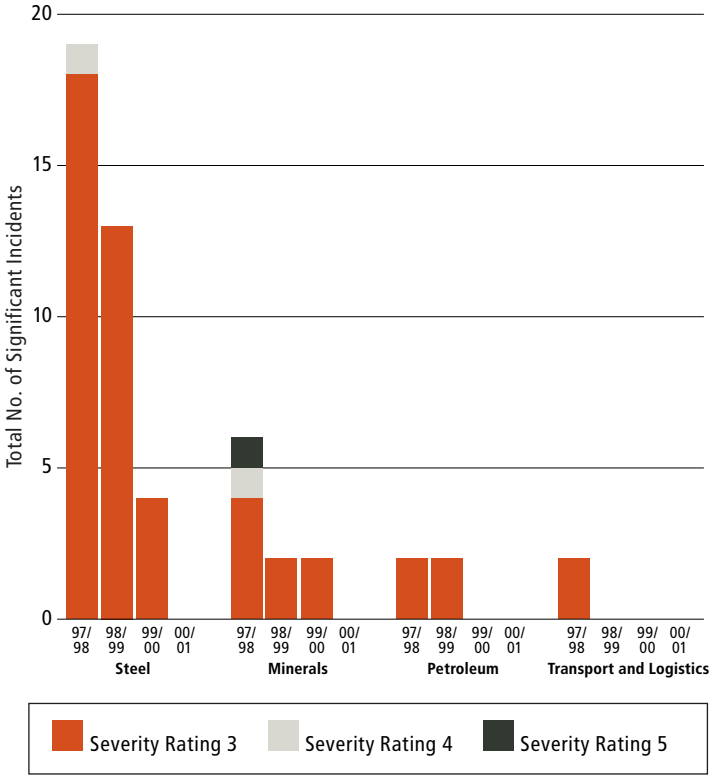
During 2000/01, the total reported volume of hydrocarbons accidentally discharged to water was 8 030 litres, up from 6 320 litres during the previous year. Even though this result was within the Company's original target of 30 per cent per annum reduction relative to the base year of 1995/96, the target of continuous reduction in the total volume of oil spilled was not achieved.

Minerals and Transport and Logistics each reported increases in the total volume of hydrocarbons spilled to water during the period, while Petroleum and Steel both reported improved performance with decreased accidental discharges.

Despite aiming to comply with all applicable laws and regulations, BHP Billiton Limited received 19 environment-related fines totalling A$135 683 during 2000/01. This represented an increase in the number of fines but not in the value of fines compared to the previous year. (In 1999/00, BHP Billiton Limited received 16 fines totalling A$212 490.)

Figure 14 shows the trends in the number of prosecutions and the total cost of fines over the last six years.

Figure 12: Reported Environmentally Significant Incidents
1997/98 to 2000/01



Note: A significant incident is an incident with consequences rated as severity 3 or above, based on the BHP Billiton Incident Severity Rating System (where 1 is the lowest severity and 5 is the highest).

Figure 13: Accidental Discharges of Hydrocarbons to Water
1995/96 to 2000/01

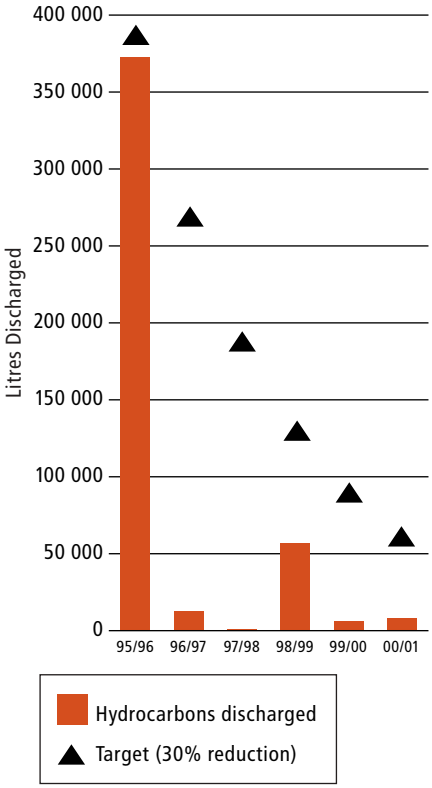
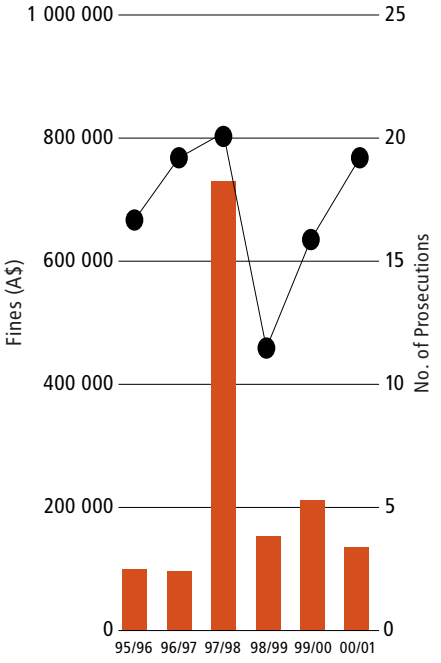


Figure 14: Fines and Prosecutions
1995/96 to 2000/01



Note: A successful prosecution without a fine is reported as a prosecution. Fines reported are those imposed during the reporting period, even though they may relate to incidents in prior years.

A summary of individual prosecutions and fines is presented in Appendix A. The largest fine of £40 000 (A$108 000) was received in November 2000 by the Liverpool Bay operations in the United Kingdom and related to a crude oil spill of 55 000 litres that occurred in June 1998.

Resource use

Land

The areas of land disturbed and rehabilitated by BHP Billiton Limited's operations each year are shown in Figure 15, together with the estimated total area of disturbed land. Note that the area of land disturbed does not include land affected by over-bank flooding and die-back from the Ok Tedi operations (in excess of 630 square kilometres). A summary of land disturbance and rehabilitation data is presented in Appendix B.

As a result of new mine developments, expansions to existing operations and the net effect of acquisitions and disposals, BHP Billiton Limited disturbed more land than it rehabilitated. Taking responsibility for this increasing net disturbance has underpinned the importance of the Company's 'whole-of-life' approach to planning, developing and operating its facilities. The approach has involved key stakeholders in determining the form and use of land following the closure of its operations and has ensured that adequate provisions are made to meet rehabilitation obligations, in line with accounting practices and regulatory requirements.

The responsibility for rehabilitation of disturbed sites and the remediation of sites that have become contaminated as a result of past operations can be dealt with in a variety of ways. As well as undertaking the work either directly or on a contractual basis, BHP Billiton Limited in some cases transferred liabilities for disturbed and contaminated sites under commercial arrangements.

These arrangements required the Company to undertake rigorous due diligence reviews of its properties and to assess the capacity of potential buyers to take on the responsibilities of cleanup and rehabilitation consistent with agreed post-mining land use. Details of site condition were disclosed during divestment negotiations, and efforts were made to minimise the retention of any ongoing or long-term liabilities.

BHP Billiton Limited's North American copper operations were placed on care and maintenance, with a minor amount of cathode copper still being produced at the Pinto Valley and San Manuel facilities. All options are being reviewed for the facilities, including closure.

Biodiversity

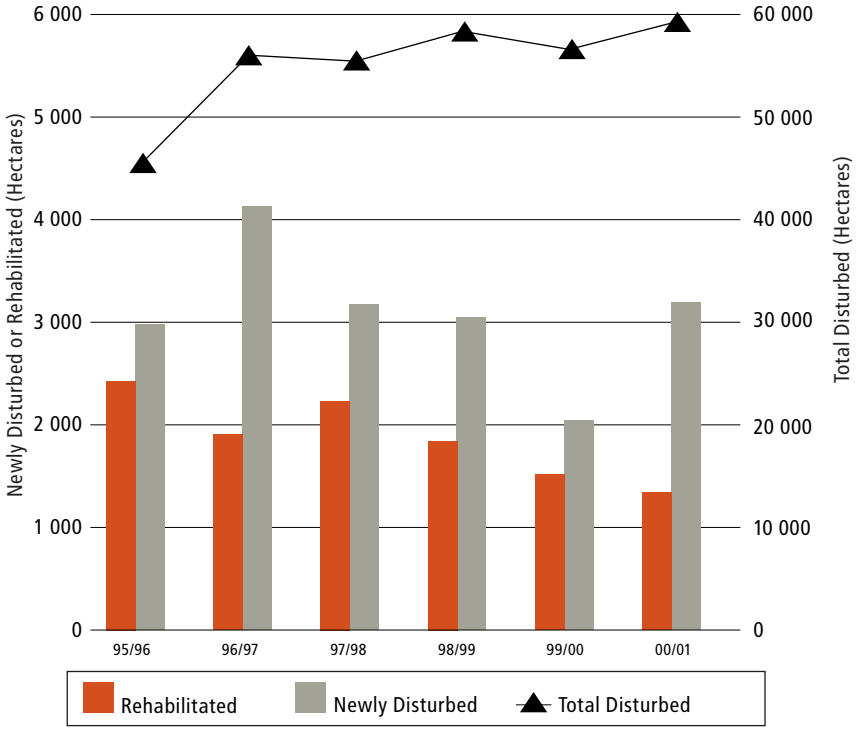
BHP Billiton Limited's activities affected the natural environment in a variety of ways. While the Company's aim was to minimise its impacts on ecosystems, the extraction, processing, storage and transporting of resources presented both challenges and opportunities to the way BHP Billiton Limited's operations have approached biodiversity issues.

There were many positive aspects for biodiversity arising from BHP Billiton Limited's activities. In the Minerals and Petroleum businesses, for example, environmental impact assessments conducted in some remote locations (both onshore and offshore) yielded studies that are considered to be valuable contributions to scientific literature, as well as allowing the operations to manage biodiversity risks effectively.

The presence of BHP Billiton Limited's operations provided the opportunity to participate in local and regional efforts to protect natural resources and to provide suitable habitat for threatened or endangered species. For example, the capping of disused bores by BHP Billiton Limited's Cannington operation in north Queensland is helping to preserve the artesian basin. As another example, for several years the Gregory coal mine in Queensland has provided an undisturbed area on the mining lease for research to assist the recovery plan for the endangered Bridled Nail-tailed Wallaby.

Transport and Logistics took a leading role within the shipping industry in developing operational approaches to protecting marine environments from the effects of anti-fouling paints and the introduction of exotic marine organisms. (See case study: 'A pro-active approach to improving the environmental performance of shipping'.)

Figure 15: Land Disturbance and Rehabilitation
1995/96 to 2000/01



A pro-active approach to improving the environmental performance of shipping

BHP Billiton Limited has been an active participant in several developments aimed at minimising the impact of shipping on biodiversity, including trials of new anti-fouling paints for ships' hulls.

Anti-fouling paints deter marine growth from building up on hulls. This can help to impede the spread of unwanted aquatic organisms that can become pests in the Australian marine environment. With less hull fouling, ships are faster, more fuel-efficient and require dry-docking less frequently, reducing operating costs significantly. However, current anti-fouling paints contain the biocide tributyltin (TBT), which can be harmful to some marine species.

In May 2001, one of our ships, the *Iron Monarch*, set off from Brisbane with its hull bearing patches of new TBT-free paints, as part of a two-year cooperative project involving the Federal Government; the maritime, paint and coating industries; and other shipowners.

The trials were initiated by Environment Australia under Australia's Oceans Policy with major funding drawn from the Natural Heritage Trust. They are managed by the Australian Shipowners Association and will be monitored regularly by the Defence Science and Technology Organisation.

Other vessels operating in Australian harbours and in offshore waters will be included in the trials. This will allow a wide range of TBT-free anti-fouling paints to be tested under normal commercial conditions, both to gain industry confidence and to help meet registration requirements before an international ban on TBT paints, proposed by the International Maritime Organisation (IMO), comes into effect.

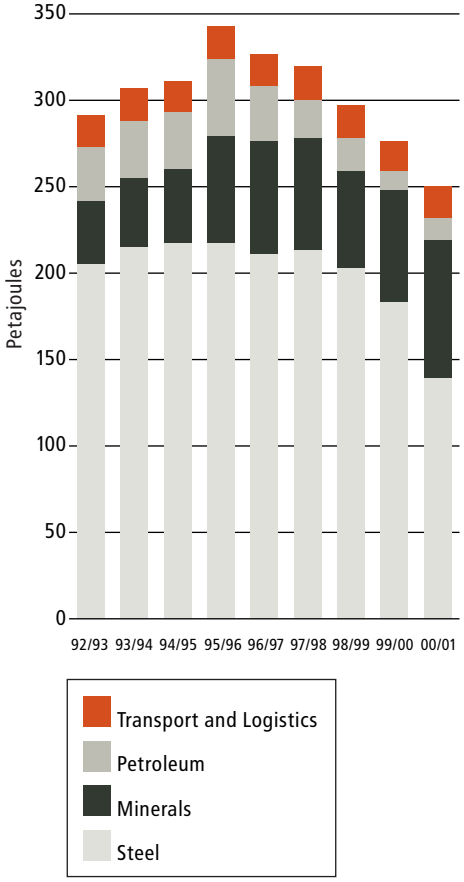
Given the impending IMO ban, it is essential that work to register effective and environmentally safe alternatives be progressed as soon as reasonably possible. Such a ban would also need to be globally implemented. For example, 97 per cent of ships passing through Australian ports are not Australian registered.

Another issue requiring a globally coordinated approach is environmental impacts from ballast water. Water taken on board for ballasting may contain unwanted aquatic organisms and pathogens that, upon discharge, may be harmful to the receiving environment. As well as requiring our vessels to comply with IMO guidelines, we have supported industry research into ballast water treatment and management. We have also operated under a voluntary compliance agreement with the Australian Quarantine Inspection Service prior to the introduction of a mandatory reporting regime that came into force on 1 July 2001.

Air pollution caused by ship exhausts is also becoming a major issue for the shipping industry, and the IMO is looking to limit emissions of oxides of sulphur and nitrogen. Our newest ship, the bulk carrier *Pacific Triangle*, incorporates an innovative engine design that reduces emissions of oxides of nitrogen by approximately 30 per cent.

The steel products carrier 'Iron Monarch' is taking part in trials to test new TBT-free anti-fouling hull paints.

Figure 16: Energy Use
1992/93 to 2000/01



Energy

BHP Billiton Limited's energy production has been in the form of fossil fuels, including coal and coke, oil, gas, LNG and other petroleum products. Energy production data based on the Company's interests in both non-operated joint ventures and Company-managed operations are presented in the Environmental Data Tables in Appendix B. Overall energy production levels have continued to rise each year despite the offsetting effect of asset divestments.

BHP Billiton Limited's energy consumption for the period from 1992/93 to 2000/01 is shown in Figure 16. Overall energy use decreased this year. This was mainly attributable to the public listing of OneSteel assets.

As shown in Figure 17, coal and coke continued to provide almost half of BHP Billiton Limited's energy requirements, while gas, at 22 per cent of the energy consumption, represented an increasing proportion of the Company's total energy needs. Distillate, fuel oil and purchased electricity contributed roughly equal proportions of the remainder of the fuel mix. A summary of energy data is presented in Appendix B.

Since 1995/96, BHP Billiton Limited has tracked its overall performance in energy intensity (i.e. energy consumption per unit of production) using an internal metric called the Energy Intensity Index. This performance measure is calculated for the range of BHP Billiton Limited's major products and is based on the ratio of each year's total energy consumption divided by the energy consumption in the base year (1995/96) adjusted for the yearly variations in production levels.

BHP Billiton Limited's overall Energy Intensity Index is shown in Figure 18. Overall, the Company's Energy Intensity Index improved by around 16 per cent, compared with the base year of 1995/96. The estimated improvement in the Index of 3 per cent since 1999/00 met the target of reducing energy intensities on a year-by-year basis. In recent years, this trend can be attributed to a combination of factors, including energy purchasing arrangements and structural changes such as closures, divestments and acquisitions, as well as technical improvements in process efficiencies.

Figure 17: Energy Use by Fuel Type
2000/01

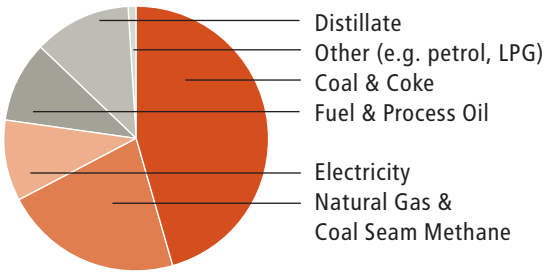
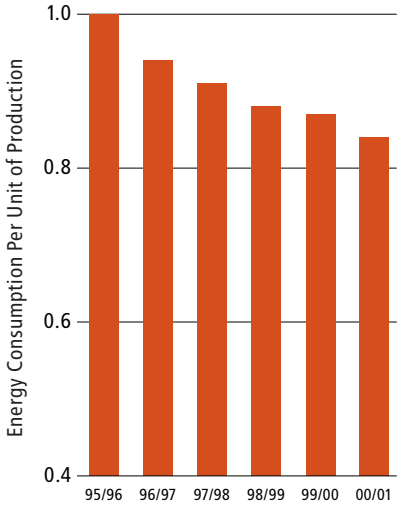


Figure 18: Energy Intensity index
1995/96 to 2000/01



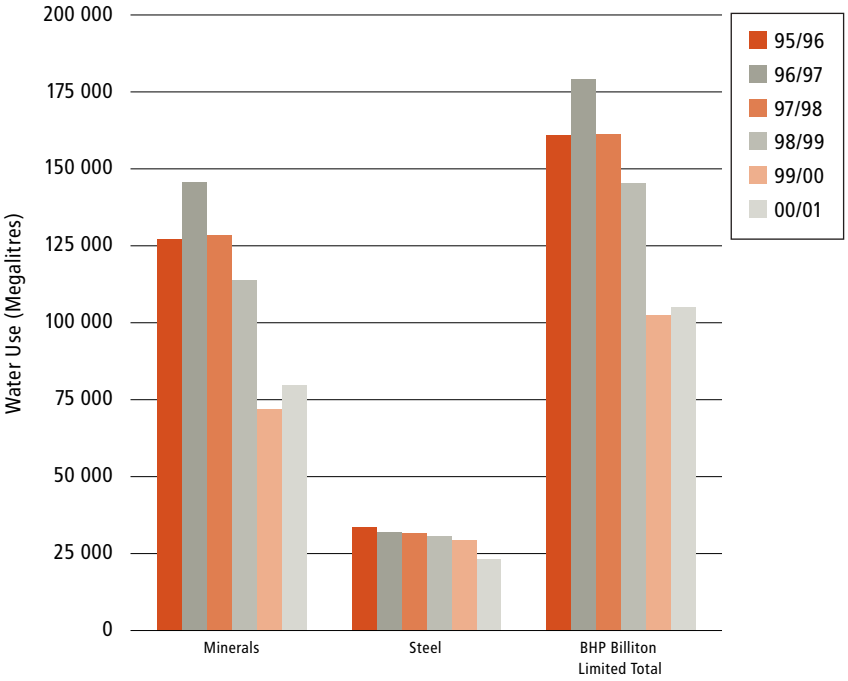
Water

Figure 19 shows the trends in water consumption by BHP Billiton Limited's major businesses, as well as total water consumption levels during the past six years. Data includes fresh water and ground water extracted for use on site.

Even though BHP Billiton Limited effectively maintained the long-term trend towards reduced use of water, consumption increased marginally across the Company's operations during the last year. Most sites had relatively stable water consumption levels, and site-specific initiatives to recycle water resources resulted in decreased water consumption at a number of operations.

The main reason for the observed increase was the additional 5 000 megalitres in water consumption at Escondida (Chile) during the last 12 months, which in turn was attributable to the construction of the Phase 4 mine expansion, as well as a slight increase in ore production from the existing facilities. A summary of water consumption data is presented in Appendix B.

Figure 19 : Water Consumption for Key Businesses, and BHP Billiton Limited Total 1995/96 to 2000/01



Note: Water consumption includes town water, ground water and run-off. It does not include consumption from mine dewatering.

Petroleum did not consume more than 1 900 megalitres of water in any of the reported years.

Transport and Logistics did not consume more than 100 megalitres of water in any of the reported years.

For complete water consumption details for all businesses see Appendix B.

Emissions

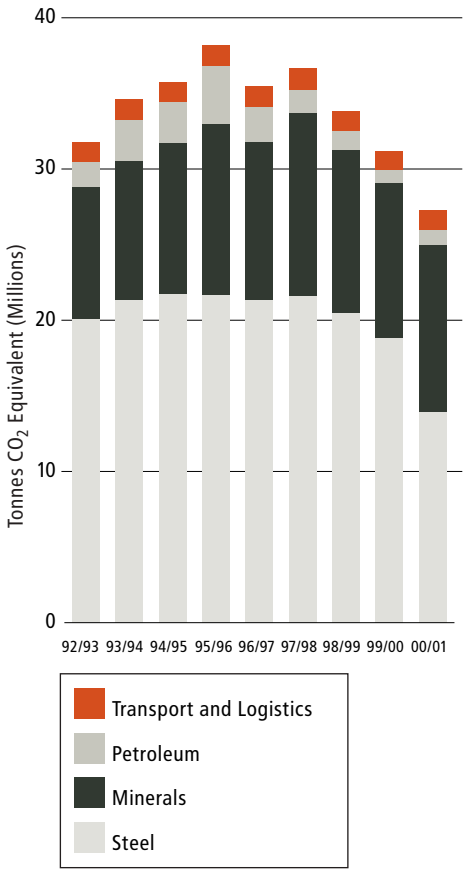
Greenhouse gases

BHP Billiton Limited's worldwide greenhouse gas emissions for the period from 1992/93 to 2000/01 are shown in Figure 20.

The main greenhouse gases associated with BHP Billiton Limited's operations are carbon dioxide and methane. Carbon dioxide emissions are mainly associated with chemical reduction processes including iron and steel making and the use of fluxes, fuel combustion processes including power generation, and, to a small extent, venting from coal mines.

Methane emissions result from coal mining and oil and gas production; and in the past year, these represented approximately 14 per cent of BHP Billiton Limited's total greenhouse emissions on a carbon dioxide equivalent (CO_2-e) basis.

Figure 20: Greenhouse Gas Emissions 1992/93 to 2000/01



Note: Total greenhouse gas emissions include carbon dioxide and methane (with a Global Warming Potential of 21).

Total greenhouse emissions in 2000/01 were 27.3 million tonnes of carbon dioxide equivalent, 3.9 million tonnes less than the previous reporting period and 10.9 million tonnes lower than the peak in 1995/96. A summary of greenhouse gas emissions data is presented in Appendix B.

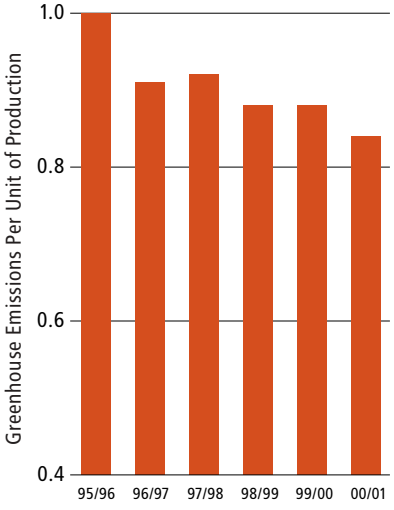
BHP Billiton Limited has measured its greenhouse performance in terms of its greenhouse emissions per unit of production for each of its major product groups. The overall greenhouse intensity performance has been tracked and reported using an internal measure referred to as the Greenhouse Intensity Index. This is based on the ratio of each year's total greenhouse gas emissions divided by the emissions in the base year (1995/96) adjusted for yearly variations in the production levels of BHP Billiton Limited's key commodity groups.

Figure 21 shows BHP Billiton Limited's Greenhouse Intensity Index between 1995/96 and 2000/01. Over this period, various initiatives, including projects and actions under Australia's Greenhouse Challenge program, general process improvements, and divestments and closures of less-efficient operations, have resulted in an overall reduction in the Company's Greenhouse Intensity Index of approximately 16 per cent.

The estimated improvement during the last 12 months of around 4 per cent satisfied the Company-wide target of year-by-year reduction in greenhouse intensities. This recent reduction was attributable in part to the change in Steel assets following the public listing of OneSteel but also reflects the increasing proportion of less carbon-intensive fuels, such as natural gas.

The Port Hedland Hot Briquetted Iron (HBI) plant also had a minor influence on this result, as production increased significantly while only modest rises in energy consumption occurred.

Figure 21: Greenhouse Intensity Index 1995/96 to 2000/01



Oxides of sulphur and nitrogen

Oxides of sulphur (SO_x) and oxides of nitrogen (NO_x) in sufficient concentrations can adversely impact local air quality, potentially affecting human health and the environment. Local emission objectives have been set and controlled at the site level either to meet environmental licence limits determined by regulators or to be consistent with good environmental and industry practice.

BHP Billiton Limited's total SO_x emissions to air are shown in Figure 22 with further detail in Appendix B. The reported emissions are estimated, based on monitored emissions from major point sources, plus the estimated emissions from combustion of fuels. Emissions of SO_x during the year increased marginally compared with 1999/00. This slight increase was primarily associated with higher production from Minerals and Transport and Logistics, which in turn was partially offset by reduced emissions from the restructured Steel business.

Figure 23 (and Appendix B) shows BHP Billiton Limited's estimated NO_x emissions to atmosphere, based on combustion of fuels and any monitored emissions from major point sources. Total estimated emissions of NO_x have reduced by almost 20 per cent since 1996/97 but levelled out over this year. Increases in emissions from Minerals and from Transport and Logistics have been offset by reductions in Steel's estimated emissions in the same period. Summaries of NO_x emissions data are presented in Appendix B.

Figure 22: SO_x Emissions to Air 1995/96 to 2000/01

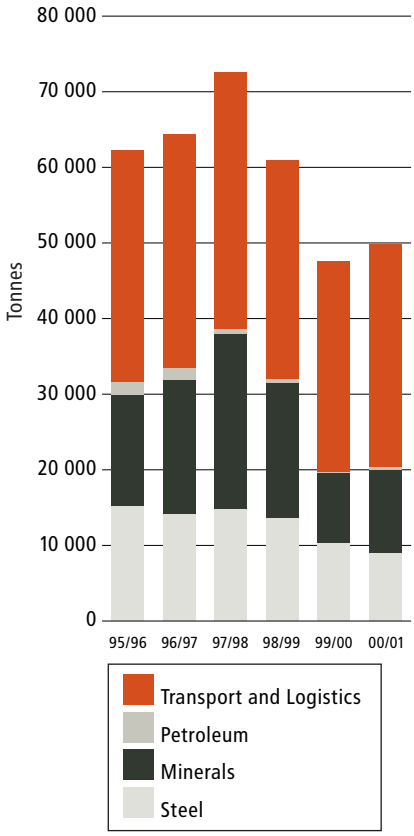
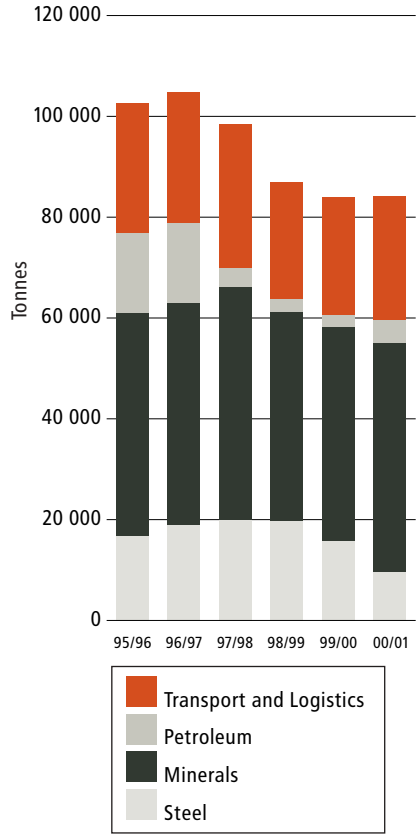


Figure 23: NO_x Emissions to Air 1995/96 to 2000/01



Other emissions to air

BHP Billiton Limited's operations have also regularly monitored and controlled a range of other substances and emissions to the atmosphere. These include:

- ozone-depleting substances, the use and disposal of which are controlled by international treaties and various national laws and regulations;
- dust emissions, which as well as being a nuisance, can be a potential health hazard due to chemical composition and other physical properties, such as particle size; and
- a range of organic compounds such as benzene and dioxin. These are by-products of various industrial and combustion processes that have potential health effects because of their toxicity.

Where the potential to impact human health has been identified, BHP Billiton Limited undertook studies to assess health risks and shared the results of these studies with communities through public forums, information provided to regulators and communications with non-government organisations. (See case study: 'Port Kembla Steelworks Health Risk Assessment'.)

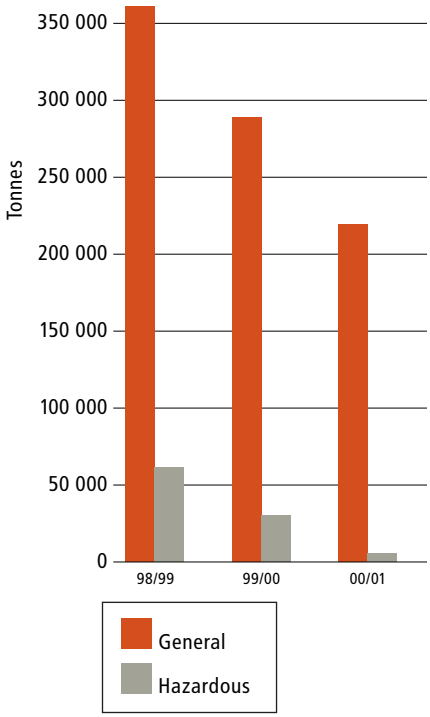
Waste

Figure 24 shows the Company-wide aggregated data for general and hazardous waste for the last three years. The quality of data has continued to improve over this period as a result of changes to waste estimation and reporting techniques.

Reported levels of general and hazardous waste have decreased steadily since 1998/99. This result was mainly attributable to the closure and sale of assets but was also influenced by site-specific waste reduction initiatives and changes in reporting practices. For example, BHP Billiton Limited suspected that some sites may have previously misreported materials (such as used oil for recycling) as either hazardous or general waste. A summary of waste data is presented in Appendix B.

Waste rock (overburden) and tailings from mining and ore-processing operations are normally stored on site in secure locations that minimise the risk of release of contaminants. These areas are rehabilitated as part of normal operations and mine closure. Materials discharged to waste rock and tailings storage facilities are therefore excluded from the calculation of total waste.

Figure 24: General and Hazardous Waste 1998/99 to 2000/01



Note: Hazardous waste is waste that is not accepted at normal landfills. It may include asbestos, hydrocarbons, radioactive material, heavy metals, solvents, thinners, acids, alkalis, fly ash, sludge and pesticides.

Port Kembla Steelworks Health Risk Assessment

BHP Steel has completed Stage Two of a Health Risk Assessment (HRA) of airborne emissions from Port Kembla Steelworks in New South Wales, Australia. The primary objectives of the HRA were to assess the potential health risk to the surrounding community and to determine BHP Steel's contribution to ambient conditions, as a basis for prioritising and managing pollution reduction initiatives. The results show adverse health risks are unlikely to be caused by emissions from the plant.

The HRA was conducted by an independent consultant and based on the California Air Pollution Control Officers Association (CAPCOA) model recommended by the Environment Protection Authority (EPA) of New South Wales. The model enables a comparison and ranking of the different operational areas of the plant.

An HRA community group was formed to contribute to the study and to monitor progress. Members of the group represented local communities, council, regional health professionals and the NSW EPA.

The HRA was conducted in two stages. Stage One, completed in December 1999, assessed emissions from the Sinter Plant. Stage Two, covering the rest of the plant, was completed in March 2001.

The Stage One Sinter Plant study found that the incremental lifetime risk of cancer in the worst case scenario was three in a million. This level is above the recommended NSW EPA guideline of one in a million, though well below the limit of one in 10 000 regarded by the EPA as unacceptable. A project has commenced to reduce emissions from the Sinter Plant, at a cost of A$94 million.

The Stage Two results estimated the increased lifetime risk of developing cancer for the local community, as a result of exposure to air emissions from the Steelworks, is 1 in 50 000. This is in comparison with the known cancer rate for the Illawarra population, being 1 in 3 as stated by the NSW Cancer Council. In a practical sense, the risk is considered so small that no additional cases of cancer above normal rates are expected within the community.

Adverse health effects other than cancer were also evaluated, using a Hazard Index. A calculation of less than 1.0 is considered acceptable by regulators. The calculated hazard risk from the Steelworks was 0.67, meaning adverse health risks are unlikely to occur.

The Stage Two results have been fully documented in a draft report that has been released for public comment.

The findings of the Health Risk Assessment are assisting the further development of pollution reduction measures at Port Kembla Steelworks.

BHP BILLITON LIMITED APPENDICES

APPENDIX A – BHP BILLITON LIMITED FINES AND PROSECUTIONS

During the period 2000/01, BHP Billiton Limited incurred 19 fines totalling the equivalent of A$135 683. These fines are described in the table below.

BHP BILLITON LIMITED BUSINESS	FINES AND PROSECUTIONS
Minerals	• La Plata Mine, New Mexico Coal, United States, in July 2000 received a fine of US$1 210 regarding an Office of Surface Mining inspection in March 2000, and subsequent Notice of Violation relating to road use and maintenance, and sediment control measures. • Tower Mine, Illawarra Coal, NSW, Australia, in March 2001 received two fines of A$1 500 each for failure to comply with EPA licence conditions regarding recording of water flow rates. • Appin Mine, Illawarra Coal, NSW, Australia, in June 2001 received a A$1 500 fine for failure to comply with EPA licence conditions regarding recording of water flow rates.
Steel	• Chullora Service Centre, NSW, Australia, in August 2000 received a A$1 500 fine for contravening a licence condition (late submission of certificate). • Port Kembla Steelworks, NSW, Australia, in October 2000 received three fines of A$1 500 each for sinter plant stack opacity exceedences. • Port Kembla Steelworks, NSW, Australia, in February 2001 received 10 fines of A$1 500 each. These related to various offences, including failure to carry out emission surveys, fugitive dust emissions, emissions from a blocked standpipe cap, and sinter plant stack opacity exceedences.
Petroleum	• Liverpool Bay, United Kingdom, in November 2000, received a fine of £40 000 (A$108 000) following an oil spill of 345 barrels (55 000 litres) in June 1998.
Transport and Logistics	• None

A successful prosecution without a fine is reported as a prosecution.

Fines reported are those imposed during the reporting period, even though they may relate to incidents in prior years.

APPENDIX B – BHP BILLITON LIMITED ENVIRONMENTAL DATA TABLES

Data in these tables are aggregate figures based on site data reported by BHP Billiton Limited's managed businesses for the BHP Billiton Limited financial year 2000/01. Totals may differ due to rounding of data. Production data can be found in BHP Billiton Limited's Report to Shareholders 2001 – Description of Businesses and Financial Statements. During a review of Land Rehabilitation and Disturbance data, an error was identified in last year's reported total area of land disturbance that has been corrected in this year's report.

Accidental Discharges of Hydrocarbons to Water

HYDROCARBONS DISCHARGED (LITRES)	95/96	96/97	97/98	98/99	99/00	00/01
Minerals	0	0	0*	7 280	5 800	7 629
Transport and Logistics	362 200#	410	80	30	100	255
Petroleum	10 500	11 980	1 190	55 620†	350	142
Steel	50	0	0	40	70	4
TOTAL	372 750	12 390	1 270	62 970	6 320	8 030

* Does not include diesel leak to soil at Ok Tedi.
# Includes Iron Baron incident of 362 200 litres.
† Petroleum figure includes 55 500 litres discharged at Liverpool Bay (offshore).

Land – Rehabilitation and Disturbance

LAND AREA (HECTARES)	95/96	96/97	97/98	98/99	99/00	00/01
Rehabilitated	2 430	1 910	2 240	1 850	1 520	1 350
Newly Disturbed	2 980	4 130	3 170	3 050	2 040	3 200
Total Disturbed	45 300	55 550	54 980	57 820	56 100	58 700

The 'Total Disturbed' areas are also affected by changes due to acquisitions and divestments, as well as 'Newly Disturbed' and 'Rehabilitated'.

Water

WATER CONSUMPTION (MEGALITRES)	95/96	96/97	97/98	98/99	99/00	00/01
Minerals	127 300	145 700	128 500	114 000	72 000	79 800
Transport and Logistics	Not Reported	60	20	90	100	100
Petroleum	Not Reported	1 300	1 100	400	1 000	1 900
Steel	33 700	32 000	31 800	30 800	29 300	23 300
TOTAL	161 000	179 060	161 420	145 290	102 400	105 100

Water consumption includes town water, ground water and run-off. It does not include consumption from dewatered mine pits.

APPENDIX B – BHP BILLITON LIMITED ENVIRONMENTAL DATA TABLES

Energy

ENERGY PRODUCTION (PETAJOULES)	95/96	96/97	97/98	98/99	99/00	00/01
Crude oil and condensate	406	409	444	574	591	610
Natural gas	236	227	224	262	275	323
LNG, LPG, ethane	97	101	110	74	104	100
Black coal	1 497	1 547	1 686	1 725	1 743	1 959
TOTAL	2 237	2 284	2 464	2 635	2 712	2 993

For petroleum products: Production reported is BHP Billiton Limited's share of production from joint ventures and 100 per cent of production from controlled entities.

ENERGY USE (PETAJOULES – INCLUDES ELECTRICAL ENERGY OF PURCHASED ELECTRICITY)	95/96	96/97	97/98	98/99	99/00	00/01
Minerals	62.0	65.3	64.5	56.0#	65.5*	80.1
Transport and Logistics	19.2	19.2	20.2	19.0	17.2	18.2
Petroleum	44.8	31.6	22.2	18.7	11.4†	13.1
Steel	217.0	211.0	213.0	203.0	182.5^	139.0
TOTAL	343.0	327.1	319.9	296.7	276.5	250.5

\# Decrease primarily due to Ferrous Minerals now purchasing electricity instead of generating its own.

* Increase primarily due to higher production from the Hot Briquetted Iron plant.

† Decrease due to sale of Elang, Challis and Jabiru during 1998/99.

^ Decrease due to closure of Newcastle primary operations.

2000/01: Minerals' energy use increased due to inclusion of Samarco iron ore operation.

2000/01: Steel's energy use reduced due to public listing of OneSteel.

ENERGY USE BY FUEL TYPE 2000/01 (PETAJOULES)	Coal & Coke	Natural Gas & Coal Seam Methane	Electricity	Fuel & Process Oil	Distillate	Other (petrol LPG, etc)	Total
Minerals	5.4	23.4	16.5	7.8	26.2	1.0	80.1
Transport and Logistics	0.0	0.0	0.1	17.0	0.9	0.2	18.2
Petroleum	0.0	11.3	–0.3	0.0	1.7	0.4	13.1
Steel	109.9	20.3	7.7	0.6	0.3	0.2	139.0
TOTAL	115.3	55.0	24.0	25.4	29.0	1.8	250.5

APPENDIX B – BHP BILLITON LIMITED ENVIRONMENTAL DATA TABLES

Emissions – Greenhouse Gases

CARBON DIOXIDE (MILLION TONNES)	95/96	96/97	97/98	98/99	99/00	00/01
Minerals	5.9#	6.2	6.4	5.9	6.3*	7.3
Transport and Logistics	1.4	1.4	1.5	1.4	1.3	1.3
Petroleum	2.8	2.1	1.4	1.0^	0.8	0.9
Steel	21.6	21.3	21.6	20.4	18.7	13.9
TOTAL	31.7	31.0	30.9	28.7	27.1	23.3

\# BHP Billiton Limited purchased Magma Copper in 1995/96.

* Increase primarily due to higher Hot Briquetted Iron plant production.

^ Decrease due to sale of Elang, Challis and Jabiru during 1998/99.

2000/01: Minerals carbon dioxide emissions increased due to inclusion of Samarco iron ore operation.

2000/01: Steel carbon dioxide emissions decreased due to public listing of OneSteel.

METHANE (TONNES)	95/96	96/97	97/98	98/99	99/00	00/01
Minerals	255 700	197 700	268 500	231 100	187 000	177 500
Transport and Logistics	0	0	0	0	0	0
Petroleum	52 000*	11 300	5 400	12 000	5 000	7 700
Steel	2 900	3 200	3 100	3 500	2 500	1 900
TOTAL	310 600	212 200	277 000	246 600	194 500	187 100

* The high value in 1995/96 methane emissions can be attributed to flaring from the Griffin facility.
Fluctuations in subsequent years are due to commissioning of facilities, flaring of gas and disposal of assets.

TOTAL GREENHOUSE GASES (MILLION TONNES CO_2 EQUIVALENT)	95/96	96/97	97/98	98/99	99/00	00/01
Carbon Dioxide	31.7	31.0	30.9	28.7	27.1	23.3
Methane (GWP = 21)	6.5	4.5	5.8	5.2	4.1	3.9
TOTAL	38.2	35.5	36.7	33.9	31.2	27.3

GWP = Global Warming Potential

APPENDIX B – BHP BILLITON LIMITED ENVIRONMENTAL DATA TABLES

Emissions – Oxides of Sulphur

SO_x (TONNES)	95/96	96/97	97/98	98/99	99/00	00/01
Minerals	14 800	17 700	23 200	17 900	9 200*	10 900
Transport and Logistics	30 700	31 000	34 000	28 900	27 800	29 500
Petroleum	1 700	1 600	700	650	200^	400
Steel	15 100	14 100	14 700	13 500	10 300#	8 900
TOTAL	62 300	64 300	72 600	60 950	47 500	49 700

* Decrease due to closure of San Manuel and sale of Hartley Platinum during 1999/00.

^ Decrease primarily due to the sale of the Jabiru, Elang and Challis during 1998/99.

\# Decrease primarily due to the closure of Newcastle primary operations in September 1999.
2000/01: Steel emissions reduced due to public listing of OneSteel.

Emissions – Oxides of Nitrogen

NO_x (TONNES)	95/96	96/97	97/98	98/99	99/00	00/01
Minerals	44 200	44 000	46 200	41 500	42 400	44 300
Transport and Logistics	25 800	26 000	28 600	23 400	23 300	24 500
Petroleum	15 800	15 800	3 700	2 400	2 500	4 800
Steel	16 800	19 000	19 900	19 700	15 700*	9 600
TOTAL	102 700	104 800	98 500	87 000	83 900	83 200

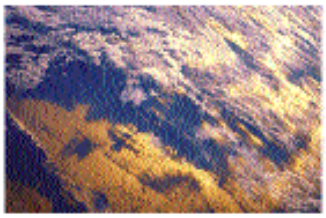
* Decrease primarily due to closure of Newcastle primary operations in September 1999.
2000/01: Steel emissions reduced due to public listing of OneSteel.

Waste

WASTE (TONNES)	GENERAL			HAZARDOUS		
	98/99	99/00	00/01	98/99	99/00	00/01
Minerals	88 400	68 100	92 100	4 600	1 100	1 500
Transport and Logistics	5 500	4 100	10 100	0	800	1 900
Petroleum	5 300	1 600	1 200	1 100	800	500
Steel	261 500	214 900	128 300	55 900	27 500	1 700
TOTAL	360 700	288 700	213 700	61 600	30 200	5 600

Reported waste does not include recycled materials, waste rock (overburden) or tailings.

Verification Statement



Scope

Environmental Resources Management (ERM), a global independent environmental and social consultancy, was asked to verify the data and data management systems relating to BHP Billiton Limited sites for the July 2000 to June 2001 period for the BHP Billiton Health, Safety, Environment and Community Report 2001.

Specifically, we were asked to review:

- the data collection process;
- the data management process;
- the data and tables presented in the report.

We reviewed the site questionnaires and correspondence and the head office data management systems, including databases, spreadsheets and data manipulation processes. Head office staff involved in data management were interviewed.

We visited a sample of six sites to review data collection and management procedures, and the data reported in the site questionnaires. Staff responsible for collecting data and for completing and authorising the site questionnaires were interviewed. The six sites were selected after data had been submitted and were chosen to represent different commodities, localities and stages in site lifecycle (some being recently developed, and some approaching closure). The sites visited were the Ekati diamond mine in Canada, Tintaya copper mine in Peru, Pinto Valley copper mine in the USA, and in Australia, the Peak Downs coal mine, Griffin gas project and Port Hedland rail and port facilities.

The review process focussed on environmental, health, safety and greenhouse data. Data and evidence of processes in relation to community relations were reviewed. No discussions were held with external stakeholders.

Findings

The review indicated that, in most instances, the data collection and management systems provided accurate information. We did, however, find differing interpretations by sites of the parameters relating to land rehabilitation and disturbance.

Whilst the data returned from the six sampled sites were found to be generally accurate, a small number of discrepancies were identified and corrected. These were immaterial in the context of the overall results.

A number of sites noted that data collection and reporting had to be completed in a short timeframe, and that they would have benefited from earlier knowledge of additional data needs.

The Head Office data aggregation and management processes were considered sound, and the assumptions made regarding greenhouse emission sources and rates were found to be reasonable.

Recommendations

We recommend:

- the purpose and importance of reporting needs to be clearly communicated to, and understood by, sites and entities providing information;
- the process for communicating data requests to sites could be streamlined, in order to assist sites with timely data collection and reporting activities;
- further clarification of definitions relating to some data items, including land rehabilitation, should be provided to sites.

Opinion

We believe that the data presented in Appendix B and as set out in the text and diagrams, relating to the year ending 2001, provides a fair and reasonable representation of company performance on those issues.

David Smashall
Director, Corporate Advisory Services

Delivering sustainable solutions in a more competitive world

ERM

BHP BILLITON PLC PERFORMANCE SUMMARY

Fanie van der Merwe at Optimum Colliery, South Africa.

This section of the Report provides a summary of the HSEC performance of BHP Billiton Plc (formerly Billiton Plc) for the year 2000/01, and is followed by the relevant Appendix and Auditor's statement. Amounts included are presented in US Dollars (US$).

This section does not include details of the performance of BHP Billiton Limited (formerly BHP Limited), which is covered in an earlier section commencing on page 16.

CASE STUDY

Pioneering biotechnology

In a world first, BHP Billiton Plc is pioneering the use of thermophile micro-organisms in recovering minerals from complex sulphide ores. At Pering mine in South Africa, the Company has commissioned a test facility using the world-class BioCop® bio-leaching process on an industrial scale. The results to date have been very encouraging.

The test reactor at the Pering mine was initiated in February 2000, following successful trials of the BioCop® process by BHP Billiton Plc and Codelco (equal partners in Alliance Copper Ltd) at a prototype plant at Chuquicamata, Chile. Patents are pending for the technology.

The initial trials in Chile demonstrated the industrial viability of the thermophile process for the treatment of base metal sulphide concentrates, replacing the traditional 'roasting' process that can produce unwanted airborne environmental emissions.

The Pering facility is designed to treat a sulphide concentrate feedstock at a rate of around 22 tonnes per day in a single 300-cubic-metre reactor. The reactor is constructed of concrete and lined with layers of ceramic tiles, acid-resistant grout and a polymer membrane. This novel design has numerous benefits, such as excellent corrosion resistance at high temperatures and high chloride levels and the ability to operate in areas of high seismic activity (an essential attribute in Chile).

The testing at Pering is scheduled to be completed by the end of 2001.

Pering mine, South Africa.

Introduction

BHP Billiton Plc remained committed to making sustainable development a cornerstone of its business activities. This section describes key aspects of BHP Billiton Plc's approach to HSEC management and performance this year, and includes a discussion of performance trends in key areas as well as case studies that describe significant HSEC initiatives, projects and programs.

Over the year, the Group worked hard to improve its corporate HSE and social reporting and management systems in order to capture more valuable information. These efforts, coupled with the feedback received from stakeholders on last year's report, have led to the inclusion of more data and analysis of liquid emissions and waste, the introduction of new reporting indicators such as financial benefits and land management and closure planning, as well as more information on occupational and community health. In an effort to improve transparency, a further development is performance reporting based on the Group's attributable share (percentage of the managed operation owned), for selected key performance indicators.

For the third year running, the Company improved its performance in the UK's Business in the Environment Index of Corporate Environmental Engagement, comparing favourably with the FTSE 100 and Resources Group averages. Ratings improved in both the management and performance categories, including strategic environmental management performance, energy, transport, global warming, waste and water. Opportunities for improvement were identified in the areas of communication with stakeholders, product stewardship and resource consumption. These will be particular focus areas for the forthcoming reporting period.

In this performance section, safety data includes all BHP Billiton Plc managed and non-managed sites, including those in which BHP Billiton Plc has interests, whether as subsidiaries, joint ventures or joint arrangements. This data includes employees and contractors.

Occupational health data covers BHP Billiton Plc employees and contractors at managed sites.

Community and environmental data covers all BHP Billiton Plc managed sites, with data omissions noted as appropriate.

External awards

This year BHP Billiton Plc received 34 external health, safety, environment and community awards. These included:

- Minesafe International 2000: Top Team Award — 'Emergency Response Skills Competition', for Worsley alumina refinery, Australia
- The Benjamin Teplizky Award — 'Outstanding Commitment to Safety and Sustainable Development', for Cerro Colorado copper mine, Chile

Information on the other awards can be found on the BHP Billiton website, **www.bhpbilliton.com**.

Risk management, audits and reviews

Risk management and policy compliance within the BHP Billiton Plc Group were supported by a series of international best practice guidelines, which were applied across the operational life cycle, from socio-economic and cultural issues to tailings and waste management. These guidelines were based on priority issues identified in part through BHP Billiton Plc's reporting standards, which were strengthened and extended during the year, particularly in respect of key indicators for environmental and community issues.

Internal and external HSE reviews and audits on the basis of risk and compliance were regularly undertaken, with HSE issues at project and operational levels being integrated into management systems.

A further indication of BHP Billiton Plc's commitment to improving risk management was a series of health, safety and environment reviews that were undertaken this year by Corporate HSE professionals and members of the HSE Committee of the Board. These reviews

Safe behaviour at Khutala Colliery

The desire to be world-class in terms of health and safety performance led to the introduction of a series of behavioural intervention programs across the workforce at Khutala Colliery in South Africa. These programs comprise theoretical training modules, supported by practical intervention exercises, at both group and individual level.

All new employees at Khutala Colliery are required to undergo a two-day training program focusing on health and safety issues.

This is followed by a three-day intervention program to equip employees with problem-solving skills. To further reinforce the message of workplace safety, they are introduced to their health and safety responsibilities through a behaviour-based safety training program.

The theory learned in these programs is reinforced through practical on-the-job training. The hands-on training provides an opportunity for employees to convert their workplace safety knowledge into action.

Long-term plans are in place to ensure that each work team is able to manage itself in a mature and sustainable manner into the future.

Following the inception of this approach, the Lost Time Injury Frequency Rate at Khutala Colliery reduced from 4.95 in December 1999 to 2.71 in June 2001, representing a 45 per cent improvement over the 18-month period. Similarly, the cases per million man hours worked during the same period reduced from 30.07 to 15.1, improving the Total Injury Frequency Rate at the colliery by 49 per cent.

Training program, Khutala Colliery, South Africa.

identified a number of management issues, including the need for:

- extensive work to support environmental health issues of relevance to BHP Billiton Plc businesses;
- implementation of high-quality waste, land management and closure plans for minerals processing plants; and
- evaluation of the recent regulatory development regarding persistent organic substances (especially dioxins, furans and perfluorocarbons) for processing plants, and its impact on the Company's long-term strategy.

BHP Billiton Plc has strived to maintain a high standard of corporate citizenship over the life cycle of operations and is committed to stakeholder engagement as part of working towards sustainable development. To this end, the Company has engaged with local communities in three ways: community events, meetings and information dissemination, all of which are recorded.

Health and Safety

Management systems

BHP Billiton Plc operations are now working towards implementation of safety and occupational health management systems to the OHSAS 18001 common standard. Good progress towards the implementation and certification of this standard was made in 2000/01, especially by the Ingwe operations in South Africa.

In addition to national legislative standards, specific standards from international bodies were used by BHP Billiton Plc to measure performance and ensure best practice. Such bodies included the American Conference of Governmental Industrial Hygienists (ACGIH), the UK Health and Safety Executive, the World Health Organization, and International Labour Organisation.

Safety programs and initiatives

To allow BHP Billiton Plc's health and safety performance to be measured against industry averages, the Company brought together a working group of major resources companies in 1999 and agreed to a set of common indicators and definitions as a benchmark for defining different levels of severity of accidents.

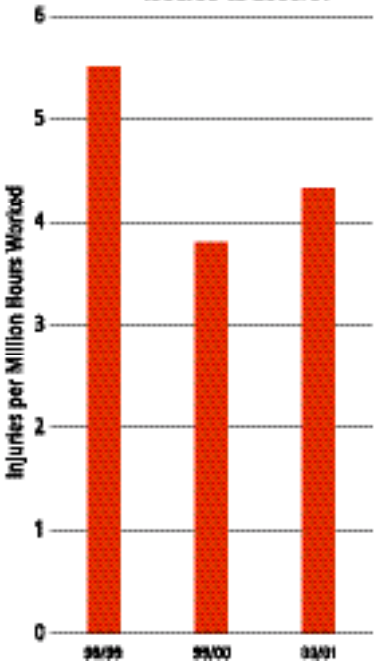
Since then, a website has been established to allow members of the working group to input their performance data and, via twice-yearly reports, compare their results with the average for the group. This initiative was the subject of a presentation at the Annual Minesafe Convention held in Perth, Australia in September 2000.

Safety performance

Safety issues were identified and managed through detailed incident reviews and adherence to BHP Billiton Plc's incident and accident reporting system. The aim was to spread best practice throughout the BHP Billiton Plc Group and ensure a common approach to safety management. (See case study 'Safe behaviour at Khutala Colliery'.)

As shown in Figure 25, performance (as measured by the Lost Time Injury Frequency Rate, which includes restricted work cases) deteriorated compared to the previous year.

Figure 25: Lost Time Injury Frequency Rate (LTIFR) 1998/99 to 2000/01



These figures represent a total of 723 incidents, compared to 606 the previous year, with a severity ratio (average number of days lost) of 24. The majority of lost time injuries were related to materials handling and mobile equipment.

Figure 26: Fatalities 1996/97 to 2000/01

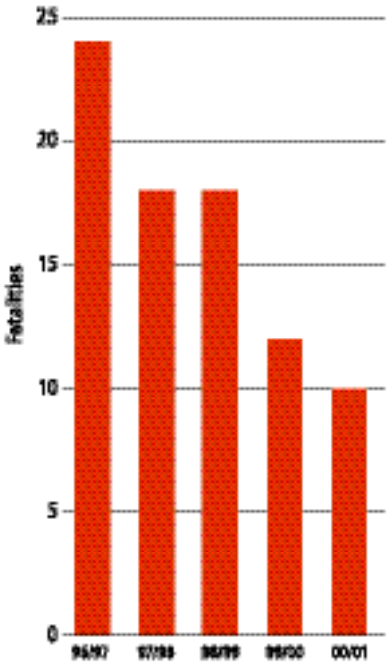
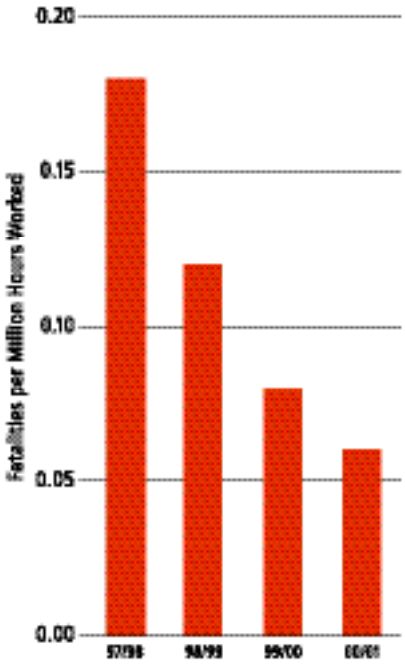


Figure 27: Fatality Rate 1996/97 to 2000/01



Fatal accidents

Despite the safety systems in place, regrettably, ten people lost their lives at work last year.

Endeavours to make BHP Billiton Plc sites safer places to work were ongoing through the year, reflecting the Company's commitment to eliminating loss of life. Fatalities since 1996/97 are shown in Figure 26. The HSE Committee studied all fatalities and 'high potential' incidents. This included reviewing the investigation report from the operation and following up the proposed remedial actions. The fatality frequency rate, as shown in Figure 27, marginally improved this year.

Occupational health

Occupational health programs and initiatives

BHP Billiton Plc recognised the importance of work-related health issues and the need to ensure that significant hazards are effectively managed.

The principal health hazards associated with the Company's operations have been noise, fumes and dust from coal and metal oxides. Monitoring and medical surveillance practices have been established at all operations, and reporting at BHP Billiton Plc Group level has allowed priority areas to be identified and targeted.

Although a number of trials were completed during the year for the use of foam as a dust suppression agent where continuous miners are used, the results did not prove there were advantages over the established use of water spray and scrubbing techniques. Benchmarking of those operations achieving consistently excellent results was undertaken, to identify best practices.

A noisy environment is one where noise levels exceed the adopted occupational exposure limit (OEL) standard of 85 dB(A) over an eight-hour shift. Continuous efforts have been made to minimise noise at source through engineering processes, while also attempting to minimise exposures through other measures such as provision of personal protective equipment, administrative controls and the introduction of remote equipment control.

Occupational health performance

During the year, 11 922 people (full-time employees and contractors) worked in areas where, for all or part of their shifts, the concentration of airborne respirable dust was determined to be above the acceptable occupational exposure limit. To ensure that their personal doses did not exceed internationally acceptable personal exposure limits, these people were provided with personal protective breathing equipment. As an added measure, medical surveillance geared to the early detection of respiratory disorders was conducted on those people potentially exposed.

During the same period, 49 185 people (full-time employees and contractors) worked in noisy environments for all or part of their shifts. They also were provided with appropriate personal protective equipment to reduce their equivalent noise exposure to below the recommended limit of 85 dB(A). All persons potentially at risk were made aware of the health hazards and trained in the use of personal protective equipment.

In spite of these measures, a total of 1 234 occupational health cases were reported during the year. This figure includes full-time employees and contractors. During the previous year, there were 363 cases, but this represented employees only. The increase in numbers is largely due to the expansion of the surveillance program to include contractors.

Programs aimed at reducing atmospheric contaminants and industrial noise are ongoing, to ultimately eliminate the need for additional protection in the workplace.

Community

BHP Billiton Plc remained committed to maintaining a high level of community development. There was an emphasis on finding ways to successfully integrate the social development programs of the Company's Development Trusts and

Malaria control in Mozambique

The Mozal aluminium smelter project in Mozambique is in an area where malaria is endemic, but the community does not have adequate resources to develop infrastructure and facilities to deal with the problem. BHP Billiton Plc's Mozal Development Trust is supporting the Lubombo Spatial Development Initiative (LSDI), which was established to tackle malaria infection and improve social and economic conditions for the local community.

The LSDI, named after the Lubombo Mountains that straddle Mozambique, Swaziland and South Africa, aims to create sustainable employment and equality of economic opportunity. This will assist the governments of the three countries to develop the region into a globally competitive economic zone.

In October 1999, the Lubombo Malaria Protocol and a tri-national malaria program were launched with the support of the Mozal Development Trust. This program is targeting under-developed areas in southern Mozambique and in the border areas of South Africa and Swaziland, with the aim of reducing new malaria infections. The program provides tourist information (including malaria risk maps and prophylaxis guidelines) and is supporting the development of a regional malaria information system with a view to assisting the development of tourism and business.

By June 2001, following a program utilising controlled public health spraying techniques, average malaria infection rates had been reduced by 40 to 50 per cent in treated areas. Before the program commenced, baseline surveys showed malaria infection rates in children of 60 to 90 per cent, varying by area. The effectiveness of the malaria control program over the next five years will be assessed by the incidence of malaria and its effect on tourism, job creation and risk perceptions.

A number of other initiatives have been promoted by the Mozal Development Trust, including:

- The building of a school using local labour and recycling materials, such as packaging timber, from the Mozal smelter operation.
- Upgrading of local clinics to provide better health care in the region. A team of 50 health workers has also been trained in the fight against HIV/AIDS and provided with bicycles to assist in their work as community health advisers.
- The development of a business skills training program for local traders, helping them to develop their business by identifying and responding to local needs and improving the presentation of their goods.

The President of South Africa, Mr Thabo Mbeki (right), testing insecticide spray equipment as part of the malaria control program supported by the Mozal smelter in Mozambique.

operations with national and regional priorities. This was an essential aspect of BHP Billiton Plc's social and community philosophy, as the socio-economic and environmental priorities of the developing world differ from those in the developed world.

Community health

BHP Billiton Plc's health initiatives were not limited to the Company's sites or operations. Outreach programs were undertaken in the wider community, often in collaboration with others. Over the past four years, the Company has steadily increased its activities in this area, building social capital and aiming to make a real difference to the communities in which the Company works.

A particular focus during the year was epidemic and endemic disease. In partnership with appropriate expert agencies, BHP Billiton Plc participated in projects to curb the spread of such illnesses, in particular malaria and HIV/AIDS. (See case study: 'Malaria control in Mozambique'.)

HIV/AIDS places a burden on both economic development and society, particularly in southern African areas. BHP Billiton Plc's HIV/AIDS strategy addressed key areas, such as social issues (including migrant labour and housing policy), employee care and support, education, and condom distribution. Company businesses also participated in intra-mining initiatives, such as the 'Powerbelt Project' in the coal mining area of Mpumalanga in South Africa.

Legislation in most areas prevents testing for HIV/AIDS and also, in some regions, the assessment of fitness prior to employment. BHP Billiton Plc's policy, in accordance with International Labour Organisation guidelines, has been not to discriminate against current or prospective HIV-positive employees.

A further challenge for employers in southern Africa is controlling the costs involved in meeting legislative requirements to provide medical aid to employees and their often numerous dependents. While this can be an onerous task, voluntary testing for HIV/AIDS

Enhancing the quality of education in Kwa-Zulu Natal, South Africa

In 1996, a unique arrangement between a non-government organisation, a government department and a corporation was forged. The Zululand Chamber of Business Foundation, the Regional Department of Education and BHP Billiton Aluminium initiated the Partnership in Education Network (PEN) to enhance the quality of education in township and rural schools. The result was a major increase in the matriculation pass rate at participating schools, surpassing the regional rate.

The PEN project is developing an education system for 38 township and rural schools (ten secondary schools and their sister primary schools) with the objective of aligning the quality of education with the best standard of urban schools in the region.

The objectives of the 12-year project are:

- to improve the matriculation pass rate within the PEN schools from 39 per cent to 80 per cent; and
- to develop an education system with skilled teams of school principals and teachers to continue the success of the project beyond its 12-year duration.

The project takes a holistic approach, with consideration given to the spectrum of educational issues. This includes such needs as water supply, shelter, sanitation, office equipment, computers and resource centres, as well as the training needs of governing bodies, parent organisations, teachers, principals and department heads. The teacher development program includes workshops focusing on mathematics, science and biology as well as an HIV/AIDS Educator/Counsellor training program.

The project has involved all levels of stakeholders, including the Department of Education, industry, parents and teachers in the process of planning and implementing strategies for school quality improvement. The project was designed after a comprehensive audit and extensive consultation with the community to ensure that it accurately addressed local needs.

The outcomes of the project are measurable through a database that captures the details of each student at the PEN schools and keeps track of their progress.

Numerous partnerships have been established with organisations that can provide support for the project. Existing partnerships are in place, for example, with communications and information technology hardware and software suppliers to link the schools to the Internet.

To ensure that a consistent and high standard of education is maintained, the project focuses on the training of teachers, principals and governing bodies. Business and management training courses are also offered to encourage a culture of self-sustainability and entrepreneurship within the education system.

The success of the project is clearly indicated by the matriculation results being achieved at the participating schools. At the inception of the project four years ago, the matriculation pass rate was 39 per cent. It has improved markedly to 67 per cent, substantially higher than the regional rate of 47 per cent and the provincial rate of 58 per cent.

A teacher participating in the PEN schools project initiated by BHP Billiton Aluminium, South Africa.

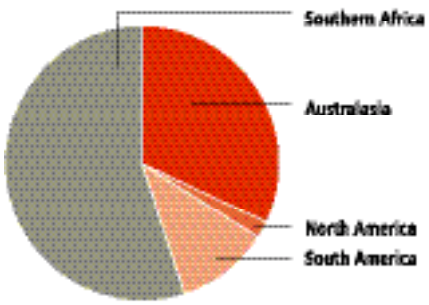
(undertaken in collaboration with trade unions) has indicated that the incidence trend within BHP Billiton Plc is up to 50 per cent lower than national statistics.

Community contributions

In addition to direct expenditure from the Billiton Development Trust of US$5.2 million, BHP Billiton Plc operations directly supported community programs through financial contributions and in-kind support. Based on data received from the sites, this additional expenditure exceeded US$4.4 million. It should, however, be noted that systems to effectively capture such expenditure are still under development.

Financial benefits for 2000/01 totalled US$2 095 million across the regions as shown in Figure 28. Such benefits include the amount spent on the purchase of goods and services, remuneration, all non-pecuniary employee benefits (e.g. pensions, medical aid, transport, food, housing and other allowances), local taxes, corporation tax, other taxes and royalties.

Figure 28: Financial Benefits by Region 2000/01



Socio-economic benefits

The number of BHP Billiton Plc employees as at 30 June 2001 was approximately 33 000. Contractor numbers totalled approximately 23 500 (full-time equivalents).

The socio-economic contribution of BHP Billiton Plc businesses to the regions in which they operate was two-fold. Firstly, in the traditional sense, the Company provided direct employment, non-financial benefits to employees, bought local goods and services, and paid income taxes and export taxes.

The support an organisation provides to both micro and macro economies is often not analysed. By attempting to quantify the financial contribution, an insight can be gained into the socio-economic benefits of BHP Billiton Plc's mining and processing activities.

Therefore, to complement the Company's approach to sustainability reporting, a new reporting parameter was introduced this year to capture these 'financial benefits' on a regional basis, as shown in Figure 28. At the same time, this analysis does not intend to infer anything about the relative distribution of such benefits through fiscal policies.

Secondly, as far as possible, BHP Billiton Plc applied the principle of employing local people and providing them with further training. In 2000/01, a total of 448 community development initiatives were also put in place, increasing from 222 the previous year. These programs and projects were initiated in partnership with governments and non-government organisations wherever possible.

Working with communities and partners provides the opportunity to identify priorities and effective ways to foster self-sustaining economic growth, enhance social welfare and improve environmental protection. The two areas in which BHP Billiton Plc significantly increased its involvement in line with development and welfare priorities were small business and community health programs.

Compared with last year, the number of small business initiatives undertaken by BHP Billiton Plc Group operations almost doubled, while the number of community health initiatives (including programs on HIV/AIDS and malaria) tripled.

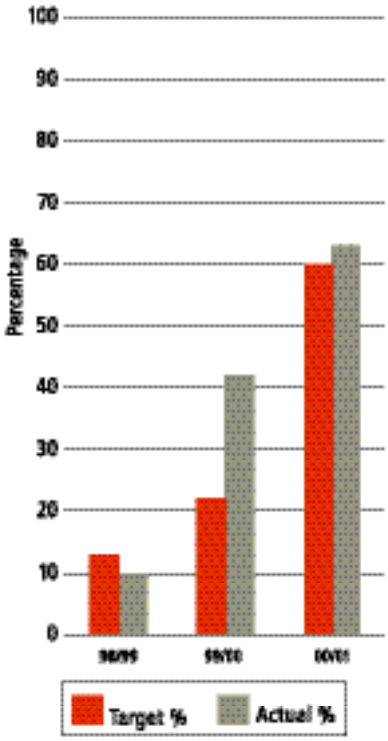
Environment

Management systems

BHP Billiton Plc remained committed to implementing sound environmental management standards and reducing environmental risks throughout its operations. As shown in Figure 29, the Company exceeded the target set in 1999/00 for 60 per cent of operations (included in the BHP Billiton Plc portfolio at that time) to achieve ISO 14001 certification in 2000/01. This compares to 53 per cent when the acquired assets and new investments of 2001 are included.

In 1999/00, mining operations lagged behind processing plants in terms of certification as part of improving environmental performance. However, four operations achieved certification this year, including two Coal operations.

Figure 29: ISO 14001 Certification 1998/99 to 2000/01



Note: Two operations nearing closure not included in data.

The management system at Optimum Colliery in South Africa was upgraded to integrate procedures with unit standards and standard-based assessment. The resulting risk-based system, which is both pro-active and preventative, resulted in simultaneous triple certification of ISO 9002, ISO 14001 and OHSAS 18001.

Environmental compliance

All BHP Billiton Plc operating companies were expected to comply, as a minimum, with regulatory requirements and to disclose all environmentally related incidents and breaches of legal compliance according to the impact or potential impact that they may have. This included non-compliance incidents that occurred

following consultation with, and the permission of, regulatory authorities.

As knowledge-sharing is a useful tool in improving performance, it was BHP Billiton Plc's practice that, following review and mitigation procedures, information about incidents was disseminated throughout the BHP Billiton Plc Group.

The various levels of environmental incidents and non-compliance for reporting purposes are defined in Figure 30.

No fines or penalties were incurred in 2000/01, as has been the case since BHP Billiton Plc's inception in 1997.

As shown in Figure 31, no massive or major (Level I and II) incidents were recorded this year, in line with BHP Billiton Plc's commitments.

Of the 870 incidents recorded in 2000/01 (compared to 508 in 1999/00), 34 were localised (Level III) incidents (compared to 12 in 1999/00). The commitment of zero spills was not met. Nine of the incidents were spill related, resulting in 27 300 litres of oil, 18 000 litres of diesel and approximately 62 tonnes of manganese sulphate solution being spilt to the environment.

The explanation for the rise in reported significant incidents is threefold. Firstly, transparency in reporting within the BHP Billiton Plc Group improved. Secondly, environmental legislation in developing countries has become more stringent. Thirdly, a number of repetitive incidents occurred, particularly as a result of heavy rains and gaseous emissions due to operational problems. Air pollution was an issue for Chrome operations in particular and was associated with registration certificate non-compliance and technical difficulties mainly relating to maintenance and upgrading.

Details of all the localised incidents recorded in 2000/01, including the nature of the impacts and mitigation, are provided on the BHP Billiton website, **www.bhpbilliton.com**.

With the exception of noise, all the localised incidents this year fell into categories similar to last year, namely air pollution, water pollution, and spillages of fuel and other liquids.

To better understand administration issues relating to changing legislation and regulation surrounding permitting processes, compliance monitoring also included the number of permits outstanding in the BHP Billiton Plc Group. There were a number of permitting non-compliances from operations, due to time lags associated with the introduction of new legislation.

Complaints

As part of BHP Billiton Plc's approach to community relations, it has been Company policy to record and mitigate all complaints that are received. As shown in Figure 32, a total of 123 complaints were recorded this year (compared to 110 last year) of which 92 per cent were resolved (compared to 75 per cent last year). This year saw a significant rise in the number of odour-related complaints as a result of improved consultation and communication processes at certain sites. It was also Company policy that complaints regarding any aspect of operations should be resolved promptly and this will continue to be the case.

Figure 30: Reporting definitions of environmental incidents and non-compliance

Level I:	Massive non-compliance, with severe adverse and possible irreparable damage, or affecting a large area with major legal implications.
Level II:	Major non-compliance excursions with severe damage; costly to repair.
Level III:	Localised non-compliance excursions with limited loss of material with known toxicity, which may lead to limited legal and public concern.
Level IV:	Minor non-compliance and impact.
Level V:	Incidents with environmental impact not covered by legislation, particularly spills and other incidents as per defined volumes.

Figure 31: Levels of Environmental Incidents 1999/00 and 2000/01

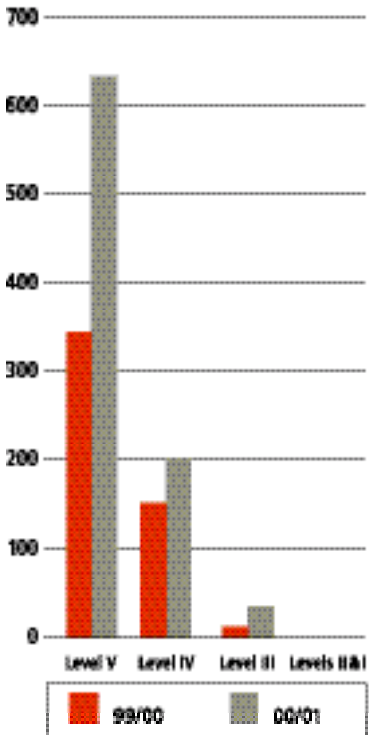
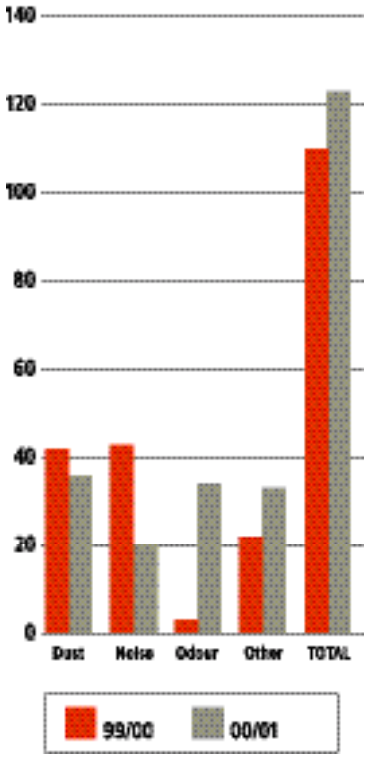


Figure 32: Number of Complaints Received: Total and by Type 1999/00 and 2000/01



Ecological conservation and management strategy for the Yabulu refinery site

In north Queensland, Australia, the Yabulu refinery land-holding covers 2 454 hectares. Yabulu is part of Queensland Nickel (QNI), a wholly owned subsidiary. Much of the area around the laterite nickel refinery is managed as a habitat buffer zone, supporting a wide variety of ecosystems. The Queensland Environmental Protection Agency (EPA) has classified the refinery lands as being of conservation significance. Working with the EPA and local communities, QNI has developed an Environment and Conservation Management Strategy (ECMS) to define and conserve these ecosystems.

The refinery, located adjacent to Halifax Bay approximately 30 kilometres north-west of Townsville, was commissioned in 1974 and is a major producer of high-quality nickel and cobalt products.

Refinery operations have protected many of the ecosystems in the land-holding from agricultural and residential development, which has impacted on areas immediately surrounding the land-holding.

Central to the ECMS is the minimisation of potential impacts of refinery operations on the buffer zone. This is achieved through a comprehensive program of tailings and waste water management, emissions monitoring and ongoing restoration activities.

To gain a better understanding of the natural values contained within the buffer zone, QNI has commissioned several leading public research institutions to complete detailed studies of the ecosystems present. The studies began in 1997 and have been updated on an annual basis. Several distinct ecosystems have been identified, including sand dunes, mangroves and salt flats, open forest, and eucalypt and melaleuca woodlands. There is also a wide variety of species of plants and animals, with a diversity and richness comparable to other undisturbed lands along the Queensland coast. The ECMS provides for protection of important mangrove communities, fish and other wildlife habitats and breeding areas.

Community involvement is also a key component of QNI's commitment to the conservation and management of the ecosystems. This includes consultation regarding future refinery development proposals and the distribution of regular reports on current environmental performance. An environmental education program is also conducted to show how communities can benefit from buffer zone lands at the same time as the overall environmental impact to the site is being reduced.

Part of the habitat buffer zone at the Yabulu refinery in north Queensland, Australia, including stands of melaleuca, eucalypt and pandanus trees.

Figure 33: Land Disturbed and Rehabilitated 1999/00 and 2000/01

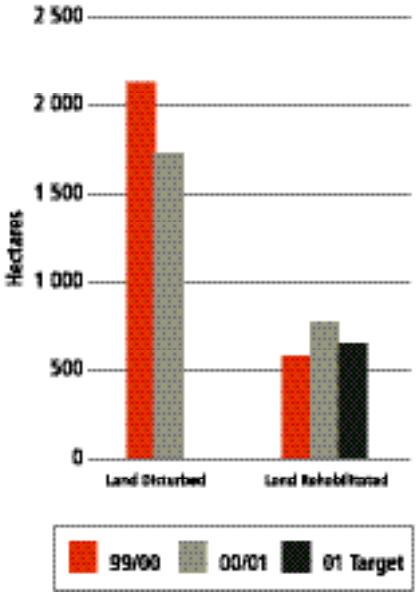
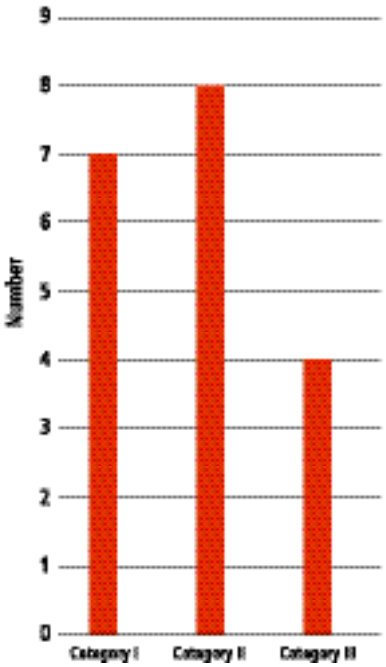


Figure 34: Categories of Closure Planning Status



Resource use

Land management and rehabilitation

BHP Billiton Plc's mining and associated activities have required varying amounts of land to be disturbed during development and production. As shown in Figure 33, a total of 1 728 hectares of land was disturbed in 2000/01 (much of which was attributable to open cast operations) compared to 2 125 hectares last year. A total of 770 hectares of land was rehabilitated this year, which exceeded the target of 650 hectares.

A commitment was also made to gather more accurate information on the total area of land disturbed that is available for rehabilitation. In 2000/01, the Company assessed that 13 000 hectares of its disturbed land was not available for rehabilitation until closure.

As BHP Billiton Plc operates a significant number of mining and processing plants at various stages of the life cycle, rehabilitation will be addressed in stages. A summary of land disturbance and rehabilitation data is presented in Appendix C.

Environmental management programs across the BHP Billiton Plc Group included projects aimed at restoring a wide range of remaining natural habitats and ecosystems. (See case study: 'Ecological conservation and management strategy for the Yabulu refinery site'.) Where possible, land is also restored for sustainable agricultural use.

Developing sustainable ventures following mining can provide many challenges. Minnaar Colliery in South Africa is an example of the way in which BHP Billiton Plc practised sustainable closure by rehabilitating a mining-disturbed area.

In this case, the rehabilitation of open cast areas and discard dumps provided more land for farming activities.

As Minnaar Colliery also had underground workings, shafts had to be closed. In the late 1990s, coal from the discard dumps was also sold as part of the reclamation process. Due to the size of the dump and the flatness of the slopes, no contours were installed and so the land is ideal for grazing or pasture. It is hoped that when the site is deemed stable by government authorities, this area, which previously had no productive land-use, can be managed as good quality pasture.

The site is also sustainable in terms of mine water management. Excess mine water is consumed by a local farmer for pivot irrigation of alternate summer and winter crops. This means the mine water is no longer decanted into the Olifants River catchment area, and has become a water resource for the farmer.

Closure and land management planning

A baseline assessment of the closure and land management planning status for BHP Billiton Plc Group operations has been undertaken using five best practice elements. These include information on risk and liability assessment associated with closure, financial liability determination, legal requirements, biodiversity issues, and consultation procedures.

The closure planning status of operations consequently has been categorised on the basis of the information received, as shown in Figures 34 and 35.

Figure 35: Land Management and Closure Planning Status

The quality of BHP Billiton Plc closure plans were rated according to the following criteria.

CATEGORY I: Where all 5 questions were answered positively.

CATEGORY II: Where 4 out of 5 questions were answered positively.

CATEGORY III: Where 3 out of 5 questions were answered positively.

Where 2 out of 5 or less questions were answered positively then the closure plan was not categorised.

Water recycling at Optimum Colliery

Optimum Colliery is an open cast mine situated approximately 35 kilometres south-east of Middelburg, in the Klein Olifants River catchment area in South Africa. Large quantities of waste water are generated within the mined areas and discharged into the catchment. To minimise the use of potable water and to reduce the amount of waste water discharged, the mine has implemented a new water management strategy.

The mine and its associated activities require around 13 000 cubic metres of water per day. Until December 1997, up to 9 000 cubic metres of waste water flowed into the streams of the Klein Olifants River catchment daily. To address this problem, a water management strategy was implemented to focus on:

- effectively separating clean and dirty waters;
- developing an operational water management plan;
- recycling the waste water for re-use in the operation; and
- participating in a controlled release scheme to discharge waste water in an acceptable manner, complying with the relevant legislation.

The mine's operational water management plan focuses on flood prevention and the reclamation of water from the operational cuts for re-use in mining activities. Water from the operational cuts, as well as return water from the processing plants, is pumped into a centralised storage facility where it can be recycled for use in coal processing, the washbays at workshops, dust suppression along haul roads and the estate gardens.

Prior to 1997, a portion of the waste water generated via the spoils and operational pits was released directly into the surrounding streams. The regulated scheme for the controlled release of affected water, in which Optimum now participates, has enabled the mine to comply with the National Water Act. Over 9 million cubic metres of affected water have been released via the regulated scheme. Releases occur only during high-flow situations in the surrounding streams, not during the dry winter and spring months. This significantly benefits water quality in the Klein Olifants River and the Middelburg dam downstream of the mine.

Fanie van der Merwe monitors the water quality at a dam that supplies water for the dust suppression system at Optimum Colliery, South Africa.

This approach helps to indicate the BHP Billiton Plc Group's performance in terms of progress from a Category III approach to a Category I (best practice) approach, where all five elements have been comprehensively implemented or completed.

Seven operations, five of which are in the mining sphere, fall into Category I status, a further eight have Category II status and another four have Category III status. The results also indicated that land management and closure for processing plants required further attention. These issues are important for the Company. One of the ways in which BHP Billiton Plc has been improving land management and the preservation of biodiversity is through programs such as those at the Yabulu refinery, Australia.

Water consumption

BHP Billiton Plc remained committed to the optimal use of resources in its drive towards sustainable development. Being mindful that water can be a locally scarce resource, the Company monitored consumption accordingly.

A total of 55.2 million cubic metres of water was consumed in 2000/01, compared to 51.6 million cubic metres last year.

In terms of attributable share, 47.7 million cubic metres of water was consumed. These figures refer to total water consumption by BHP Billiton Plc, which includes all external sources of water used, such as purchased water, ground water, and water abstracted from rivers. They do not include recycled water.

In terms of efficiency, performance decreased from 0.54 cubic metres per tonne of final product in 1999/00 to 0.65 cubic metres per tonne of final product this year. Many sites improved their efficiency this year, but this was offset by low production within commodities with high-intensity use.

Improving water management was seen as important in terms of eco-efficiency. As an indication of BHP Billiton Plc's commitment to improvement, 83 per cent of operations had a water balance plan in place and 77 per cent had undertaken a water balance within the last three years.

Good progress was made in terms of water recycling and the Company met its commitment to increase the use of recycled water. (See case study: 'Water recycling at Optimum Colliery'.) A total of 99.7 million cubic metres (attributable share 88.7 million cubic metres) of water was recycled in 2000/01, which is over 30 million cubic metres more than last year. The total amount equates to 1.17 cubic metres per tonne of final product for 2000/01.

Consumption of water and recycled water is shown in Figure 36. A summary of water consumption data is presented in Appendix C.

Liquid discharges

BHP Billiton Plc monitored suspended and dissolved solids in water, with the aim of minimising these emissions. New water treatment plants such as the one commissioned at Yabulu, Australia, have been designed with this goal in mind.

As shown in Figure 37, BHP Billiton Plc Group operations discharged 36 851 tonnes of suspended solids off site this year, compared to 48 845 tonnes in 1999/00. The amount of total dissolved solids discharged off site was 47 336 tonnes, compared with 104 515 tonnes in 1999/00. The significant fall in total dissolved solids was due to the implementation of a recycled water system at Yabulu and improved practices elsewhere. A summary of liquid discharges data is presented in Appendix C.

Figure 36: Water and Recycled Water Consumption 1999/00 and 2000/01

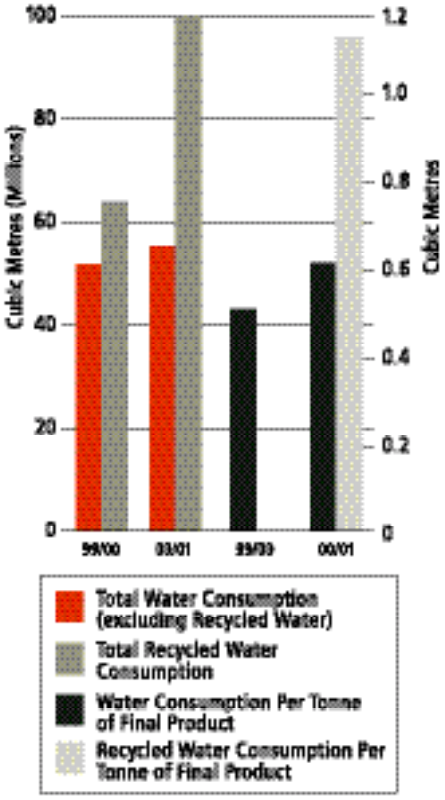


Figure 37: Liquid Discharges Off Site 1999/00 and 2000/01

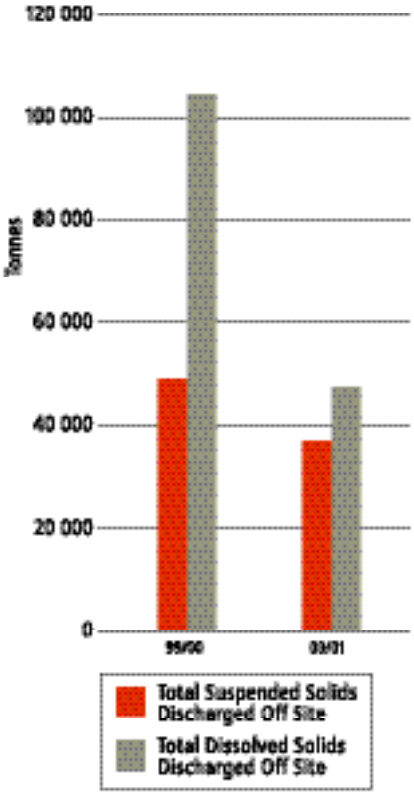


Figure 38: Energy Consumption 1999/01 and 2000/01

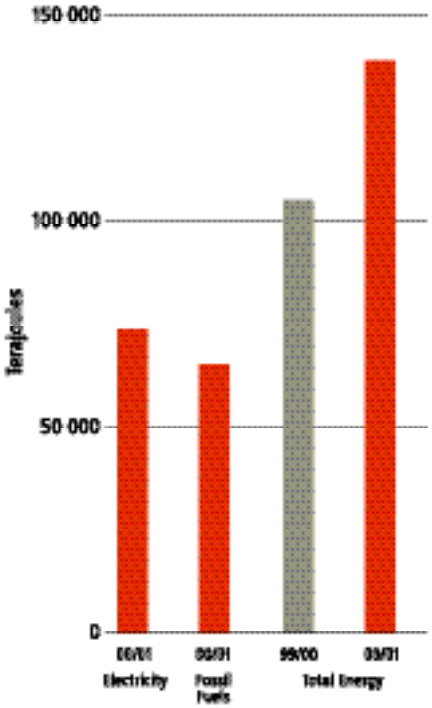
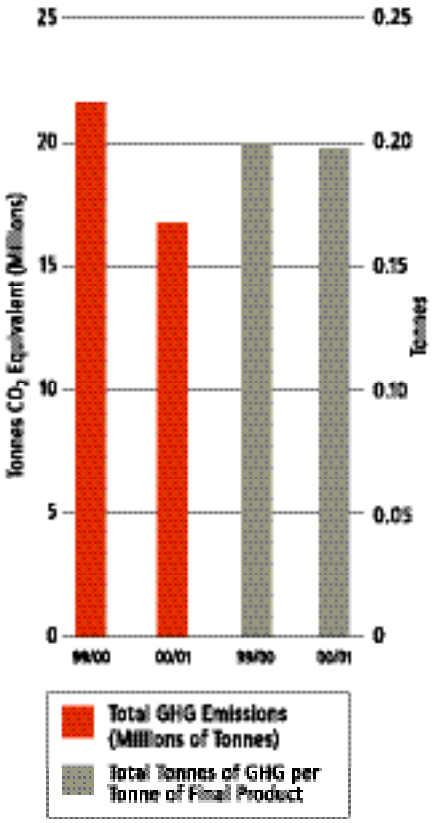


Figure 39: Greenhouse Gas (GHG) Emissions 1999/01 and 2000/01



Energy

With BHP Billiton Plc's processing activities being energy intensive, and with acquisitions in Base Metals and Aluminium and new production, total energy consumption increased as expected.

As shown in Figure 38, approximately 139 010 terajoules of energy (equal to 1 639 megajoules per tonne of final product) was consumed this year, of which 27 per cent came from new capacity and acquired operations. This compares with 105 240 terajoules of energy (equal to 1 103 megajoules per tonne of final product) in 1999/00.

In terms of attributable share, total energy consumption for 2000/01 equalled 127 836 terajoules.

Operations consumed 73 800 terajoules of electricity and 65 210 terajoules of fossil fuels in 2000/01. A small number of operations also produced some of their own energy. A summary of energy data is presented in Appendix C.

Emissions

Greenhouse gases

In 2000/01, BHP Billiton Plc Group operations emitted an estimated 17 million tonnes of CO_2 equivalent, equal to 0.197 tonne of greenhouse gas per tonne of final product. In 1999/00, an estimated 21.6 million tonnes of CO_2 equivalent was emitted, equal to 0.2 tonne of greenhouse gas per tonne of final product, as shown in Figure 39. This year's lower total emissions figure is a result of improved estimation methodology.

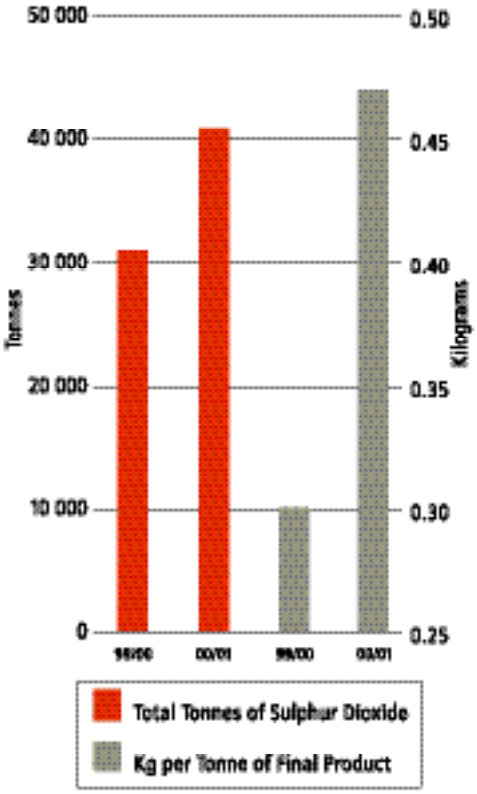
In terms of attributable share, emissions equalled a total of 15 million tonnes of CO_2 equivalent. A summary of greenhouse gas emissions is presented in Appendix C.

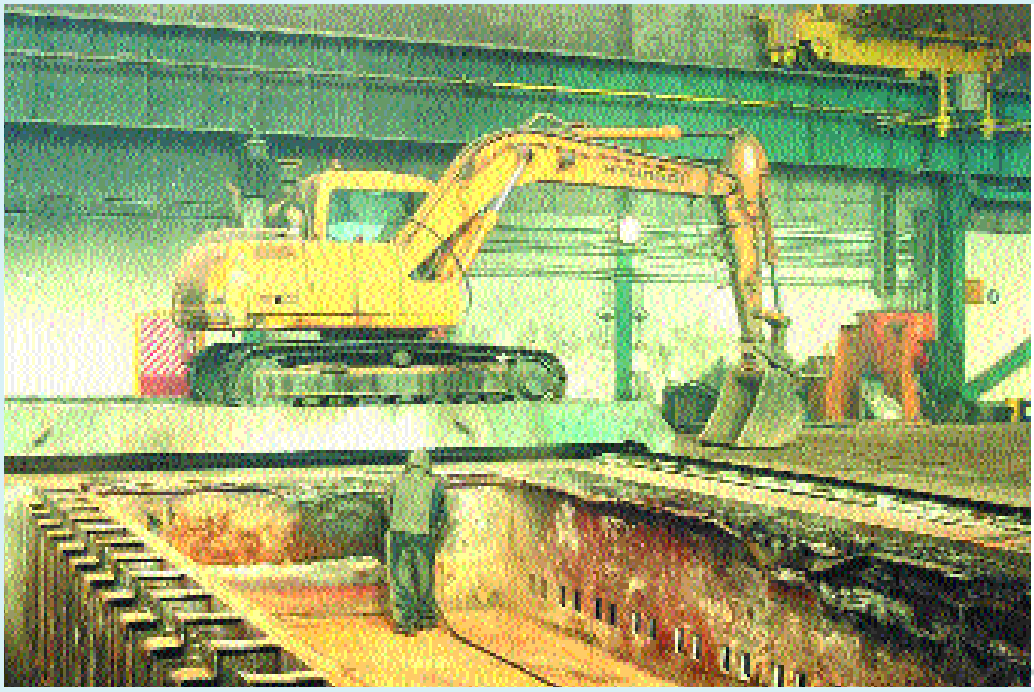
Sulphur dioxide

In 1999/00, BHP Billiton Plc Group operations improved their estimation methodologies and on this basis emitted 31 000 tonnes of sulphur dioxide, equal to 0.3 kilogram of sulphur dioxide per tonne of final product. This year, 40 227 tonnes of sulphur dioxide, equal to 0.47 kilogram per tonne of final product, were emitted, as shown in Figure 40. Mozal in Mozambique and Worsley in Western Australia (as newly added capacity) accounted for over 15 000 tonnes.

In terms of attributable share in 2000/01, emissions equalled 33 586 tonnes of sulphur dioxide. A summary of sulphur dioxide emissions data is presented in Appendix C.

Figure 40: Sulphur Dioxide Emissions 1999/00 and 2000/01





Spent pot lining from aluminium smelters in South Africa is removed and sent for recycling into useable raw material for cement manufacturing.

Recycling of aluminium spent pot lining in South Africa

Spent pot lining is a waste material generated from the aluminium smelting pot-delining process. It is regarded as hazardous material because of its high soluble salt content (especially fluoride). BHP Billiton Plc's smelters are constantly looking at avenues to safely treat and manage the substance without negative impacts on the environment. A landmark agreement has provided a solution.

Safely disposing of spent pot lining is a challenge faced by all aluminium smelters. Over the past four years, our Hillside and Bayside aluminium smelters in South Africa have been working with Pretoria Portland Cement to develop a 'one-stop' solution.

In August 2000, the three organisations entered into an agreement that allows a safe, cost-effective and environmentally responsible means of managing the spent pot lining. This is a win-win situation, whereby a hazardous waste material from the smelters represents for the cement company a useable raw material that provides energy savings.

When the spent pot lining is introduced into the cement kiln operations at high temperatures, contaminants are dissociated and the fluorides are bound with calcium that is present in the cement or lime, rendering the substance non-hazardous.

To process the spent pot lining in their plant, Pretoria Portland Cement had to seek permits from the Department of Environment and Tourism and the Department of Water Affairs and Forestry. This involved a rigorous process of proving that the processing had no negative impact on ground water, emissions to air, employee health and safety, or the quality of the final product. For Pretoria Portland Cement, it meant changes to plant operations and processes to ensure safe introduction and processing of the material. Pretoria Portland Cement is ISO 14001 compliant, as is Hillside.

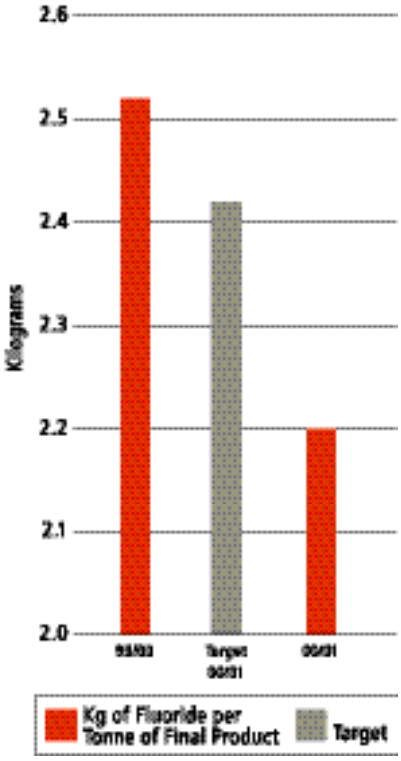
Sound environmental management was also a central requirement in the agreement between Pretoria Portland Cement and Hillside and Bayside Aluminium. Their innovative arrangement has provided a successful solution for managing a critical waste stream in the aluminium industry.

Fluoride

Fluoride is emitted during the production of aluminium at smelters. The health of humans and ecosystems can be affected through exposure to high concentrations of fluoride. Last year, BHP Billiton Plc operations emitted 1 713 tonnes of fluoride, equal to 2.52 kilograms of fluoride per tonne of final product. This year, the Mozal smelter in Mozambique, using similar technology to Hillside in South Africa, came on line and BHP Billiton Plc operations emitted a total of 1 795 tonnes of fluoride, equal to 2.2 kilograms of fluoride per tonne of final product, as shown in Figure 41. This result was better than the target of 2.42 kilograms per tonne of final product.

In terms of attributable share, emissions equalled 1 745 tonnes of fluoride. A summary of fluoride emissions data is presented in Appendix C.

Figure 41: Fluoride Emissions 1999/00 and 2000/01



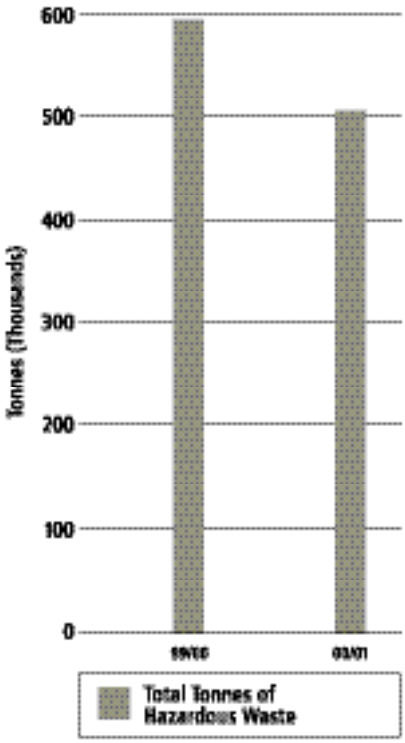
Waste

BHP Billiton Plc recognises the importance of efficiently managing waste, both on site and off site. (See case study: 'Recycling of aluminium spent pot lining in South Africa'.) In 2000/01, 91 per cent of the Company's operations had waste management plans in place and 74 per cent had waste minimisation strategies with reduction targets in place.

The Company continued to monitor the amount of hazardous waste (as classed by the Basel Convention) produced by operations. As shown in Figure 42, 507 093 tonnes of hazardous waste was produced in 2000/01 (by largest volume per operation aggregated across the BHP Billiton Plc Group), compared with 595 760 tonnes last year. A summary of hazardous waste data is presented in Appendix C.

Waste rock (overburden) and tailings from mining and ore-processing operations are normally stored on site in secure locations that minimise the risk of release of contaminants. These areas are rehabilitated as part of normal operations and mine closure. Materials discharged to waste rock and tailings storage facilities are therefore excluded from the calculation of total waste.

Figure 42: Hazardous Waste (Basel definition) 1999/00 and 2000/01



BHP BILLITON PLC APPENDIX

APPENDIX C – BHP BILLITON PLC ENVIRONMENTAL DATA TABLES

Data in these tables are aggregate figures based on site data reported by BHP Billiton Plc's managed sites for the BHP Billiton Plc financial year 2000/01. Totals may differ due to the rounding off of data. Production data can be found in the BHP Billiton Plc Report to Shareholders 2001. Guidance notes are included to provide further clarification of the data where appropriate.

Land

LAND (HECTARES)	99/00	00/01
Land Disturbed	2 125	1 728
Land Rehabilitated	573	770

Water

WATER (MILLIONS OF CUBIC METRES)	99/00	00/01
Total Water Consumption	51.6	55.2
Total Recycled Water Consumption	64.1	99.7

Total water consumption includes external sources of water, i.e. purchased water, ground water and water abstracted from rivers. It does not include consumption of recycled water, which is shown separately.

Liquid Discharges

LIQUID DISCHARGES (TONNES)	99/00	00/01
Total Suspended Solids Off Site	48 845	36 851
Total Dissolved Solids Off Site	104 515	47 336

Energy

ENERGY (TERAJOULES)	99/00	00/01
Electricity	Not Reported	73 800
Fossil Fuels	Not Reported	65 210
Total Energy	Not Reported	139 010

Gaseous Emissions

EMISSIONS	99/00	00/01
Total Greenhouse Gases (Million Tonnes CO_2-e)	21.6	17
Total Sulphur Dioxide (Tonnes)	31 000	40 227
Total Fluoride (Tonnes)	1 713	1 795

Fluoride emissions relate to aluminium smelters only.

Figures from the Mozal smelter for the first six months of 2001 for greenhouse gases and fluoride are not included, as systems were under development.

Hazardous Waste

HAZARDOUS WASTE (TONNES)	99/00	00/01
Hazardous Waste	595 760	507 093

Hazardous waste refers to the waste generated by sites, by largest volume, as defined by the Basel Convention.

Reported waste does not include recycled materials, waste rock (overburden) or tailings.

AUDITOR'S STATEMENT TO THE DIRECTORS OF BHP BILLITON PLC

We have read the performance summary relating to the BHP Billiton Plc Group within the BHP Billiton Health, Safety, Environment and Community ('HSEC') Report 2001 as set out on pages 46 to 60 and Appendix C ('the report') and performed certain work on its contents in relation to BHP Billiton Plc Group sites.

The directors of BHP Billiton Plc have prepared the report and they are responsible for the information and assessments set out within it. In particular, the directors have selected the performance data presented in the report and are responsible for establishing appropriate performance management and internal control systems for measuring, collating and reporting the performance data.

It is our responsibility to review the report and other information as described in our approach below and to report our findings to the directors of BHP Billiton Plc.

Approach

There are no statutory requirements in the UK relating to the preparation, publication and review of HSEC reports. To ensure the rigour of the review, our approach drew upon both financial auditing and environmental audit principles, standards and expertise. We have assembled a multi-disciplinary team of subject specialists and assurance experts to:

- review the BHP Billiton Plc Group HSE Reporting Standards (the 'HSE Standards')
- review the collation at the head office in Johannesburg of certain specified performance data (the 'selected data' – listed below) from source data reported by sites (without attempting to verify the source data itself) to ensure that the collation process does not give rise to a material error or mis-statement; and
- review the design of the Information Management procedures and controls supporting implementation of the HSE Standards in respect of the selected data at selected sites (listed below).

The selected sites and the selected data were chosen for our review by BHP Billiton Plc management following discussion with KPMG. In performing our review of the BHP Billiton Plc Group's Information Management systems we applied KPMG's risk based approach to assurance over those systems.

Basis of conclusions

Our work consisted of the following:

- We reviewed and compared the HSE Standards to the standards that were applied to the year ending 30 June 2000. We also discussed the application of HSE Standards for the selected data with management at the selected sites.
- We reviewed the transfer of data from sites' reports to the BHP Billiton Plc database, which included checking data submitted by sites to data within the BHP Billiton Plc database for the year ended 30 June 2001.
- Visits to the five selected sites. These were Hillside Smelter, Pering Mine, Middelburg Mine, Hotazel Mines and Yabulu Refinery. They represented five of the eight commodities.

The selected data at the selected sites were: number of new cases of occupational disease or illness cases referred (identified); number of new cases of occupational disease or illness cases registered 'compensatable' (i.e. confirmed as requiring compensation); lost time injury frequency rate; fatalities; ISO 14001 certification; total water consumption; total energy consumption; environmental incidents of non-compliance; and number of community health programs.

As agreed with the directors of BHP Billiton Plc, we did not consider the adequacy, appropriateness and completeness of the reporting requirements contained within the HSE Standards nor did we assess the implementation of operational HSE procedures and controls. Although we have not reviewed all the data included in the report, we have evaluated the consistency of the report with the selected data.

Conclusions

In our opinion, the selected data set out within the BHP Billiton Plc Group report in respect of the year ended 30 June 2001 have been accurately collated at Johannesburg head office from the source data. In our opinion, the information in the report is, where relevant, consistent with this collated data.

With the exception of those matters listed below, on the basis of our review nothing came to our attention to suggest that for the selected data at the selected sites, data reported for the year ending 30 June 2001 of BHP Billiton Plc has been mis-stated.

Reporting standards

In our opinion there are areas of confusion in the interpretation of the HSE standards, in particular for new cases of occupational diseases or health and environmental incidents of non-compliance.

Limited review of procedures and controls

During our work, nothing came to our attention to suggest that the selected sites had not, in respect of the selected data, designed systems to meet the reporting requirements contained within the HSE Standards with the exception of Pering where the systems in relation to new cases of occupational disease or illness and environmental incidents of non-compliance do not contain adequate assurance mechanisms and we cannot therefore confirm completeness of this data reported.

November 2001

KPMG

BHP BILLITON HSEC AWARDS

The BHP Billiton HSEC Awards recognise those employees who openly embody the values expressed in our Charter and go beyond what is required in their day-to-day job to care for their fellow employees, the community and the environment.

Awards were presented in three categories: Health and Safety, Community, and Environment. Nominations were assessed by a separate judging panel for each category, comprising representatives from BHP Billiton and non-government, government and education sectors.

Having received more than 140 nominations from around the world, the judges selected a shortlist of finalists in each category. From these were chosen the winning and highly commended projects. The non-profit environment or community group nominated by each short-listed finalist received a donation of US$5 000 (winners), US$2 500 (highly commended) or US$500 (finalists). In recognition of their initiative, each winning and highly commended nominee received a specially designed trophy, and each finalist received a certificate.

We congratulate all the nominees for the high standard of their contributions.

HSEC AWARDS CONTINUED

HEALTH AND SAFETY

Winners

Mark McCamley and Keith McQualter — *BMA Gregory Crinum Mine, Queensland, Australia*

The winning project by Mark and Keith, on behalf of the Crinum Mine Production Department, involves the installation of remote control fire doors and a deluge system in the conveyor roadway of an underground coal mine. The innovation enables a fire to be contained and extinguished from remote locations, both underground and on the surface. The fire doors isolate the conveyor drive head and loop take-up area, which is the high-risk zone of the conveyor. When the fire doors close, another ventilation door opens, directing smoke into the return airway and protecting miners who are working further into the panel of the mine.

For those working underground, the remote control fire doors and deluge system provide a hard barrier protection against smoke and gas from a fire. This means they do not have to rely solely on personal protective equipment such as oxygen self-rescuers.

Able to be designed, built and installed on site, the protection system is industry best practice in underground coal mines. Previously no off-the-shelf systems existed for use in an underground hazardous environment.

This innovation could save lives. The contaminants and gases produced by a fire underground can be lethal. It is a better solution than mine workers relying on personal protective equipment after the event.

Highly commended

Gerry Gibb — *BHP Billiton Corporate Safety, Victoria, Australia*

Gerry worked with safety representatives from BHP Billiton Limited businesses and with the assistance of the Australian Transport Safety Bureau to develop the Incident Cause Analysis Method (ICAM), which is a tool used for incident investigation.

By applying ICAM, the organisational factors that lead to incidents and near miss events can be identified. The lessons learned can assist in developing prevention strategies and improving safety systems.

Gerry played a key role in overseeing development of the ICAM process, formulating the training program and managing its introduction to BHP Billiton Limited businesses.

Steve Pratt — *BHP Billiton Illawarra Coal, New South Wales, Australia*

Diesel-powered equipment has been used extensively in Australian underground coal mines. Employees have expressed concern about health effects, such as unpleasant odours and eye and respiratory tract irritation, arising from exposure to diesel exhaust emissions.

Steve chaired a major research project aimed at reducing exposure to emissions. Key results have included the introduction of low emission fuel and development of vehicle emission controls.

The project is a major step forward in improving the working environment in underground coal mines and has greatly reduced the risk of adverse health effects from the use of diesel equipment.

Barry Fraser and Graham Mayo — *Port Kembla Steelworks, New South Wales, Australia*

The project by Barry and Graham has resulted in two major developments in the management of stave leaks in blast furnace cooling systems. The first is a method for determining the location of leaks by using an ultrasonic detector. The second is a method of isolating leaks without shutting down the blast furnace. The new methods allow leak detection to be not only more effective but also safer, as shutting down the furnace can be hazardous, particularly if water from a leak is entering the furnace.

Costas Politis — *Marine Logistic Services, the 'Iron Sturt'*

When the *Iron Sturt* was converted to carry sulphuric acid, the vessel was fitted with overflow tanks. These have been subject to build-up of heavy acid salts and slurry. Twice yearly, crew members would don acid suits and enter each tank to scrape, shovel and lift out buckets of the heavy residue. Entering the tanks and carrying out the work were high-risk activities.

Costas and his team developed a solution of replacing the mild steel overflow tanks with stainless steel tanks fitted with an internal spray washing system. The stainless steel is more durable and resistant to acid residue build-up and the tanks can now be washed at the beginning of an acid discharge. This flushes out any acid residue remaining from the previous sea voyage. The crew is no longer involved in heavy lifting activities, and exposure to acid residue has been eliminated.

Finalists

Alberto Pacheco on behalf of the plant team — *Tintaya Copper Mine, Peru*

An investigation of hand accidents at the plant revealed that some employees were using their hands as tools. Alberto and his team developed 'The Sixth Finger', a multi-purpose tool based on a screwdriver that has become a mandatory item of personal protective equipment, significantly reducing the risk of finger injuries.

Keith Brassell, Keith Derbyshire and Adriaan Viviers — *Zululand Anthracite Colliery, South Africa*

Keith and his colleagues developed a ventilation model for training purposes at underground mines. Their innovation consists of a scale model of a typical board and pillar layout, which can be re-arranged to suit various training scenarios. The simulation provides a more realistic situation in which training course participants can see the consequences of their actions.

Mike Robertson — *Transport and Logistics, New South Wales, Australia*

Aiming to minimise mobile equipment accidents, Mike developed a new set of Safety Guidelines for the loading and unloading of trucks, presented in a simple, practical format.

Wally Galus, Peter Susovich and Shane Moloney — *Transport and Logistics, Victoria, Australia*

Wally, Peter and Shane developed the 'Galus Grip', a simple restraining device that facilitates the safe transportation of slit coil on vehicles.

Graeme Thomas — *BHP Billiton HBI, Port Hedland, Western Australia*

Graeme initiated trials of Voltage Reducing Devices (VRDs), in order to reduce the risk of electric shock and electrocution while using electric welding machines. Since trials began of a purpose-designed prototype VRD, there have been no electric shocks at HBI.

COMMUNITY

The Community Awards were judged in two categories: Category A, which covered projects undertaken by employees that were unrelated to the Company's business programs, and Category B, which covered projects that were Company – sponsored but where the practitioner had exceeded expectations by spending hours above and beyond a normal work commitment to implement the project.

Winner — Category A

Anthony Quin — *BHP Billiton Corporate, Victoria, Australia*

In a private initiative, Anthony co-founded St Joseph's South Yarra Emergency Housing Association Inc, of which he is Treasurer. The Association's mission is to provide low-cost accommodation for Melbourne's homeless people and for people who are on the waiting list for public housing but for whom no places are available.

After operating an emergency shelter for people on the streets in need of short-term accommodation and finding that the shelter was occupied all year round, the Association decided to take on a larger project.

Making clever use of resources, an empty school building in South Yarra was converted into four units that are now fully occupied. The Association plans to extend the project to include a further two units and to look for other opportunities.

Anthony was a finalist in the 2000 Environment and Community Awards, at which stage the Association had been incorporated and was seeking funds for a new housing project. Since then, $150 000 has been collected through fundraising to complete phase one of the project.

In addition to fundraising, Anthony's involvement has included enlisting members for the management committee, incorporating the organisation, formulating construction and funding plans, setting up proper referral systems, seeking volunteer support and ensuring an appropriate management system is in place so that the project becomes sustainable and the Association continues to achieve its objectives.

Winner — Category B

Helena Russell — *Gag Island Nickel Project, Irian Jaya, Indonesia*

PT Gag Nikel (PTGN) is developing a nickel project in remote Gag Island off the north-west coast of Irian Jaya. Around 700 people live on the island. PTGN is pro-actively initiating and supporting a range of community development programs. These include education, health and income-generating programs to improve the welfare of people and provide both the company and community with cross-cultural and technical skills to facilitate good communications and foster a beneficial working relationship.

As PTGN Community Relations Manager, Helena has made a lasting contribution to this work over the past two years. Her dedication to the project is demonstrated by the fact that she lives on site for the duration of each work period.

The impact of the programs that Helena has managed have been primarily aimed at capacity building. The Gag Island people are already demonstrating an ability to overcome the 'tyranny of distance' by helping to create as well as participate in the micro-development programs that Helena has put forward.

Understanding the cultural setting and gradually introducing alternatives to less appropriate traditions, such as the imbalance of opportunity for girls and women, has been a demanding task for Helena. She has been instrumental in establishing formal lines of communication with the community through establishment of the Gag Island Consultative Committee.

One of the most important outcomes of Helena's work is the sense of community ownership of the various improvements that have occurred on Gag Island.

Highly Commended

Jose Herrera — *San Juan Coal, La Plata Mine, New Mexico, United States*

Jose has shown outstanding personal commitment to disadvantaged youth in his community by establishing a public gymnasium at the rear of his residence and devoting 16 years of his life to operating it in his spare time. Jose trains abandoned or unsupervised children in the art of boxing, building their confidence and self-esteem.

Boet du Plessis — *Middelburg Mine, Ingwe Coal, South Africa*

Boet has undertaken numerous projects to help the many needy and less fortunate individuals who live in his community. He has been involved in a range of activities out of work hours, including setting up a safe house for victims of crime, a mobile health clinic and a home for disabled people.

Roberto Arriagada Godoy on behalf of the Shift A team — *Minera Escondida Ltda, Chile*

A group of parents became concerned about the lack of recreational activities in the community, believing it increased the

risk of their children resorting to drugs. They wished to create an activity that would allow young people to be occupied, entertained and educated about drugs. Roberto and his colleagues founded the 'Say No to Drugs' sports and education program. Around 500 young people have participated in the sporting aspects of the program, while nearly 3000 students have undertaken the drugs education program.

Finalists

Jan Craig, Alice McGlashan and Bill Chadburn — *Port Kembla Steelworks, New South Wales, Australia*

Jan, Alice and Bill organised an appeal that raised $50 000 to create a garden terrace area at the Palliative Care Unit recently opened at Port Kembla Hospital.

Mary-Anne Druitt — *BMA Gregory Crinum Mine, Queensland, Australia*

BMA Gregory Crinum Mine has donated a four-bedroom brick home to the Domestic Violence Service of Emerald, Queeensland. Prior to this donation, there were no safe houses for domestic violence victims in the area. Mary-Anne played a key role in identifying an appropriate house and raising funds to cover ongoing maintenance and running costs.

Colonel Zulfiqar Ali Khan — *Zamzama Gas Plant, Pakistan*

Colonel Zulfiqar helped develop a community health clinic that provides professional consultation and affordable medicine for the treatment of common illnesses and maternity-related problems, runs awareness programs on preventative health care and family planning, and operates medical camps during calamities such as drought and epidemics.

Richard Hinde on behalf of The Boddington Mine Emergency Response Team — *Worsley Alumina, Western Australia*

Richard and his team are dedicated to community service. In addition to being a member of the Emergency Response Team (ERT) at the mine, each belongs to at least one local emergency service, including the State Emergency Service, St John's Ambulance and the rural fire brigade. Emergency response groups are crucial to the wellbeing of small rural communities. Much of the team's ERT training is done in their own time.

Edward Modise on behalf of the plant team – *Western Chrome Mines, Mooinooi, South Africa*

Western Chrome Mines is located within a poor farming district. Edward and his colleagues organise for three local schools to be provided with bread and fruit twice a week. Around 750 students benefit from the project, which has also helped to improve the level of school attendance.

HSEC AWARDS CONTINUED

ENVIRONMENT

Winner

Wendy Hird — *Port Kembla Steelworks, New South Wales, Australia*

Wendy initiated a landmark recycled water agreement between BHP Steel and Sydney Water. In the biggest industrial re-use scheme in the country, BHP Steel is to take 20 million litres of recycled water per day for industrial use at the steelworks for the next 15 years. The water is to be produced at a state-of-the-art sewage treatment plant.

BHP Steel Port Kembla is the single biggest consumer of water in the Wollongong area. By taking the recycled water, the steelworks is reducing the amount of waste water going to ocean outfalls, while at the same time saving a natural resource by reducing the consumption of fresh water. The operations are to use the recycled water for cooling, dust suppression and a range of industrial and environmental applications for which salt water cannot be used.

The scheme will allow BHP Steel to more than halve its usage of fresh water, and will also reduce Wollongong's total water consumption by up to 24 per cent. The agreement is an excellent example of the Company's efforts to manage resources wisely and to re-use and recycle wherever possible.

Highly Commended

Sebastiao Carlos Machado — *Samarco, Anchieta, Brazil*

Upset by fishing boats discharging oil into the sea, Sebastiao launched the Salvamar (Save the Sea) project. Every month, local fishermen would each discharge about eight litres of oil into the sea. The local community was unaware of the harm to the environment resulting from this disposal of oily waste. Sebastiao's project team is organising the installation of conducting an environmental education program and oil collection tanks at the piers where the fishermen berth their boats. The waste oil is sent to a recycling unit.

Domingos Campos Neto — *Alumar, Maranhao, Brazil*

Domingos represents a team that developed ash capping, an innovative method for rehabilitating residue disposal areas. The process is based on the recycling of waste materials such as boiler ash and biological sludge, and the application of biotechnology using soil micro-organisms to promote plant growth. Preliminary research at a test site has identified the growth of more than 100 plant species following ash capping.

Tim Ramsey — *San Juan Coal, La Plata Mine, New Mexico, United States*

As a reclamation specialist, Tim has been involved in numerous environmental research and reclamation projects. He recently received the 2001 Reclamationist of the Year award at the 18th Annual National Conference of the American Society for Surface Mining and Reclamation. A few of his accomplishments include the design of a more efficient irrigation system at San Juan and Navajo Mine, the design and incorporation of water harvesting features into the reclamation program at Navajo Mine, and direct responsibility for the reclamation and revegetation of over 800 hectares at the New Mexico operations and 350 hectares in Indonesia.

Tim has shared his knowledge by writing numerous publications and conducting workshops at environment conferences around the world.

Finalists

James Glasston, Jeff Parker and Ron Allum — *San Manuel Operations, Arizona, United States*

James, Jeff and Ron initiated the development of a transfer station for local waste such as cardboard, newspapers, liquids, tyres, tin and aluminium cans.

Lou Caruana, Bob McNeill and Peter Hanbury — *Port Kembla Stevedoring, New South Wales, Australia*

Lou, Bob and Peter trialled and developed the replacement of hardwood dunnage with kiln-dried pine timber. The pine, from re-growth plantations, replaces hardwood that was cut from natural forests.

Shudong Zhu and Jane Li — *Steel Building Products, Shanghai, China*

Shudong and Jane developed a scheme where steel off-cuts, which were previously disposed of as low-value scrap, are now supplied as high-value raw material for use in the suitcase industry.

Mark Piggott — *BHP Billiton Iron Ore, Nelson Point Operations, Western Australia*

Mark managed the rehabilitation of a mangrove habitat near the port facility, with the aim of re-establishing a stable ecosystem and encouraging the return of local fauna.

Michiel Brand, Anton Fouche and Rob Hounsome — *Hillside Aluminium, Richards Bay, South Africa*

By developing a stakeholder-focused project charter as part of the Environmental Impact Assessment process, Michiel, Anton and Rob ensured that social and environmental concerns raised by the community in relation to proposed expansion of the smelter could be addressed in detail.

BHP BILLITON HEALTH, SAFETY, ENVIRONMENT AND COMMUNITY REPORT 2001 FEEDBACK FORM

Complete this form and receive a BHP Billiton pen. We value your feedback. Please let us know what you think so we can continue to improve the way we inform you about our health, safety, environment and community performance.

Q1. I am interested in BHP Billiton's health, safety, environmental and community performance as an (please tick)

- ☐ Employee
- ☐ Shareholder
- ☐ Customer
- ☐ Member of the same industry
- ☐ Regulatory body
- ☐ Media representative
- ☐ Community or environmental group
- ☐ Financial analyst
- ☐ SRI analyst
- ☐ Resident near a BHP Billiton operation
- ☐ Academic/student
- ☐ Other, please specify_____

Q2. Please rank the three sections you found most useful (1=best, 2=second, 3=third).

- ☐ Our Message
- ☐ Executive Summary
- ☐ HSEC Policy, Standards and Systems
- ☐ HSEC Targets
- ☐ Case Studies
- ☐ Performance Summaries
- ☐ Auditors' Verification Statements
- ☐ Appendices

Q3. Please indicate your view of the following features of the Report (please tick your choice).

(3a) Openness and honesty
☐ very good ☐ good ☐ fair ☐ poor ☐ very poor

(3b) Layout and design
☐ very good ☐ good ☐ fair ☐ poor ☐ very poor

(3c) Writing style
☐ very good ☐ good ☐ fair ☐ poor ☐ very poor

(3d) Amount of information provided
☐ very good ☐ good ☐ fair ☐ poor ☐ very poor

(3e) Overall rating
☐ very good ☐ good ☐ fair ☐ poor ☐ very poor

Q4. If you could change something about this Report, what would you change (please tick)

- ☐ More data
- ☐ Less data
- ☐ More case studies
- ☐ More photos
- ☐ More community emphasis
- ☐ More environmental emphasis
- ☐ More health and safety emphasis
- ☐ Shorter report
- ☐ Other, please specify_____

Q5. In your opinion, how could BHP Billiton improve its safety/environmental and/or social performance?

_____

_____

_____

_____

_____

_____

Q6. Other comments?

_____

_____

_____

_____

_____

If you would like to receive a BHP Billiton pen, please provide your name and address:

Name:_____

Address:_____

_____

_____

_____

Thank you for your feedback!

Fax this form to: (613) 9609 3048, or

Post it to: Reply Paid
BHP Billiton Health, Safety and Environment
GPO Box 86A Melbourne,
Victoria 8060, Australia

bhpbilliton locations

Customer Sector Group – Petroleum

Continent	Site/Asset	Description	Map Ref No
Africa	Gabon	Petroleum asset.	47
Africa	Angola	Petroleum asset.	48
Asia	Algeria	Petroleum's exploration portfolio includes test areas in Algeria.	50
Asia	Pakistan	Petroleum's exploration portfolio includes test areas in Pakistan.	49
Australasia	North West Shelf	One of Australia's largest resources projects, producing LNG and domestic gas.	18
Australasia	Bass Strait	50% share with Esso (the operator). The Bass Strait operations produces oil, condensate, LPG, natural gas and ethane.	22
Europe	Liverpool Bay	Five gas fields in the Irish Sea.	6
North America	Gulf of Mexico	Several producing assets in the Gulf of Mexico.	16
South America	Bolivia	Petroleum's exploration portfolio includes both production and test areas in Bolivia.	46
South America	Trinidad	Petroleum's exploration portfolio includes test areas in Trinidad.	45

Customer Sector Group – Energy Coal

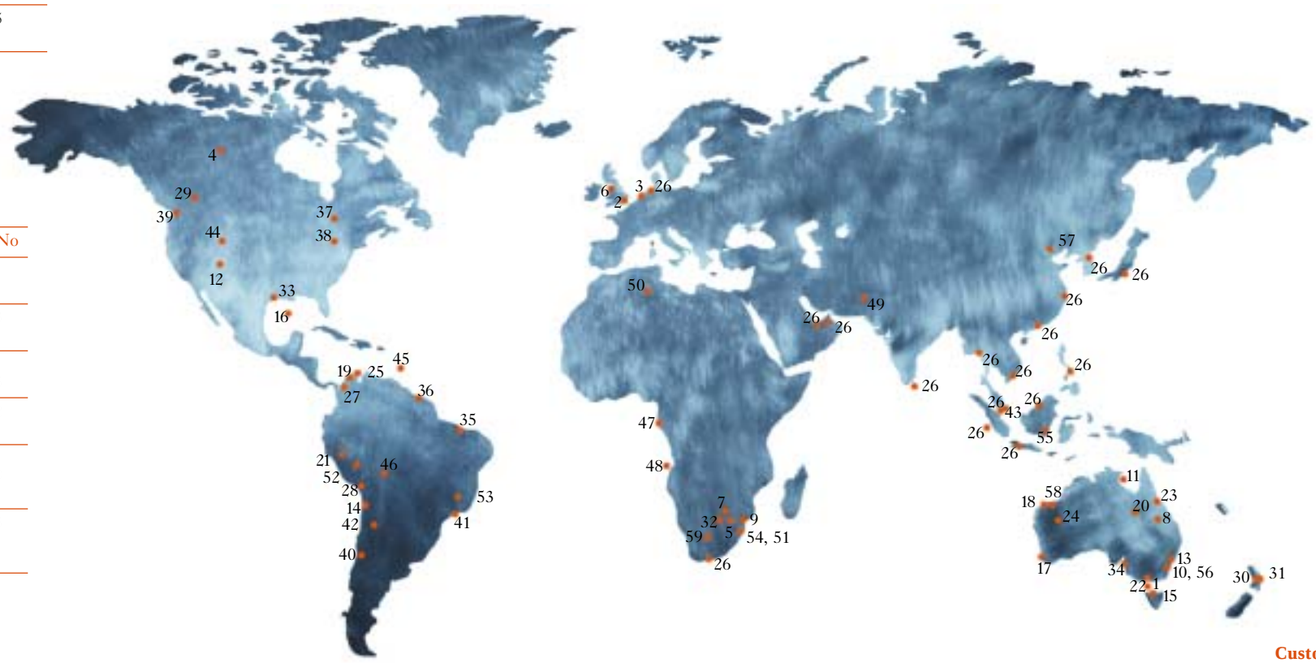
Continent	Site/Asset	Description	Map Ref No
Africa	Ingwe, South Africa	Largest coal producer in South Africa.	5
Australasia	COAL, Australia	Coal Operations Australia Ltd (COAL) has two operations in Australia.	13
Australasia	Indonesia Coal	Open pit coal mine in the Kalimantan region of Borneo.	55
North America	New Mexico Coal, USA	Three open pit thermal coal in the Four Corners region of New Mexico.	12
South America	Carbones del Cerrejon, Colombia	One-third interest in Carbones del Cerrejon, steaming coal.	19
South America	Cerrejon Zona Norte Coal, Colombia	One-third of a 50% stake in the largest open pit coal mine in Latin America.	25

Customer Sector Group – Carbon Steel Materials

Continent	Site/Asset	Description	Map Ref No
Africa	Samancor, South Africa	60% share of Samancor Limited, integrated producer of chrome and manganese ores and ferroalloys. (Also part of Stainless Steel Materials Customer Sector Group.)	7
Australasia	Bowen Basin, Australia	Queensland coal mines producing high quality metallurgical coal for steel production.	8
Australasia	Boodarie Iron, Australia	Hot briquetted iron asset.	58
Australasia	GEMCO, Australia	60% stake in Groote Eylandt Mining Co Pty Limited producing manganese ore.	11
Australasia	Illawarra Coal, Australia	Five underground coal mines.	10
Australasia	Iron Ore operations, Australia	The Pilbara iron ore mines rank amongst the world's best long-life iron ore assets.	24
Australasia	TEMCO, Australia	60% held in Tasmanian Electro Metallurgical Company Pty Limited (TEMCO). Produces manganese alloys.	15
South America	Samarco, Brazil	50% interest in Samarco, an efficient low-cost producer of iron ore products.	53

Customer Sector Group – Stainless Steel Materials

Continent	Site/Asset	Description	Map Ref No
Africa	Samancor, South Africa	60% share of Samancor Limited, integrated producer of chrome and manganese ores and ferroalloys. (Also part of Carbon Steel Materials Customer Sector Group.)	7
Australasia	Yabulu, Australia	The Yabulu refinery is one of the major lateritic nickel-cobalt processing plants in the world.	23
South America	Cerro Matosa, Colombia	Integrated ferro-nickel mining and smelting complex in north Colombia.	27



Other Assets

Continent	Site/Asset	Description	Map Ref No
Africa	Richards Bay Minerals, South Africa	50% stake in world's largest producer of titanium slag.	54
North America	Ekati, Canada	Diamond mine in the north-west territories of Canada.	4

Customer Sector Group – Steel

Continent	Site/Asset	Description	Map Ref No
Australasia	Port Kembla, Australia	Flat steel products centred in Port Kembla.	56
Australasia	Taharoa Mine, New Zealand	The site of the Taharoa mine has been leased from its Maori owners for 70 years. Leased commenced in 1972.	31
Australasia	Waikato North Head Mine, New Zealand	Iron sand mine operated by New Zealand Steel that has an exclusive 100-year lease.	30
World	Multiple locations	27 operations worldwide. The BHP Steel business will be publicly listed in 2002.	26

Customer Sector Group – Aluminium

Continent	Site/Asset	Description	Map Ref No
Africa	Hillside/Bayside, South Africa	Two wholly owned aluminium production smelters.	51
Africa	Mozal, Mozambique	47% stake in the Mozal aluminium smelter.	9
Australasia	Worsley, Australia	86% share in the integrated Worsley alumina refinery/bauxite mine.	17
South America	Alumar, Brazil	Alumina refining plant and aluminium smelter.	35
South America	BMS, Suriname	Billiton Maatschappij Suriname (BMS) alumina refining plant.	36
South America	Valesul Aluminio SA, Brazil	46% interest in aluminium smelter.	41

Corporate Centres

Continent	Location	Map Ref No
Africa	Johannesburg	32
Asia	Beijing	57
Australasia	Adelaide	34
Australasia	Melbourne (Head Office)	1
Europe	London	2
North America	Houston	33
North America	Toronto	38
North America	Vancouver	39
South America	Santiago	40

Marketing Offices

Continent	Location	Map Ref No
Asia	Singapore	43
Europe	The Hague	3

Customer Sector Group – Base Metals

Continent	Site/Asset	Description	Map Ref No
Africa	Pering, South Africa	Copper mine.	59
Australasia	Cannington, Australia	A silver, lead and zinc deposit in north-west Queensland.	20
North America	Highland Valley Copper, Canada	33.6% stake in Highland Valley Copper mine in British Columbia.	29
North America	Selbaie, Canada	Wholly owned open pit operation producing zinc concentrate and by-products including gold and silver.	37
North America	Smith's Ranch, USA	Uranium mine in Wyoming.	44
South America	Escondida, Chile	57.5% ownership in one of the largest copper mines in the world.	14
South America	Antamina, Peru	33.75% stake in a copper-zinc mine in Peru.	21
South America	Cerro Colorado, Chile	Mine in north Chile produces copper cathodes and concentrates.	28
South America	Alumbrera, Argentina	25% interest in Alumbrera copper concentrate producer, with gold by-products.	42
South America	Tintaya, Peru	99.5% interest in Tintaya that produces copper concentrate within the 'Skarn Belt' of south-eastern Peru.	52

BHP BILLITON CORPORATE CENTRES

Australia
600 Bourke Street
Melbourne VIC 3000
Telephone +61 3 9609 3333
Facsimile +61 3 9609 3015

South Africa
6 Hollard Street
Johannesburg 2001
Telephone +27 11 376 9111
Facsimile +27 11 838 4716

United Kingdom
1–3 Strand
London WC2N 5HA
Telephone +44 207 747 3800
Facsimile +44 207 747 3900

USA
1360 Post Oak Boulevard, Suite 150
Houston, TX 77056
Telephone +1 713 961 8500
Facsimile +1 713 961 8400