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It is with pleasure that we once again present our annual Sustainable Development and Community Engagement report *Namakwa Footprint 2003*. The first of such reports was published last year. *Footprint 2002* was well received and as a result we have decided to continue with, and expand on, the initial theme. There are numerous types of footprints found at Namakwa Sands operations. These range from the impact the Company has made on the local communities and surrounding environment to the footprints of fauna we see returning to our rehabilitated areas. Added to these are the footprints our employees and local communities in turn make on us and the way we conduct our business. It is the interaction of all these that makes Namakwa Sands the Company it is.

Some highlights of the past year include the certification of both our quality and environmental management systems during October. This was followed by our annual NOSA grading audit where once again each operation, and the Company as a whole, retained their Platinum 5 Star status for the NOSA Integrated SHE System. Our Behaviour Based Safety Programme is in the final stages of implementation and we are already starting to see positive results from this initiative. In conjunction with this, the Visible Felt Leadership process has seen a notable increase in the number of man-hours spent on site, focusing on safety, health and environmental issues.

Sadly, the Company experienced one fatality during 2003. Savumelwano Hokwana, a



*Paul Henry*

contractor working as a loading assistant at the Smelter, died in a transport related incident on 3 August 2003. This tragedy serves as a harsh reminder that despite improvements in safety systems and subsequent reduction in injuries and incidents, we cannot afford to ease our steadfast focus on ensuring the safety and well being of all our employees and contractors. Notwithstanding this, the Continuous Improvement and in-house Suggestion Scheme are two new initiatives introduced in 2003 that have also contributed towards an improvement in the areas of safety, health, environment, quality and sustainable development

A fire at our Mineral Separation Plant in October had a negative impact on our output but speedy progress has been made in returning the affected units to full production.

The scope of our ISO 17025 accredited laboratory system is in the process of being expanded to include titanium dioxide slag. The system will be audited early in 2004 and will complete our suite of final product accreditation.

We have implemented, and built on, the Behaviour Based Safety and Visible Felt Leadership initiatives mentioned above, in an effort to eliminate as much risk as possible from our systems. In this regard our efforts have proved successful as the number of medical treatment cases decreased during 2003. This is viewed as a positive indicator but as we have not yet achieved our ultimate goal of zero injuries, we continue to work towards this objective and aim to improve on our performance every year.

A voluntary, anonymous HIV/AIDS prevalence test was

carried out in the latter half of the year. The results indicated a fairly low prevalence rate, but the percentage has increased marginally since our first assessment conducted in 2000. Despite the increase, the high level of participation by our employees and contractors is a source of great encouragement to us and indicates that HIV/AIDS is taken seriously by the workforce and that the in-house education and awareness programmes are having the desired results. The information and analysis from the prevalence survey will be used to further enhance our efforts in this regard. We continue to focus on keeping the prevalence as low as possible, not only amongst our employees but in the local community as well, hence our support of the West Coast Community HIV/AIDS Initiative. Another exciting initiative is the partnership through the Anglo American Chairman's Fund with the loveLife Youth education programmes. We have been selected as one of five Anglo American operations to benefit from this funding which will be primarily used for youth HIV/AIDS education programmes within the communities where our operations are located.

Our social responsibility programmes are underpinned by a commitment to sustainable development and a philosophy of preparing for the future today.

We realise that our business goals are best achieved through a considerate regard for all stakeholders and we are committed to engaging our employees, contractors and the communities in which we operate, in programmes that support business objectives for the benefit of all concerned.

Prominent in these programmes is the investment in youth and education, our policy of preferred local employment, focussed training and development interventions. Furthermore we play a visible role in small business development, donations to local charities and community support organisations as well as an active involvement in the community in combating the threat imposed by HIV/AIDS.

The input received from our stakeholders in response to our *Footprint 2002* contributed significantly to our preparation of this report. We ask that you please complete and return the feedback cards provided at the back of this report to assist us in achieving our goal of continued improvement whilst ensuring that future reports meet the expectations of our stakeholders.

We celebrate our 10th anniversary in 2004. Whilst we have made good progress to date, we believe that we have only scratched the surface in unlocking the potential that exists within our Company and are aiming for greater improvements over the next decade through focused investment in our employees and stakeholders.



Paul Henry  
GENERAL MANAGER





# Our Purpose

## Mission Statement

- We, the people of Namakwa Sands, are passionate about our business and this drives us to be a leading supplier of premium quality products in the mineral sands industry.
- We dedicate ourselves daily to uplifting our employees and the communities in which we operate.
- By setting clear goals and pursuing them with enthusiasm and innovation our achievements create superior profits for our shareholders and prosperity for all.

## Vision

*The Shape of the Future  
"Top 3 in 3"*

- Namakwa Sands will be one of the world's top 3 mineral sands producers within 3 years.
- Measured by:
  - Net cost per TiO<sub>2</sub> unit;
  - Revenue to cash cost ratio; and
  - Premium quality zircon tons.

## Values

*Our Guiding Principles*

- Excellence in all we do.
- We live the Anglo American principles of good citizenship.
- We expect and recognise superior performance.
- We care for the environment.
- We utilise our resources in a responsible and sustainable manner.
- Diversity is a strength and we embrace transformation.
- We will not compromise health and safety for production or costs.
- We enjoy what we do and celebrate success.



# Our Commitments

## Safety Commitment

Safety will not be compromised

- We take personal responsibility for safety.
- We ensure the safe conduct of all people on our premises.
- We enforce safe work practices and conditions.
- We reinforce a culture of safety through programmes and systems.
- We fully comply with statutory requirements.
- We continually review and improve all aspects related to safety.

## Environmental Commitment

- We conduct our business with care and respect for the environment.
- We conserve resources and limit the impact of our activities.
- We rehabilitate areas affected by our operations.
- We nurture mutually beneficial relationships with surrounding communities.
- We foster sustainable development.
- We communicate openly on the nature of our activities.
- We encourage dialogue and report progress on performance.
- In addition to statutory compliance we identify and adopt best practice.

## Health Commitment

- Namakwa Sands recognises that the physical and mental well being of all employees is key to the success of our business.
- We treat employees with respect and dignity and handle all information with confidentiality.
- The physical environment will be managed to safeguard the health and well being of employees.
- We create a culture where employees take a personal interest and responsibility for their mental and physical health.
- We promote and implement programmes to improve knowledge, attitudes and practices regarding health risks.
- We maintain systems for early identification of health conditions and referral for appropriate treatment and care.

## Quality Commitment

- Namakwa Sands is a long-term producer of consistent quality products.
- Each employee is dedicated to satisfying our customer requirements in terms of:
  - \* Quality
  - \* Quantity
  - \* Service
  - \* Competitive pricing
- Development of our people, processes and systems through continual improvement will ensure that we are the preferred supplier



# *Introduction to Our Operations and Products*







*West Mine Tip*





## Our Operations and Products

**N**amakwa Sands is a heavy minerals mining and beneficiation business that operates along the West Coast of South Africa. The business encompasses mining, mineral concentration and separation and smelting operations. As part of the Base Metals Division of Anglo American plc, Namakwa Sands draws on the technological expertise and financial strength of a powerful international mining and natural resources company that is listed on the London Stock Exchange.

The Mine, situated at Brand-se-Baai, 385 km North of Cape Town, encompasses an area of 14 892 ha, commencing at a line running roughly parallel to, and some 300m inland from the high water mark of the West Coast, and reaching almost 14 km inland. The area stretches approximately 5 km along the coast where surface mining and primary (gravity) and secondary (magnetic) concentration of heavy minerals sands occur. The resulting non-magnetic and magnetic concentrates are transported by road to the Mineral Separation Plant, approximately 60 km south of the Mine.

The Mineral Separation Plant (MSP) is located 7 km from Koekenaap (near Lutzville). Electrostatic, dry magnetic and gravity methods are used to separate ilmenite, rutile and zircon. The products are dispatched by rail, via the Sishen-Saldanha line, approximately 300 km to the Smelter.

The Smelter is located near Saldanha Bay. Zircon and rutile are stored prior to bulk shipment via the Port of Saldanha.

Bagging of products to customer requirements also takes place. Ilmenite is smelted to produce two grades of titania slag product and several grades of pig-iron.

Our products are supplied mainly to export markets. Consistent quality of product in accordance with customer requirements and international specifications are key considerations in the production process.

**Zircon** - Namakwa Sands produces premium grade zircon which is ideally suited to the ceramics industry as an opacifier in the production of tiles and sanitary ware. Other applications include refractories, television

screens, foundries, zirconium chemicals and metals.

**Rutile** - This natural titanium dioxide mineral is used in the production of welding electrodes, titanium dioxide pigment and titanium metal production.

**Titania Slag** - The slag is supplied as feedstock for the production of titanium dioxide pigment, which is used mainly in the manufacture of paint, paper and plastics.

**Pig-Iron** - The high purity material produced is used in the foundry industry, for casting of automotive and engineering components.



*Geographical location of our operations*

*Some examples of end products manufactured from our products. These include paint, space shuttles, tiles, welding equipment, television screens and surgical instruments*









## Executive Summary

Our approach to sustainable development is underpinned by our values and our commitments to safety, health, environment and quality. Safety and health are supported by the Anglo American plc Zero Tolerance, Target Zero (OTTO) initiative, whereas environmental activities are guided by our environmental policy. Internal and external quality performance is determined by our customer requirements. The Anglo American Good Citizenship Principles and our Community Engagement Plan directs our social footprint.

The successful implementation of effective management systems linked to regular auditing processes monitors our progress and ensures continual improvement. The objectives and

targets established as part of these systems have enabled the Company to align our operations in a manner that is beneficial to our clients, safe for our people and considerate to the environment in which we operate.

At Namakwa Sands the safety of our employees and contractors is not negotiable. Our focus on safety has, therefore, intensified during the year with the implementation of the Golden Rules concept and roll-out of the Behavioural-Based Safety Programmes. It is however with great regret that we report the death of one contractor. Our safety performance indicators for 2003 reflect a fatality and four lost time injuries, compared with no fatalities and the same number of lost time injuries in 2002. We are, however, pleased to report a 58% reduction in

medical treatment cases and more than 3 lost time injury free years recorded at our Mineral Separation Plant.

Our occupational health risk management focuses on the identified significant occupational risks. These risks are addressed by concentrating our efforts on reducing exposure to noise, thermal stresses and dust. A well-developed medical surveillance programme monitors employee and contractor exposure to occupational hazards. Mining, separation and smelting operations are involved in major programmes to manage the impact of HIV/AIDS on employees and communities.

The environmental performance at our operations continued to improve with zero significant environmental incidents reported for the year. In the important

*Left to right: Hans Botha - Human Resources Manager, Neels Oosterhuis - Operations Manager (North), Paul Henry - General Manager, Louis Booysen - Operations Manager (South), Edwin Capendale - Marketing Manager, Steve McComb - Operations Manager (Services) and Ken Holness - Finance and Administration Manager (inset)*





area of biodiversity, conservation at the mine site maintained its rehabilitation programmes and included fauna biodiversity monitoring as a performance indicator. However, energy use and normalised carbon dioxide emissions increased during the reporting period. Achieving both the water use permit limits reflects an improvement in our operations water management practices.

In line with our values we reviewed our Community Engagement Plan and maintained our social engagement with our employees, surrounding communities, relevant authorities and our suppliers. This year we report an increase of 155% in active Black Economic Empowerment (BEE) suppliers and a marked improvement in the number of

learners taking and succeeding in mathematics.

Having maintained continual improvement in our Safety, Health, Environmental, Quality and Community spheres through 2003, future efforts will be centred on consolidating our management systems and improving our focus on the key challenges. The following pages summarise our 2003 performance and our key objectives for 2004.



*"We all have a personal responsibility to make the SHEQ programmes a success and improve on our existing good standards".*

*Thomas van Boven  
(Engineering Contractor -  
Smelter) and Beyargon van  
Boven (Mechanical Operative  
- Smelter)*



*Tailings belt at the East Mine*



# *Overview of Performance, Key Facts and Figures*







*Mineral Separation Plant*

**Safety**

- Maintain a fatality free incident rate.
- Zero lost time injuries and injury severity.
- Reduction of 33% on Medical Treatment cases.
- Implement a behavioural based safety programme.
- Review of all risk assessments.



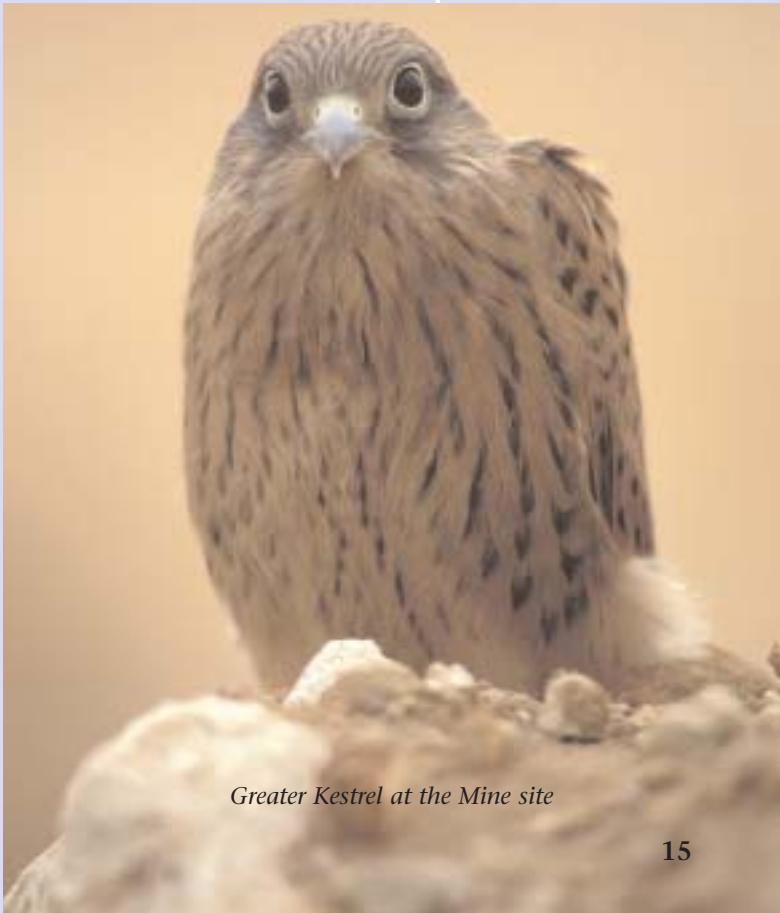
- Implement an improved safety induction programme for employees, visitors and contractors.
- Train all employees and contractors on hazard identification, risk assessment and risk management.
- Retain NOSA 5 Star status.

- One fatality at the Smelter in August.
- Four lost time injuries recorded.
- The objective of a 33% reduction on medical treatment cases was met with 22 being recorded against a target of 39.
- The Meerkat Behavioural Safety process was implemented in April 2003 and 121 observers trained by year end.
- Risk assessments were reviewed and where necessary revised at all operational areas.

- The control of contractors was enhanced through improved access control procedures and upgrading contractor training and induction records.
- A revised induction programme including refresher training is in the process of being developed and will be implemented in 2004.
- Safety training under licence from NOSA continued throughout the year and included contractors.
- Risk assessments were conducted by the contractor companies on site, under guidance from Namakwa Sands personnel.
- The occupational health risk assessment was extended to include the contractors.
- Contractors receive mandatory training in procedures and controls identified as critical to the safety of the operation.
- All three operational areas and the Company retained and improved on their NOSA 5 Star Integrated SHE System grading.

- No fatalities.\*
- No lost time injuries(LTIFR of 0).\*
- LTISR of zero.\*
- 33% reduction in medical treatment cases.
- Encourage all first aid case reporting (0% reduction).
- Analysis of Meerkat behavioural based safety programmes and develop action plans to address identified areas of concern.
- Continuous training of Meerkat Process team members.
- Entrench focussed Visible Felt Leadership programmes into the work ethos.\*
- Combine and standardise all safety, health, environmental, quality and community engagement risk assessments.
- Risk assessments embedded into work ethos.
- Review all risk assessments, (including external consultants, in-house occupational health and hygiene risk assessments), rank the risks and complete a detailed assessment for the top three at each operational area, including disaster recovery plans.
- Introduce a formal planned routine task observation programmes, with specific focus on whether hazards and risks were identified prior to the commencement of the task and whether appropriate risk mitigating measures are in place.
- Improve contractor safety performance.
- Produce and implement a video-based SHEQ induction programmes for all visitors and contractors.
- Implement refresher training programme.
- Include contractors in all facets of safety programmes.
- Achieve and retain NOSCAR level of performance.



AA plc/Base Metal Targets for 2003+	Our Performance 2003	Our Objectives for 2004
<ul style="list-style-type: none"> <li>• Implementation of internal Management audits on the Golden Rules and supporting standards to be conducted during the first quarter.</li> <li>• Third party audits also need to be conducted on the implementation of the Golden Rules during the first quarter.</li> <li>• Develop OHSAS 18001 compatible occupational health and safety systems, for certification in 2004.</li> </ul>	<ul style="list-style-type: none"> <li>• The Golden Rules were included as a standing audit item in the quarterly internal management audit programme.</li> <li>• A third party audit was conducted in the first quarter by a Black Mountain representative.</li> <li>• Work in this regard has commenced and key personnel have been trained as certified OHSAS 18001 auditors. A project leader has been appointed to oversee the process of collating and revising existing systems to meet this objective during 2004.</li> </ul>	<ul style="list-style-type: none"> <li>• Entrench Golden rules initiative*</li> <li>• Conduct a comprehensive review of the Golden Rules.</li> <li>• Conduct third party audits including occupational health.</li> <li>• Conduct three Internal SHE audits.</li> <li>• OHSAS18001 certification in 2004.</li> <li>• Ensure legal compliance and licensing of Company rail facilities.</li> <li>• Continual analysis of incident and accidents to priority issues.</li> <li>• Zero irreversible occupational disease.</li> </ul>
<p><b>Occupational Health</b></p> <ul style="list-style-type: none"> <li>• Maintain a zero compensatable occupational disease incidence rate.</li> <li>• Conduct gap analysis audit against the Corporate Occupational Health Management Guidelines by Feb 2003 and prepare action plans.</li> <li>• Fully implement the Corporate Occupational Health Management Guidelines at all operations by end of 2003.</li> <li>• Review occupational health risk assessments by June 2003.</li> </ul>	<ul style="list-style-type: none"> <li>• Zero irreversible, compensatable occupational diseases reported.</li> <li>• Completed.</li> <li>• Full implementation achieved.</li> <li>• Completed and extended to include contractors.</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct three Occupational Health audits during 2004.</li> <li>• Review the occupational hazards baseline survey.</li> <li>• Maintain compliance to AA plc OH Guidelines and principles and prepare plans to address non-compliances.</li> <li>• Occupational health hazards and risks identified and managed.</li> <li>• Health surveillance programmes linked to health risk exposure in place.*</li> <li>• Develop a baseline for FeO emissions and reduce emission from tap floor.</li> <li>• Facilitate three occupational hygiene monitoring surveys to monitor the findings of the legally required annual occupational hygiene survey.</li> <li>• Analyse the Namakwa Sands injury database for soft tissue and lower back injuries and develop an ergonomics programme to address these issues.</li> <li>• Comprehensive health surveillance programmes in place.</li> <li>• Sub-Saharan operations to have comprehensive HIV/AIDS response plans.*</li> <li>• Evaluate the NOSA 1600 HIV/AIDS Management system during 2004 and develop compatible systems.</li> </ul>
 <p><i>Greater Kestrel at the Mine site</i></p>		

AA plc/Base Metal Targets for 2003+	Our Performance 2003	Our Objectives for 2004
<p><b>Community Health</b></p> <ul style="list-style-type: none"> <li>• Extend HIV/AIDS initiative to the Vredendal/Lutzville area where the Company's Northern Operations are located.</li> <li>• Conduct bi-annual prevalence testing. This is one of the issues under discussion by the HIV/AIDS Steering Committee.</li> </ul>	<ul style="list-style-type: none"> <li>• The West Coast HIV/AIDS Initiative has extended its operation to the Vredendal/Lutzville area.</li> <li>• A prevalence testing survey was conducted during August 2003 and was also extended to contractors. 1210 (899 permanent and 311 contract) employees provided a specimen for testing. This equated to 94% of the permanent workforce available for testing.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure full operational status of West Coast HIV/AIDS Initiative satellite facility in Lutzville/Vredendal area.</li> <li>• Fully implement lovelife programme</li> </ul>
<p><b>Environment</b></p> <p><b>Water Consumption</b></p> <ul style="list-style-type: none"> <li>• Maintain compliance with water permit conditions.</li> <li>• Targets set in 2002 will be implemented in 2003. These targets are determined by water permits and water restrictions.</li> </ul> <p><b>Water Pollution</b></p> <ul style="list-style-type: none"> <li>• Construction of the seepage cut off trenches at the MSP to be completed before end April 2003.</li> </ul> <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>• Set energy efficiency targets for all operational areas in 2003.</li> </ul> <p><b>CO<sub>2</sub> emissions</b></p> <p><b>Air Pollution</b></p> <ul style="list-style-type: none"> <li>• Reduce fugitive emissions from the Smelter tap floors and fall-out dust.</li> </ul>	<ul style="list-style-type: none"> <li>• All three sites were within their permit limits. The Northern operations achieved an additional saving of 11%.</li> <li>• Targets were achieved by all three sites.</li> <li>• Seepage trenches were constructed. Completed August 2003.</li> <li>• Energy targets established.</li> <li>• Baghouse maintenance ongoing to manage fumes. Curtains for tap floor ordered and will be installed in early 2004.</li> <li>• Annual gas plant utilisation higher than 96%.</li> </ul>	<ul style="list-style-type: none"> <li>• Improve Water Consumption-</li> <li>• Develop a five year water consumption target.</li> <li>• Improve Energy utilisation –</li> <li>• Further 1% reduction in total energy use.</li> <li>• Smelter to investigate energy reducing measures and apply those in 2005.</li> <li>• Develop 5 year energy consumption targets.</li> <li>• Improve CO<sub>2</sub> emissions -</li> <li>• Further 1% reduction in total CO<sub>2</sub> use.</li> <li>• Smelter to investigate CO<sub>2</sub> reducing measures and apply these in 2005.</li> <li>• Develop five year CO<sub>2</sub> emission targets.</li> <li>• Develop baseline for FeO emissions and reduce emission levels from tap floor.</li> <li>• Maintain gasplant utilisation of more than 96%.</li> <li>• Increase gas plant utilisation to 98%.</li> <li>• Reduce acid emissions at MSP 4.2 % 3mg/m<sup>3</sup> (2003) to &gt;2.5mg/m<sup>3</sup> (2004).</li> <li>• Install acid fume scrubber at MSP.</li> <li>• Install in-line stack monitors in furnace and gas stacks.</li> <li>• Develop particulate emission baseline for dust and fume baghouses at Smelter.</li> </ul>





*"SHEQ systems are very good and we can all improve if we all participate fully in the SHEQ programme".*

*Jurie Cardinal (Boilermaker - Smelter)*




*Operator working on furnace roof*






*Repair work in progress*



AA plc/Base Metal Targets for 2003+	Our Performance 2003	Our Objectives for 2004
<p><b>Land Use</b></p> <ul style="list-style-type: none"> <li>• Continue with rehabilitation continuous with mining.</li> <li>• Optimise dual carry conveyor system efficiency (tailings disposal).</li> </ul> <p><b>Biodiversity</b></p> <ul style="list-style-type: none"> <li>• Ongoing flora biodiversity audits for life of mine.</li> <li>• Commence with fauna diversity audits in 2003.</li> </ul>	<ul style="list-style-type: none"> <li>• Rehabilitation rates continuous with mining. Backlog has been eliminated.</li> <li>• Tailings delivery bins installed on conveyor to ensure efficient tailings distribution.</li> <li>• Flora biodiversity audit conducted.</li> <li>• First fauna biodiversity audit successfully conducted.</li> <li>• Biodiversity Action Plan completed.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain rehabilitation with mine advance - <ul style="list-style-type: none"> <li>• <b>West Mine:</b> Rehabilitation Rate to equal Feldspathic Mining Rate.</li> <li>• <b>East Mine:</b> Rehabilitation Rate to equal Aeolian Mining Rate.</li> </ul> </li> <li>• Continue with annual flora biodiversity audits.</li> <li>• Conduct second fauna biodiversity audit.</li> <li>• Review biodiversity status of the operations and implement the biodiversity action plan.</li> <li>• Assess gum tree plantation at the MSP</li> <li>• Retain involvement with the Succulent Karoo Ecosystem Planning Project (SKEP).</li> </ul>
<p><b>Legal compliance and Environmental Incidents</b></p> <ul style="list-style-type: none"> <li>• Complete implementation of routine radiation monitoring programmes.</li> <li>• Apply recycling practices to more waste streams.</li> <li>• Complete implementation of the waste management programme.</li> <li>• Develop and commence implementation of a final radioactive waste disposal</li> </ul>  <p><i>African Black Oystercatcher</i></p>	<ul style="list-style-type: none"> <li>• Routine radiation monitoring programme implemented.</li> <li>• Recycling practices include scrap metal, paper, glass and plastic.</li> <li>• Waste management programme and procedures implemented across all sites.</li> <li>• Radioactive waste disposal system included in overall waste management procedures.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain Radiation Protection programme.</li> <li>• Optimise recycling practices at all operations.</li> <li>• Review and improve on procedures.</li> <li>• Implement an alternative sulphate slag loading method.</li> <li>• Environmental hot line: <ul style="list-style-type: none"> <li>• Implement 24 h feedback loop;</li> <li>• Close out reported incidents and complaints within 1 week; and</li> <li>• Quarterly advert in local papers.</li> </ul> </li> <li>• Conduct toxicology study at the Smelter.</li> <li>• Effluent licenses.</li> <li>• EIA/EMP (expansion).</li> <li>• Zero level 2 and 3 environmental incidents.</li> </ul>
<p><b>Certification and audits</b></p> <ul style="list-style-type: none"> <li>• ISO 14001 certification scheduled for mid 2003.</li> <li>• The environmental risk assessments systems will be externally audited in 2003.</li> </ul>	<ul style="list-style-type: none"> <li>• ISO 14001 certification achieved at all three sites.</li> <li>• The risk assessment system was audited as part of the ISO 14001 certification audits.</li> </ul>	<ul style="list-style-type: none"> <li>• Maintain ISO14001 certification.</li> </ul>

AA plc/Base Metal Targets for 2003+	Our Performance 2003	Our Objectives for 2004
<p><b>Management and reporting</b></p> <ul style="list-style-type: none"> <li>• Introduce systems and managerial leadership that ensure a culture where hazard identification, risk assessment and management are conducted before the start of every activity or task.</li> <li>• Mine closure plans are to be reviewed and the financial processes for funding closure are to be fully defined. This includes the methodology to be followed in the event of early closure.</li> <li>• Full implementation of the SHE Corporate Management System by the end of 2003.</li> <li>• Sustainability Management Reports to be generated by the end of July 2003.</li> <li>• Publish Annual Report</li> </ul>	<ul style="list-style-type: none"> <li>• 30 second risk assessment established and is in use. Risk assessment where any modification or change in process has also been implemented.</li> <li>• Closure plan reviewed and updated. Revised costs will be included in the 2004 budget.</li> <li>• Achieved all SHEQ commitments, systems and procedures are geared towards meeting the aims and principles as set out in the SHE Corporate Management System.</li> <li>• Completed.</li> <li>• The Namakwa Footprint 2002 Report was published and distributed in February 2003.</li> </ul>	<ul style="list-style-type: none"> <li>• Review Mine Closure plans and costs.*</li> <li>• Include new closure costs in 2004.</li> <li>• Sustainability reporting.*</li> <li>• Publish 2004 Annual SHEQ Report.</li> </ul>
<p><b>Corporate Citizenship</b></p> <ul style="list-style-type: none"> <li>• All operations to achieve at least an 80% compliance with the SHE component of the AA plc Business Principles. No Business Principle should score less than 75%.</li> <li>• Each operation will compile detailed plans of action to address non-compliances.</li> <li>• All operations will conduct and be subjected to second party Base Metals Division team audits.</li> <li>• Community Engagement Plans and the associated reports are to be revised by the end of July 2003.</li> </ul> <div data-bbox="151 1498 443 1845">  </div> <div data-bbox="151 1845 443 2024"> <p><i>"SHE is my main priority because if we work safely, production results will follow".</i></p> <p>Chris Morley - (Engineering Group Leader)</p> </div>	<ul style="list-style-type: none"> <li>• Namakwa Sands is fully compliant with the SHE component of the AA plc Business Principles. Implementation of Business Principles at Namakwa Sands viewed as best practice by auditors.</li> <li>• Action plans exist for continuous improvement.</li> <li>• No second party Base Metals Divisional audits were conducted at Namakwa Sands' operations.</li> <li>• The Community Engagement Plan was revised.</li> </ul>	<ul style="list-style-type: none"> <li>• Business Principles to be in place at all operations.</li> <li>• Revise the community engagement plan in line with recommendations by external auditors.</li> <li>• Maintain the three year rolling community strategy.</li> <li>• Community Engagement Plans to be completed.*</li> <li>• Continue the Community Health initiative and HIV/AIDS campaign.</li> <li>• Continue the Youth engagement initiative.</li> <li>• Continue the Business development initiative.</li> <li>• Implement a third party assurance system in conjunction with and involving the local community.</li> <li>• Embed the speak-up whistle blowing campaign.</li> <li>• Socio-economic impact assessments to be done by all operations.</li> </ul>



**Quality**

- ISO 9001 certification was obtained in October 2003.
- ISO 17025 laboratory accreditation for zircon, rutile and pig iron was retained.
- Quality assurance indices, measured on an ongoing basis reflected that customer satisfaction improved from a dissatisfaction index of 13.6 in 2002 to 4.5 in 2003.
- ISO 9001, ISO 14001 and ISO 17025 management systems have been integrated.
- The objective of implementing a document control system for all quality and environmental management aspects was completed.

- Retain ISO 9001 certification.
- Maintain the ISO17025 accreditation for zircon, rutile and pig iron analysis.
- Attain ISO 17025 accreditation of titanium dioxide slag in February 2004.
- Customer Dissatisfaction Index <4%.
- Product Conformity Index  $\pm$  95%.
- Integrate ISO 9001, ISO 14001, ISO 17025 and OHSAS 18001.
- Implement total document control system, incorporating safety, health and all other aspect of the company's business.
- Audit and calibration of all measuring equipment that directly affect product quality and environmental monitoring and performance.
- Develop a baseline for costing of product and supplier quality non-conformances.

**Integrated Sustainability Management Systems**

- Develop integrated SHE and Sustainability risk assessment and risk management systems.

**Note: \*Indicates AA plc and Anglo Base Metals objective.**



Excavator in pit



# *Safety*







*Tapping operations at the Smelter*

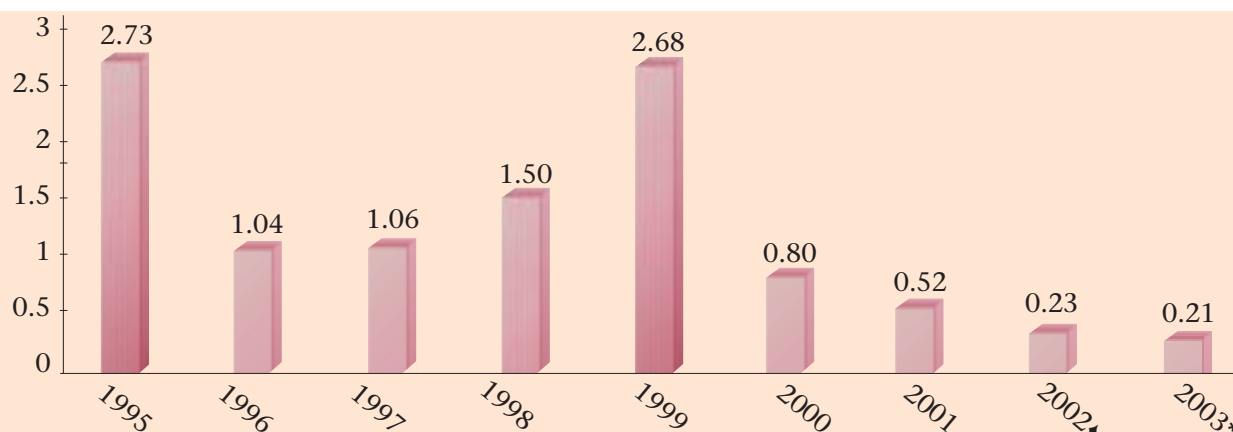
## Safety

This year was a disappointing year from a safety and health performance perspective, with one fatality and four lost time injuries compared to zero fatalities and four lost time

was to adopt and improve on the Anglo Base Metals' targets with regards to Lost Time Injury Frequency Rate, medical treatment cases and first aid cases. These targets were based on a 33% improvement on the 2002 performance as shown in Table 1.

performance. This places all three operations in a sound position to achieve the desired performance of 95% or more during 2004.

Benchmarking is done on a quarterly basis and current safety performance statistics indicate



**Figure 1: Historical Safety Performance - Lost Time Injury Frequency Rates**

\* 2002 statistics were revised to include an additional LTI as a result of an injury sustained in 2002 that necessitated an operation in 2003

♦ 2003 – excludes fatality

injuries during 2002. Lost time injuries are measured using the lost time injury frequency rate (LTIFR). The MSP retained its zero lost time injury status. The Company remains committed to achieving the target of zero

Twenty-two medical treatment cases were reported against a target of 39 giving a 58% reduction on the cases recorded for 2002. We recorded 274 minor injuries in 2003 compared to 277 during 2002.

that all three operational areas compare favourably with other similar operations throughout the Southern African region both within and outside of AA plc. We are constantly seeking best practice amongst similar

Operational Area	LTIFR 2002	Target LTIFR 2003	Actual LTIFR 2003	Actual No. Lost Time Injuries	Target MTCR 2003	Actual MTCR 2003	Actual No. Medical Treatment Cases
Namakwa Sands	0.23	0.00	0.21	4	2.28	1.16	22

**Table 1: Safety performance against targets**

The fatality experienced during 2003 saw Namakwa Sands end the year on a FIFR of 0.05

fatalities and zero lost time injuries for 2004 (Figure 1).

The fatality and all four lost time injuries experienced involved contractors and this clearly indicates that this must remain a key focus area. Hand and finger injuries are still the most prevalent type of injury experienced, accounting for 31% of the total recorded injuries for 2003. A key objective during 2003

The fatality experienced during 2003 saw Namakwa Sands end the year on a Fatal Injury Frequency Rate of 0.05.

Integrated Safety, Health and Environmental systems are used to assist us in the management of our SHE commitments. All three operational areas and the company as a whole successfully retained their NOSA Platinum 5 star status and improved on 2002

operations in an effort to continually improve our own performance. Visits to other operations were undertaken during 2003 and learning points from these observations are built into our systems.

A specific focus area during 2003 was the reporting of incidents and the capturing of costs associated with these incidents. An increase in incident reporting



# CASE STUDY

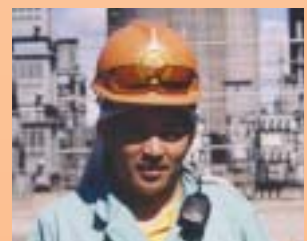
## Meerkat Behavioural Safety Process

In line with accepted best practice, we undertook to implement a behavioural-based safety programme at all our operations during 2002 and preparations to implement the programme commenced in January 2003. Termed the **MEERKAT** Process, ('**M**aking the **E**ffective **E**limination of at **R**isk Behaviour a **K**ey **A**ttitude **T**ogether'), the name captures the fundamental intention of the process. The analogy of a meerkat was found to be most suitable as in its natural environment, this animal's behaviour embodies our philosophy. The meerkat constantly keeps watch over the safety and well-being of others in its environment and it is this 'looking out for one another' culture that most effectively describes the desired outcome of the MEERKAT process.

The implementation was phased in over a period of eight months. Individuals were selected by the workforce and trained as process facilitators to drive implementation. The process is focused on and managed at shop floor level by a steering committee comprising of mostly level 1 operational personnel, with support from management in the form of a sponsor at each operational area.

Trained observers, both permanent employees and contractors, are given a target of completing 2 observations per week and good progress towards this target is being achieved. The observers operate on a 'no name, no blame' basis, while observing work being done. At risk behaviours that could lead to accidents and injuries are identified and addressed immediately, thereby creating a proactive culture of preventing injuries and reinforcing an environment of safety ownership and awareness. Observation results are collated and analysed using proprietary software and the results are used to develop action plans for addressing trends.

By year end 121 observers were trained and a total of 2151 observations conducted, indicating 91.5% safe behaviour. On-going training of observers at all levels of the organisation is a key objective for 2004, and it is anticipated that the real impact of this process will be evident in 2004.



*"SHEQ standards are of a high quality and this is why we got our NOSA 5 star rating. Being elected as a Health and Safety Representative was also a great honour and the support and co-operation I get is excellent".*

*Martin November  
Operator - Iron Treatment  
and Health and Safety  
Representative*

## Safety

from 2002, has been achieved, and in particular the reporting of near-hit incidents. This has been beneficial in targeting areas of loss and enabling proactive remedial action to be taken in preventing re-occurrences.

The Anglo American plc Golden Rules concept that ensures uniformity of safety standards within the organisation was used as a basis for the development of our Golden Rules. All our employees and contractors have been trained accordingly. This initiative was also taken to our suppliers and in excess of 400 suppliers were requested to acknowledge their acceptance of and commitment to adherence to the Golden Rules. These suppliers confirmed their acceptance and are, where necessary, working towards meeting their commitments in this regard. An

example of this commitment is the number of contractors and suppliers who have modified their vehicles to meet the requirement that no persons travel in the back of light delivery vehicles and that all persons in a vehicle have seatbelts. The initiative is undoubtedly creating a positive impact not only within our company but also with contractors, suppliers and visitors and is serving to uplift the level of safety awareness in the community.

There has been a significant improvement in the Visible Felt Leadership process during 2003. The objectives are to raise the safety awareness levels through increased management visibility and to identify unsafe or at risk behaviour and unsafe conditions in the workplace. An electronic data collection system was developed in-house and is used to analyse walkabout findings and to determine the 'safety climate' at the respective operations. This process complements and enhances the MEERKAT process and in excess of 10 000 hours were spent by managers and supervisors performing this function during 2003.

The 'I am my Brother's Keeper' campaign, launched during 2002 continued throughout 2003. The efforts of the SHE task team in addressing the identified obstacles to safety success has been a significant contributor to safety performance. The 'brother's keeper' theme and culture remains the foundation of all safety, health and environmental initiatives at Namakwa Sands.

### Safety, Achievements:

- At the 2003 NOSA Western Cape Regional Awards the Mine was awarded first place in the opencast mines category and the Mineral Separation Plant and Smelter first and second place respectively for the surface plants category.
- Company employees were also recipients of individual awards at the same function with the Environmental Manager receiving the Environmental Co-ordinator of the year award and the Occupational Health Sister at the Smelter receiving the Occupational Health Practitioner of the year award.
- The Mineral Separation Plant was awarded the Anglo Base Metals Chief Executive Officer's Silver Award in recognition of safety performance.
- The Mineral Separation Plant has worked 1101 days without a lost time injury, the last recorded injury being 14 December 2000.
- The Furnaces at the Smelter, an inherently high risk area due to the hot metal and high temperatures, have worked 962 days without a lost time injury.
- Both the Mine and Mineral Separation Plant have retained their fatality free status since 1995 when Phase 1 of the project was commissioned.
- Sixty eight workplace sections within the Company have worked without a lost time injury and 37 workplace sections have worked without a minor injury since the commissioning of Namakwa Sands in 1995.



*Pre-use inspections*





*"SHEQ is a very high priority at Namakwa Sands. I think it is important to all departments."*

*Jiyaad Constant (Production Controller Iron Treatment)*

*Furnace tapfloor operator*









*Medical surveillance*

## Occupational Health

Our activities and products can affect the health of employees and surrounding communities. We therefore have occupational health measures in place to reduce the associated risks. The identification, assessment and management of occupational health risks remains a priority issue. To meet legal requirements we continued to use the services of external approved inspection authorities and consultants to identify, quantify and assess workplace occupational health risks. These include noise, dust, fumes, gases, illumination and heat stress.

Medical surveillance of employees and contractors at risk of exposure to occupational hazards is conducted at our three Occupational Health Centres located on site. These fully equipped centres provide medical services to all employees and

contractors, including:

- Primary health care provided free of charge at our operations. Local medical practitioners are contracted to hold consultations on a weekly basis.
- Occupational health care by the occupational health practitioners which extends to ergonomic assessment of the workplaces. Training and awareness of occupational health hazards is also a key focus area.
- Lung function, audiometry and vision testing. This forms an integral part of the medical surveillance programme and all employees and contractors exposed to occupational health stressors are closely monitored.
- Biological monitoring is carried out on employees and contractors exposed to substances and hazards that necessitate such surveillance. The medical surveillance, psychomotoric and psychometric testing facilities

ensure an integrated, holistic approach toward employee and contractor primary and occupational health assessment.

### Occupational health performance

Noise in workplaces and associated with certain activities is a risk at all three operational areas and a comprehensive hearing conservation programme is in place to mitigate the risk of noise induced hearing loss. No cases of compensatable hearing loss were recorded during the year. All employees and contractors exposed to noise had baseline audiometric assessments conducted in 2003.

Dust and fumes pose the most significant occupational health risks. Projects identified under the Continuous Improvement initiative include the reduction of iron oxide fumes on the Smelter tapping floors. At the



*Dr Ivan Marais, Occupational Health medical practitioner examining André Engelbrecht (Production Operator)*



Mineral Separation Plant, levels of sulphuric acid fumes were identified as unacceptably high and the installation of scrubbers has been budgeted for.

In addition, the exposure of personnel to heat from the climatic conditions at the Mine and Mineral Separation Plant and from tapping and casting operations at the Smelter, requires that effective heat management programmes are in place. One case of heat exhaustion was recorded during the year.

An audit against the AA plc Occupational Health Guidelines indicated that our occupational health programmes had a high level of compliance. However, one of the areas identified as deficient was the regular, ongoing occupational hygiene monitoring of the major occupational health stressors evident at the operational areas.

reference include:

- addressing site-specific issues relating to HIV/AIDS, sexually transmitted infections and tuberculosis;
- ensuring continuous awareness and education;
- identifying and training voluntary peer educators and support groups and co-ordinating their activities; and
- disseminating HIV/AIDS related information and updating of dedicated HIV/AIDS notice boards.

The main focus on HIV/AIDS since 2000 to date has been to promote awareness amongst employees and contractors, develop an HIV/AIDS policy and conduct a voluntary testing programme in order to determine the prevalence status amongst the workforce. As stated in our objective of biannual testing, a second company wide prevalence test (see Table 2) was conducted during August 2003, using non-invasive saliva based HIV



*"SHEQ is an everyday part of our daily duties and responsibilities, and at Namakwa Sands it is of a high standard."*

*Josephine De Leeuw  
(Laboratory Operative - Smelter)*

committees analysed the results of the prevalence test, it was evident that although permanent employees have a relatively low HIV prevalence (0.9%), this represented an increase since the previous prevalence survey in 2000, then recorded as 0.59%. Cognisance must however be taken of the fact that the target population for the survey in 2000 was significantly lower than in 2003. This relatively low prevalence is also in keeping with other surveys done by the testing authority in other West Coast

	Total Tested	HIV Positive	HIV Negative	% HIV Positive
Employees	899	8	891	0.9
Contractors	311	18	293	5.8
Total	1210	26	1184	2.1

**Table 2: Results of voluntary HIV prevalence testing**

Currently this monitoring is conducted on an annual basis only, meeting the minimum legal requirements. To address this shortcoming, provision has been made to conduct this monitoring on a quarterly basis.

#### **HIV/AIDS**

An HIV/AIDS committee comprising of employee representatives and including the occupational health practitioners has been established at each of the three sites. Their terms of

antibody tests. These tests were extended to all employees and contractors working at our operational areas. In total 1210 (899 permanent and 311 contract) employees participated. This represented 94% of permanent employees at work at the time of the survey and 88% of the entire permanent workforce.

When management, union representatives and representatives of the HIV/AIDS

companies. Contract employees have a higher prevalence (5.8%). Of the entire workforce, inclusive of contractors, the HIV prevalence was recorded at 2.1%.

Thirty six peer educators were trained as part of the on-going in-house HIV/AIDS programme and one of their focus areas during 2004 will be to address the issue of education and awareness amongst the entire workforce, including contractors.







*Dung Beetle*

## Environment

Our operations are located in two geographically distinct areas. The northern operations are situated in the arid Succulent Karoo Biome, a traditionally agricultural community. The Smelter is situated near the Port of Saldanha in an area zoned for industrial development. This area of the West Coast is increasingly becoming a popular holiday destination for many local and international tourists.

A number of interested and affected parties interact with us. Regular site visits with relevant authorities and other interested and affected parties are held in order to keep them informed of operational performance and ascertain their concerns about issues. A toll-free environmental call centre was established in 2003 as another means of promoting constant community engagement. The line is operational 24-hours a day and callers will receive a response in answer to their queries. Should you wish to express any environmental concerns, please call 0800 203 565.

Namakwa Sands is represented on the Lower Olifants River

Water User Association as well as the Olifants River Catchment Management Agency. Representatives participate in the Waste Minimisation Club for Large Companies in the Western Cape and are also key role players in the Saldanha Bay Water Quality Forum. Since the Smelter uses water from the lower Berg River catchment, we participate in forums that ensure the supply of adequate water quality for domestic and industrial consumption to the area.

Namakwa Sands also interacted with the Saldanha Bay Municipality which convened a local Cities for Climate Change forum and the Succulent Karoo Ecosystem Planning Project (SKEP), which is actively involved in preserving the biodiversity of the Succulent Karoo.

From the initial construction phase of the operations, we have established and continued to build solid relationships with our immediate surrounding communities, regulatory authorities and non-governmental organisations. These relationships centre around interaction with and discussion on a number of issues of common interest including

**Environmental Call Centre  
0800 203 565**



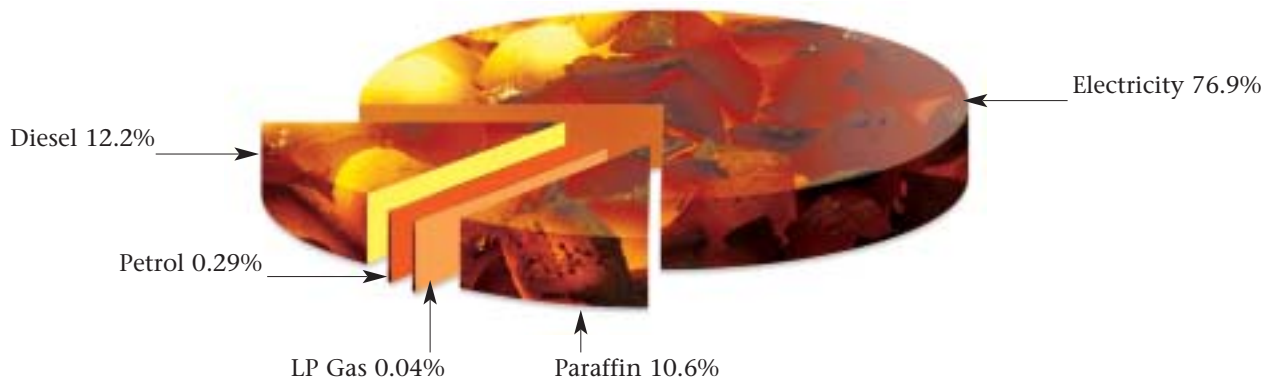
*The water treatment plant facilities maximise re-use of process water resulting in the decrease of potable water consumption*

rehabilitation, conservation and responsible resource utilisation. Regular meetings are held with these parties to discuss these issues and to report on progress and improvements. Interested

Risk	Action	Achievement
Disturbance of the natural environment	Approved rehabilitation programme and biodiversity monitoring	Maintained rehabilitation rate equal to mining advancement
Seepage to ground water	Seepage prevention and water use reduction	Installed seepage cut-off trench and remained within water permit parameter
Air emissions	Monitoring and emission reduction	Achieved 96% gas plant utilisation

**Table 3: Key Environmental Risks**





**Figure 2: Sources of Energy for Namakwa Sands**

and affected parties in the area include:

- Government departments and institutions (national, provincial and local) and regulatory authorities (Catchment Management Agencies and Water User Associations).
- Public stakeholders including agricultural associations; primary, secondary and tertiary educational institutions; non-governmental organisations; neighbouring mining and industrial companies and local communities.

Compliance with applicable legislation is a priority. This was one of the drivers behind the implementation of a recognised environmental management system based on the international ISO 14001 standard.

#### Key environmental risks

Table 3 summarises the key identified environmental risks.

#### Environmental Performance Energy

Electricity is used as the main energy source across the three sites (Figure 2). The Mine site consumes diesel to power the large earth moving vehicle fleet. Paraffin is used at the Smelter and MSP for drying purposes. Activities at the Mineral Separation Plant utilise electricity as the main energy source. Alternative sources of energy (such as CO gas at the Smelter) are being investigated.

Energy usage at each site is quantified in terms of gigajoules (GJ) used as a ratio of tonnage mined or processed. The Smelter site showed a decrease in energy use per tonne slag tapped. Lower than budgeted production

volumes at both the Mine and MSP have resulted in higher energy consumption rates for these sites.

Each site has committed to achieving stipulated energy consumption targets for 2004. In the case of the northern operations these are a 1% reduction in GJ per ton mined/processed. The Smelter will be conducting research into alternative energy sources and uses during 2004 in order to gain a better understanding of how best to manage its consumption patterns. Improvement targets will then be established from 2005.

#### Water

Water is consumed by all three sites for the various production processes as presented in Figure 3. The northern operations are supplied with potable (fresh)



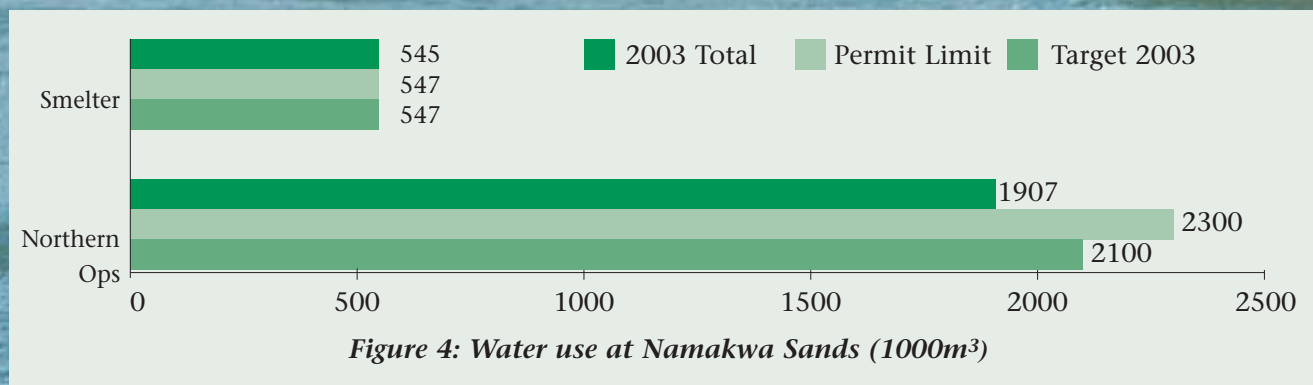
**Figure 3: Sources of Water for Namakwa Sands**

## Environment

water via a canal system from the Clanwilliam Dam on the Olifants River. In addition to this the processing plants at the Mine site utilise sea water for the processing activities. The

at the Smelter site reduced water consumption per tonne slag tapped to below 2002 levels. Each site has set targets to improve on water consumption figures for 2004. The total water consumption for all sites complied with respective permit

Karoo and Lowland Succulent Karoo. Both of these are classified under the Succulent Karoo Biome, one of 24 biodiversity hotspots of the world. The vegetation is dominated by chamaephytes (woody plant with buds resting at ground level),



Saldanha Bay Municipality supplies the Smelter site with its potable water requirements. Water consumption at the operations is governed by the relevant permits and licences.

The Smelter consumed potable water in excess of the stipulated municipal permit limit in 2002. As a result, all operations were required to account for water consumed during 2003. This focus is emphasised by senior management on a daily basis and records of consumption are analysed by the production staff at their morning meetings. In addition, monthly consumption figures in excess of the calculated allowance are reported internally as Level II environmental incidents. This renewed focus has paid dividends at all sites.

Water consumption per tonne mined at Brand-se-Baai was above 2002 levels. The MSP's total water consumption was lower than budget as a result of the fire which reduced production. Water management

requirements in 2003 as shown in Figure 4. The use of sea water as a replacement for potable water at the northern operations continues to prove successful and further potable water saving initiatives are investigated and implemented where practicable.

### Biodiversity

We own 14 890 ha of mineral and surface rights at the Mine site and have a mining authorisation for 9 054 ha. Strip mining of aeolian sand can result in large tracts of land remaining which are denuded of all vegetation, often with soil structure and fertility degraded. Current South African legislation requires that mines rehabilitate mined out areas to a land-use agreed upon by the regulator and other interested and affected parties. In the case of Namakwa Sands the agreement was to return the property to its former land-use as small stock farming land.

### Vegetation and Fauna

The vegetation of the mine is defined as Strandveld Succulent

with therophytes (annual plants) and geophytes (plants growing from bulbs) commonly found. Mass flowering displays of certain therophytes (usually Asteraceae) during Spring are characteristic of this region. The rich succulent part of the vegetation comprises mainly of Mesembryanthemaceae and Crassulaceae and many species are endemic or near endemic. The fauna consists primarily of 107 resident bird species, with 52 species forming the breeding population. Thirty nine species of reptiles and amphibians, as well as 35 mammal species have been reported, but no rare or threatened species have been noted.

### Rehabilitation method

The initial lack of effective large-scale stabilisation of disturbed areas with local plant species, due to a lack of topsoil and wind erosion protection, resulted in the revision of our environmental management programme. The revision considered post closure land use,





*Preparing nursery cuttings for mine rehabilitation*

the results from extensive rehabilitation trials and operational experience. This culminated in a revised rehabilitation programme, which was approved in July 2002. This programme includes the removal and re-use of the topsoil resource and the installation of windbreaks and has subsequently been integrated into our biodiversity action plan.

The three key objectives of the current rehabilitation programme are to:

- ensure the successful re-establishment of a range of indigenous species in the mining area;
- manage the rehabilitated vegetation so as to minimise the loss of species diversity and

habitats as a result of mining activities; and

- to ensure that rehabilitated land is stable in the long term, to prevent soil erosion and promote a self sustainable vegetation cover, that can be used for sheep grazing after cessation of mining activities.

The rehabilitation programme leaves the maximum number of options open to future generations. Should parts of the rehabilitated land be leased to farmers, stringent control measures will be incorporated in the leasing agreements to ensure that good veldt management and effective animal husbandry practices are adopted.



*"Re-use, reduce, recycle"*  
Alex Hoorn (Mine site)

## **Biodiversity monitoring**

### **• Flora biodiversity monitoring**

Large-scale rehabilitation commenced at the end of 1999. Rehabilitation progress is measured as the amount of land backfilled and stabilised with windbreaks and indigenous vegetation. To date 1600 ha have been disturbed and 1000 ha are under rehabilitation. Of the 1000 ha under rehabilitation 881 ha have been stabilised with windbreaks and local vegetation as presented in Figure 5. An area of 600 ha is occupied by infrastructure and mining operations.

Flora biodiversity audits of undisturbed and stabilised areas have been undertaken since 2001 to serve as an indicator for rehabilitation progress. Plant species composition, crown cover and basal cover are the three parameters that are measured to determine the effectiveness of the rehabilitation programme. The veldt condition of the rehabilitated area is assessed using the step point method to determine the initial success and long term sustainability of the rehabilitation programme. The initial results from the biodiversity audits show an encouraging recovery in indigenous plant species, crown and basal cover. Individual plant species diversity in the rehabilitated areas has also

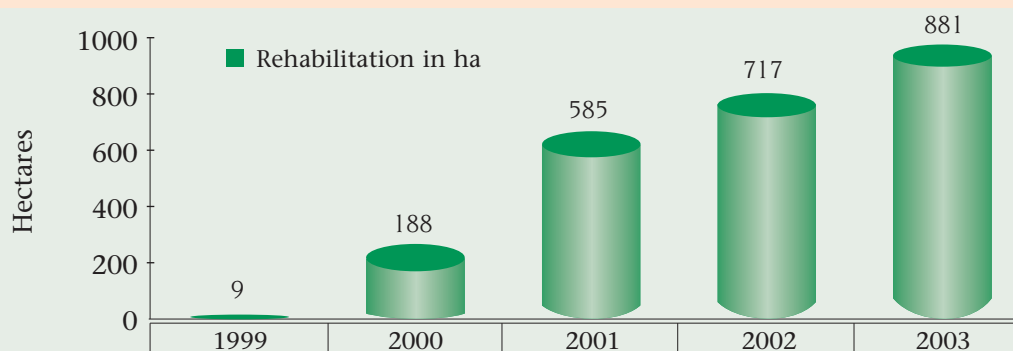
shown marked signs of recovery. Continual monitoring of species recovery over life of mine will assist in measuring the recovery of all species found.

- **Fauna biodiversity monitoring**  
Ants have been used in Australia, Brazil and elsewhere as indicators of environmental health. Ant communities were sampled at the mine using pitfall traps on three sites, one in natural

by the difference in the abundance of ants between natural vegetation and mine-spoil sites. On average, vegetation in un-mined areas was more species-rich and also contained some rare species (i.e. those species that were not found on either one of the two mine-spoil sites). Ant communities, therefore, appear to be good indicators of environmental health in Namaqualand and will be used as a life of mine fauna biodiversity indicator.



and other coastal species, but also keeping the many Oystercatcher Programme participants up to date with project findings and progress.



**Figure 5: Progressive Rehabilitation (stabilisation with windbreaks and vegetation)**

vegetation and the other two on the mined landscape, one and two years after rehabilitation respectively. Sampling was done during autumn (April) as well as during winter (July). The results of these samplings are presented in the accompanying Table 4.

- Mining has a large impact on ant communities, as is demonstrated

## African Black Oyster Catcher programme

We sponsored the African Black Oystercatcher newsletter *Oystercatcher Tidings* during 2003. The newsletter has been vital to the success of the Oystercatcher Conservation Programme. Not only does this newsletter increase public awareness of conservation problems facing oystercatchers

## Emissions, Effluents and Wastes

Carbon dioxide is the only greenhouse gas emitted by our activities. This CO<sub>2</sub> is accounted for in relation to the source of the emission. Direct CO<sub>2</sub> gas emissions occur as a result of the furnace operations at the Smelter. CO<sub>2</sub> equivalent emissions are calculated based on the usage of different energy sources as

Area sampled	April sampling		July sampling	
	No. Ants	No. Species	No. Ants	No Species
Natural vegetation	1315	8	855	5.8
Mined ground 1 year after rehabilitation	621	4	1	2.1
Mined ground 2 years after rehabilitation	780	6	60	3

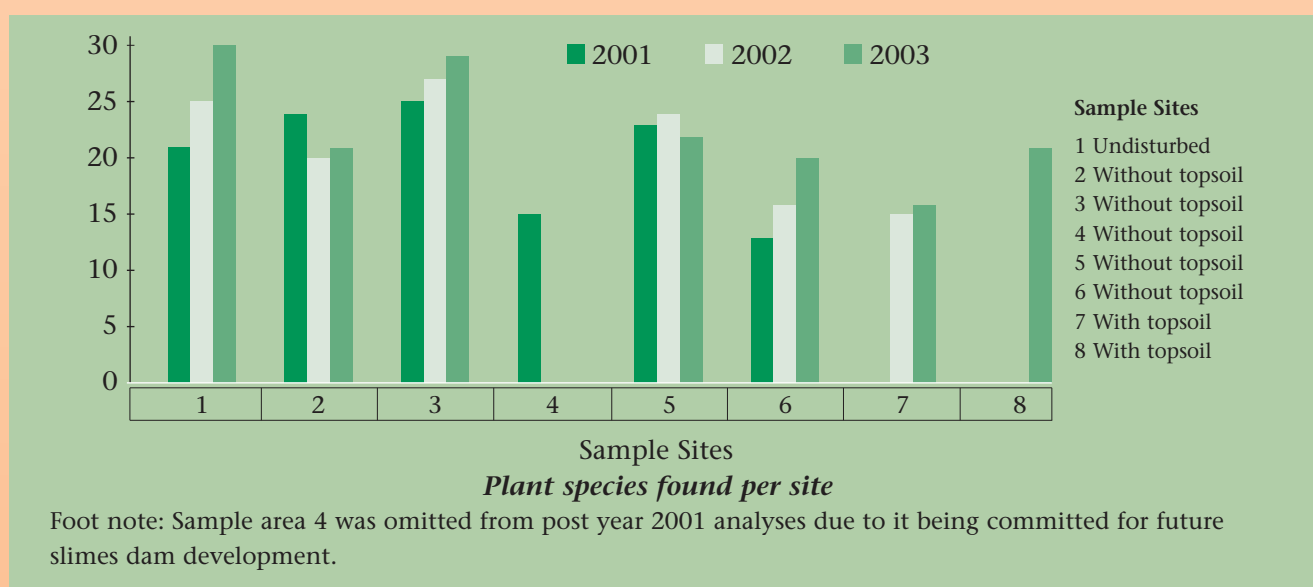
**Table 4 - Ant Sampling Results**



# CASE STUDY

## Rehabilitation at Namakwa Sands

Numerous specialist reports and the environmental impact assessment identified the key environmental impact at the Mine site as the disturbance of the Succulent Karoo ecosystem. Recommendations by specialists and numerous revegetation tests identified the methodology and refined the application of the rehabilitation programme. In situ large-scale application of the programme since November 1999 resulted in a marked recovery of the disturbed succulent vegetation. Both plant species and percentage cover parameters showed marked recovery. Continual research on the rehabilitation of the Succulent Karoo will assist and refine the current rehabilitation process. Future challenges include the long-term sustainability of the established vegetation especially during long drought periods and the effect of climate change on the Succulent Karoo as a whole and specifically the rehabilitated areas during the post closure period.

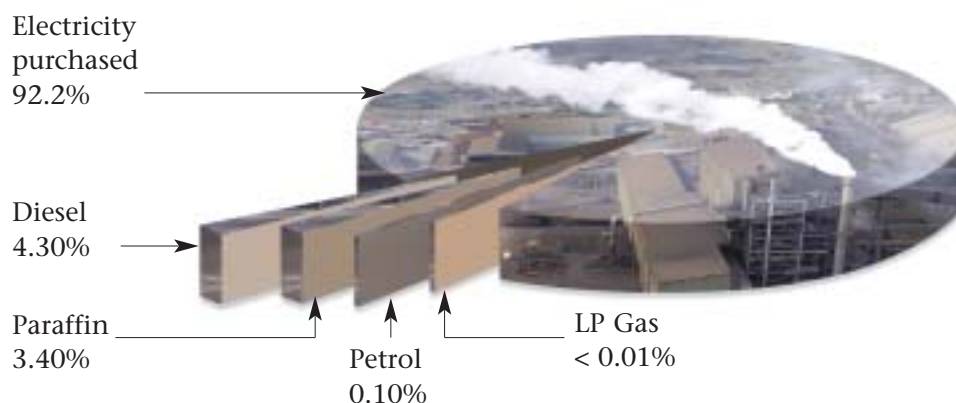


Checking the windbreaks

determined earlier in this report and, therefore, correlate with electricity use as our primary energy source for Namakwa Sands. Figure 6 presents the

assessment of the impact of these fumes on the surrounding environment has been budgeted for 2004 and from this, action plans to address the issue will be detailed. The concentration plants at the Mine site do not

on both plants is above the permit condition of 96% as shown in Figure 7. Particulate emissions have been better managed this year and the total particulate emissions have decreased from previous years



**Figure 6: CO<sub>2</sub> Equivalent emission sources at Namakwa Sands**

different sources of CO<sub>2</sub> emissions at Namakwa Sands.

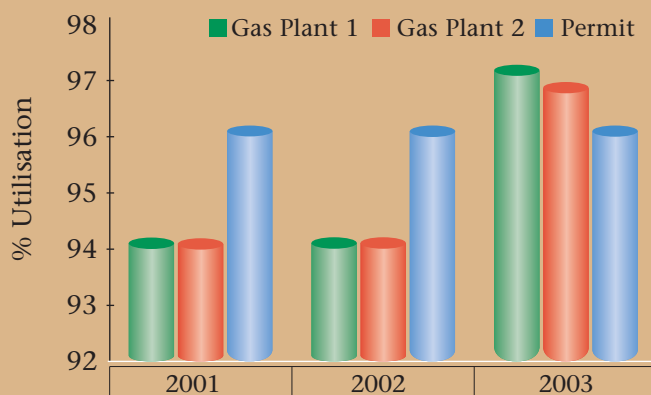
Normalised carbon dioxide emission levels increased at both the Mine and MSP. Lower production and higher carbon fuel consumption levels at the northern operations are the cause of this increase. The Smelter recorded a reduction in normalised CO<sub>2</sub> ratios.

Sulphuric acid fumes are emitted at the MSP. A bio-monitoring

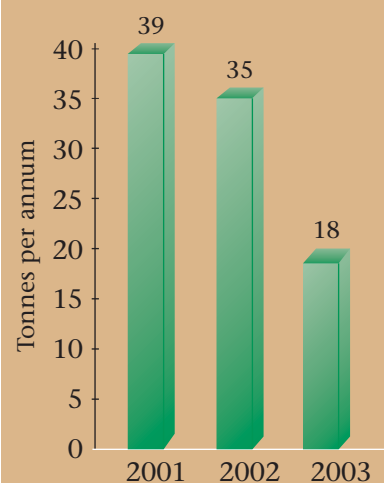
emit to atmosphere. The ilmenite smelting process at the Smelter emits carbon monoxide gas. This gas contains particulate matter and must therefore, pass through the gas cleaning plants for a minimum of 96% of the time that feed is supplied to the furnaces. This period is referred to as 'gas plant utilisation' and is a condition to the Smelter's air emission registration certificate. Clean gas plant utilisations have improved at the Smelter during 2003 and the average for the year

(Figure 8). A trial installation of a particulate monitor on Furnace 2 has been done in order to assess the success of this monitor prior to implementation of online monitors on all Smelter stacks.

Different waste types, as indicated in Figure 9, are generated by our operations. Tailings material from the mining operations is backfilled into the pits from where it was originally excavated. The chemically inert clay fraction

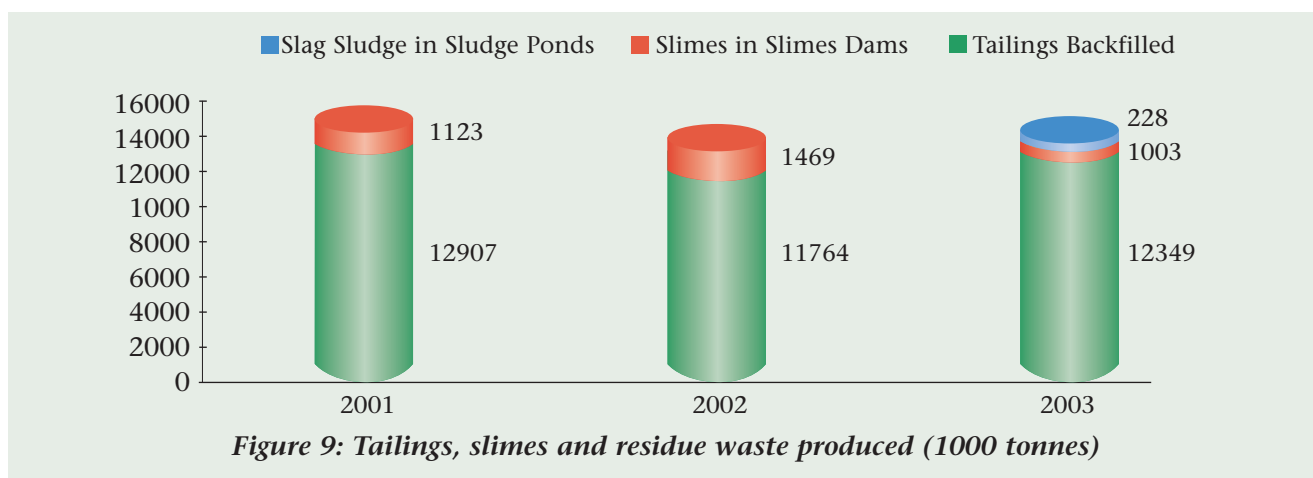


**Figure 7: Average Gas Plant Utilisation (%)**



**Figure 8: Smelter Average Particulate Emissions**





(slimes) originating from the primary and secondary concentration plants is sent to slimes dams adjacent to the PCP's. Effluent water resulting from the processes at the Mineral Separation Plant is treated and sent to evaporation ponds on site. At the Smelter site sludge is generated from the various gas cleaning plants and associated processes and this material is sent to a lined residue facility.

Figure 10 shows the quantities of domestic and hazardous waste produced. Domestic waste from the northern operations is sent to one of two on-site permitted landfill sites. The local municipality removes non-hazardous waste from the Smelter site and this is disposed of in their permitted municipal landfill site. Hazardous waste generated

on all sites is sent for disposal with a registered hazardous waste company.

Namakwa Sands applies the principles of waste recycling by separating wastes at source and sending these for recycling using local scrap handling companies.

The bulk of this material, as indicated in Figure 11, is scrap metal, however, paper, plastic and used oil recycling also takes place.

In the case of the northern operations all sewage effluent is handled in permitted treatment



*Recycling scrap metal*

## Environment

plants located on site. The Smelter discharges its sewage into the local municipal sewage system.

limits were exceeded. This procedure has ensured that these issues are constantly drawn to management's attention with the result that the year-end permit requirements have been met.

summarises environmental incidents reported in 2003. The reporting of all incidents is encouraged in order to ensure that potentially significant incidents are prevented.



*Figure 11: Wastes recycled by Namakwa Sands*

### Suppliers

The implementation of the ISO 14001 environmental management system prompted us to request suppliers to answer a questionnaire centred around their own environmental practices. In general these questionnaires were well received and, on a number of occasions Namakwa Sands was requested to provide advice to the suppliers on how they should tackle the implementation of an environmental management system.

### Compliance

Namakwa Sands operates with an approved Environmental Management Programme Report including a detailed closure plan. The closure plan is regularly reviewed and provision for closure costs are made in a restoration trust fund. No fines for legislative contraventions were received during 2003. Internal Level II environmental incidents were raised and reported to regulatory authorities in cases where permit

Environmental incidents are defined as: Level I - minor; Level II - moderate and Level III - significant environmental impact incidents. Environmental



*Environmental Department with ISO 14001 flag and certificate*

incidents are recorded on a monthly basis and reported to management. Figure 12

Investigations by personnel working in the area in which the incident occurred are conducted for all levels of incidents. These investigations highlight the basic causes of the incident and require operational staff to put the necessary measures in place to correct the incident and to prevent recurrence in the future. The MSP reported a Level II incident for seepage to groundwater and surface water at the hot acid leach circuit effluent evaporation ponds. This incident was reported to the relevant authority and the seepage is addressed by an ISO14001 objective.

The Smelter site reported a total of 9 level II environmental incidents for 2003. Of these 67% were related to gas plant utilisations below the permit level; 11% were as a result of monthly water consumption volumes in excess of the calculated monthly permit level. There was one incident relating to the dumping of residue material on open soil and one





Recycling paper

pertaining to dust levels leaving site above the action level. In all instances the incidents were reported to the applicable regulatory authorities. Following the incident investigations, action plans were defined and implemented to address the causes.



Namakwa Sands completed the implementation of an ISO 14001 aligned environmental management system in 2003. The system utilises environmental aspect assessments to determine company environmental objectives and targets. Regular

management reviews as well as internal and external audits ensure the continuous improvement process. SGS has been appointed as the independent external auditing firm. We can now report that all three operational sites were awarded ISO14001 certification in October 2003.

### Radiation Protection

Naturally occurring radioactive material (NORM) is present in the heavy mineral concentrate mined by Namakwa Sands. The level of radioactivity gradually increases during the separation processes at the PCP, SCP and the MSP. These levels are greater than the natural background radiation that mankind receives from the sun, outer space and parts of the earth's crust. It is therefore required by legislation that we comply with the requirements stipulated in the National Nuclear Regulator Act (No. 47 of 1999). Namakwa Sands is operating under a Certificate of Registration (COR-24).

This low dose ionising radiation from naturally occurring radioactive nuclides in the zircon and rutile products, poses an occupational health risk and is managed by the radiation protection programme for workers and members of the



*"Namakwa Sands has the best SHEQ systems that I have ever seen at any company that I have worked at. The Golden Rules are very good."*

*Diankae Mofokeng  
(Contractor - Projects)*

public. These programmes were based on hazard assessments that were compiled by technical experts in the radiation field and aim to achieve the ALARA (as low as reasonably achievable) principle in terms of exposure to radiation sources.

A qualified Radiation Protection Officer appointed during 2003 to liaise with the NNR on a regular basis, has afforded a more focused approach to this hazard. Together this team strives to ensure that Namakwa Sands complies with legislative requirements. Good progress was made during 2003 in terms of improving radiation protection.

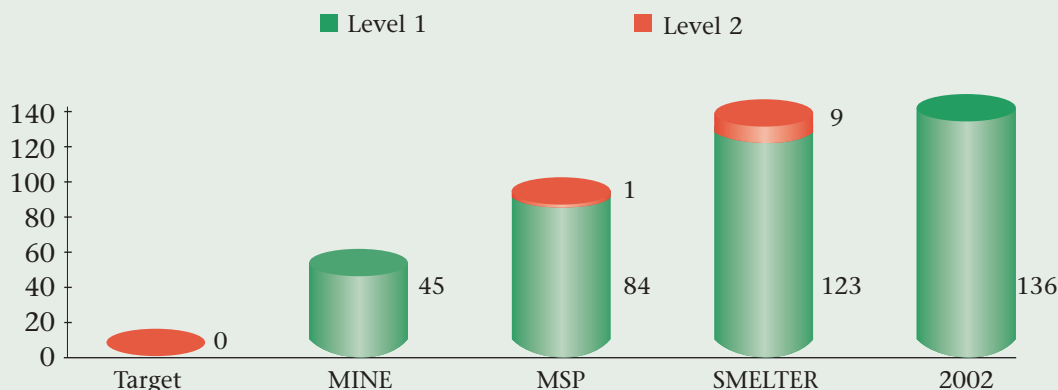


Figure 12: Number of environmental incidents reported for 2003



*Quality*







*Maintaining quality standards in the laboratory*

## Quality

Namakwa Sands operates in a competitive global environment where conformity to customer requirements is essential. Our concept of quality is defined as meeting customer

our customers, as a heavy mineral feedstock producer with accredited analytical methods.

Spectroscopic and grain counting techniques are used to verify product quality at various stages in the production streams. All

conducted in September 2003 by SGS, an internationally recognised certification body. Our commitment to quality management and high degree of compliance to the ISO 9001:2000 standard were recognised and Namakwa Sands was registered as



*ISO9001 and ISO14001 Certification celebration function held on 2 December 2003*

requirements in terms of service, product quantity and product specifications.

A strategic decision was taken to introduce formal quality management systems and subsequently we have obtained ISO 17025 Laboratory Quality Management System accreditation. The ISO 17025 accreditation is applicable to the testing of rutile, tiokwa™, zircon, zirkwa and pig iron and ensures accurate analytical results. This enables the Company to establish a high level of credibility with

product consignments to customers undergo a final quality assurance check before leaving the site and a certificate confirming specification conformity accompanies all consignments.

Following the success of the laboratory quality management system, it was decided to implement an ISO 9001 quality management system during 2002-2003.

A third party audit of the Quality Management System was

an ISO 9001 certified company in October 2003.

A high level of commitment towards quality exists amongst our employees and the quality concept forms an integral part of our business culture. Internal customers are also recognised and a consistent drive to meet their requirements is a focus area.

Comprehensive procedures and standards for grade control have been established throughout the Company to ensure constant product conformity to



specifications. Continuous measurement, analysis and monitoring of processes form an integral part of the Quality Management System. Customer complaints are investigated and non-conformances are recorded and corrective and preventive actions put in place. A customer dissatisfaction index (CDI) has been developed whereby the number of customer complaints are expressed as a percentage of the total number of orders. The aim is to have a CDI as close as possible to zero to ensure customer satisfaction.

We monitor the final product conformance to specification and a product conformance index (PCI) is utilised as performance indicator. The PCI is the

percentage of the final product that conforms fully to specification. A quality complaint system incorporating our suppliers is in place and all non-conformances generated by this system are monitored and addressed.

Company quality objectives and departmental objectives have been set and performance against these is measured. Currently, 90% of all Company and departmental objectives are being met and action plans are in place to address shortcomings. Our objectives for 2004 focus on continuous improvement of services and products to our customers and departmental objectives support this by focusing on the delivery of the

right quantity and quality of product on time, every time.

#### Quality Performance

- Namakwa Sands obtained ISO 9001 certification and retained ISO 17025 accreditation.
- The customer dissatisfaction index improved from 13.6 in 2002 to 4.5 at end of 2003.
- All organisational quality and 90% of departmental quality objectives were met.

*Handover of ISO 9001 and ISO 14001 certificates by Tony Murphy (SGS) to Paul Henry (General Manager)*











## Stakeholder Engagement

The Namakwa Sands Community Engagement Plan has been reviewed with due consideration to the nature of our operations, our geographical location and an existing relationship with the communities in which we operate. This review was further

influenced by existing and pending legislation and guidelines and criteria for effective process auditing.

Central to our Community Engagement Plan is a commitment to the values and standards contained in the Anglo American Good Citizenship Business Principles document.

Our mission and values are congruent with these principles and our stated commitments comply fully with the values and standards contained therein.

We exercise our social responsibilities with due consideration to sound business principles and an assessment of stakeholder prioritisation.



*Namakwa Sands values the contribution of employees and their families to the Company*





*Communications meeting*

#### **OUR STAKEHOLDERS**

Namakwa Sands has and will continue to pursue a policy of constructive interaction of mutual benefit with all stakeholders.

#### **OUR EMPLOYEES AND THEIR FAMILIES**

Employee perceptions and attitudes are key elements in creating a culture in which the Company can operate successfully. Namakwa Sands places considerable emphasis on promoting understanding and securing the commitment and support of employees in an environment characterised by workplace equality. This is, inter alia, achieved through the following:

##### **Management Briefs**

The General Manager issues a monthly management brief or special brief depending on subject matter and timing of the communication.

- Twelve Management and 26 Special briefs were issued.

The formal briefing structure may be complimented by special interactive small group briefing sessions. This approach proved extremely effective in our communication drive prior to our HIV prevalence study undertaken during the year.

##### **Consultation Forums**

A number of joint consultation forums exist at each of the three sites in order to consult on policies and issues of mutual concern. These include:

##### **Employment Equity Forum**

Employees and employee representatives serve on an Employment Equity Forum. This forum considers all aspects of equity in the workplace and plays a significant role in monitoring progress on issues contained in the Employment Equity Plan and the compilation

of the annual Employment Equity progress report that is submitted to the Department of Labour.

##### **Skills Development Forum**

A Skills Development Forum meets to address issues as required in the Skills Development Act and to assist with the compilation of the annual Skills Development report.

##### **Quarterly Safety, Health and Environmental Review Forum**

Safety, Health and Environmental structures exist on all three sites where issues of mutual interest are addressed. The Quarterly Safety, Health and Environmental Review Forum is chaired by the General Manager and covers all aspects of SHE which are elevated to Company level, including statistics, strategies and objectives.

## Stakeholder Engagement

### Communications Forums

Communication Forums operate at all three sites and serve as a consultative forum primarily for employees outside the bargaining unit. Site specific issues of mutual concern are raised, discussed and resolved. Issues not resolved at this level, or issues common to the Company as a whole, are referred to the Management Committee for a decision.

### National Union of Mine Workers

The National Union of Mineworkers (NUM) is the only trade union enjoying with enjoying formal recognition. It represents employees at the semi-skilled operative levels. In terms of the recognition agreement,

each operational site has a branch committee, which in turn reports into a Namakwa Sands co-ordinating committee. The co-ordinating committee is also responsible for annual substantive negotiations.

### OTHER MEANS OF ENGAGEMENT

#### Sandy Times

Namakwa Sands publishes an in-house monthly newsletter, *The Sandy Times*. It contains a fair mixture of operational results, successes and social issues. A specific theme during 2003 has been to focus on diversity and in this regard articles appeared covering the major religious holidays and customs. Special editions are also published as required.

A special behavioural safety related newsletter *De Meerkat* that forms part of the Meerkat Process, introduced during the third quarter of 2002, has proven popular amongst employees.

### Special Themes

Being a proud South African - Namakwa Sands recognises diversity as a strength and actively promotes transformation. Short campaigns to promote recognition, awareness and an understanding of the background, history and reason for some of our national holidays are arranged along specific themes. These holidays include Human Rights Day, Freedom Day, Workers' Day, Youth Day, Women's Day, Heritage Day and Day of Reconciliation.



Matthew van Rooyen (Chairperson of Smelter NUM Branch Committee) and Louis Booysen (Operations Manager - South) planting trees in celebration of Arbor Day



### Suggestion Scheme

It makes good business sense to tap the creative capacities of our employees, and this creates opportunities for recognition and a positive sense of competition. A formal suggestion scheme was launched in June 2003 and elicited 143 suggestions in the first six months. Savings on implemented suggestions registered with the Suggestion Scheme since June 2003 amount to R1.1 million.



### Employee Assistance Programme

Namakwa Sands contracted the Centre for Human Development in September 2001 to provide an assistance programme to employees and their immediate families. This programme compliments primary and occupational health programmes offered on site and seeks to promote the social and mental wellbeing of employees and their immediate families.

The programme continues to be well supported both in terms of mandatory referrals by the Company as well as self and voluntary referrals.

### Surveys

In order to establish a formal basis from which to formulate strategies, Namakwa Sands has recently undertaken the following surveys:

- an assessment of possible Employment Equity/discrimination practices;
- a voluntary HIV/AIDS prevalence study, and
- a culture and climate survey.

Based on a finding in the culture and climate survey that

employees view communications in the company in a moderately negative light, Namakwa Sands commissioned a communications consultancy to further investigate this issue. The results of the recent audit are awaited.

### Employee Development

In the development of our employees we recognise the abilities and rights of all to compete for advancement. We will continue to foster an environment of learning and provide opportunities for growth. The Company fully subscribes to

### • Staff Development Panels

Staff development panels have been introduced since March 2000. All employees graded at the Paterson 'D-band' graduates and 'C-upper' high potential employees attend panels in order to discuss career progress and to identify development needs. The panels are chaired by the General Manager and are attended by Management Committee Members. Head Office consultants and specialists are also invited and their presence adds significant value to the process.



*Employees contributing to the graffiti wall on Human Rights Day*

the principles of the Mining Charter and the undertaking by Anglo American regarding the empowerment and employment of historically disadvantaged South Africans as well as the achievement of representative targets.

The means of engaging employees in the development process are contained in the following strategies and activities:

Junior Development panels, aimed at first line supervisory levels, have been introduced at each of the three operations.

### • Performance Management

Performance management is considered to be an integral part of the development of employees and performance contracts for all management level employees are in place. Performance Management

reviews are conducted twice per annum and are currently in place in respect of all first line supervisory positions to senior management. All other levels of employees have been trained in the process during 2002 and performance management has been fully implemented from the beginning of 2003.

- **Graduate / Diplomat Development Scheme**

The metallurgical graduate development programme has proven very successful in developing and retaining metallurgists for the Base Metals' Division. The format of this programme has been adapted and extended to the engineering, human resources and financial disciplines with further extensions being developed for commercial services, information technology and environmental management. The aim of these development programmes is to ensure the supply of well-developed managers for the future.

A generic development profile which lists pre-requisite management and leadership skills forms part of this programme and is used in determining individual development needs.

During 2003 three employees completed their graduate development programmes while eight progressed within their respective development programmes.

- **Mentoring and Coaching Programme**

A mentoring and coaching programme was identified as a need and both mentors and protégés received training in 2003.



*The home ownership scheme assists employees to purchase their own homes*

This programme is viewed as essential in the development of young, highly mobile employees. While still in its infancy, it is believed that the programme will contribute significantly to preparing young graduates for future leadership appointments.

- **Diversity Management Programme**

We are committed to the training of all employees in diversity management. This strategic objective will be achieved by 2007 through the training of approximately 200 employees per annum.



A diversity management programme was custom-developed for Namakwa Sands and piloted during 2002. Eight employees were trained and accredited by the service provider as facilitators. The facilitators commenced programme presentations during February 2003. Twelve sessions were presented with a total of 179 employees participating.

- **Part Time Study**

Namakwa Sands encourages employees to improve their skills and qualifications in line with their careers and the needs of the Company. To this end it is extremely pleasing to report that 157 employees received support for part-time study during 2003.

- **Bridging Programme**

Namakwa Sands has, since 2001, been involved with Cape Technikon in developing a bridging scheme that will eventually enable employees with potential, but limited educational qualifications, to obtain a tertiary qualification. Of the original seven employees who enrolled, one employee met the criteria and has enrolled for a National Diploma in Chemical Engineering.

- **Home Ownership Scheme**

Following a process of consultation started in 2002, Namakwa Sands formally introduced its home ownership scheme at the beginning of 2003. A total of twenty employees have so far elected to purchase their Company house with the first transfer registered on 28th November 2003. Although the initial uptake has been slow the Company is confident that

employees will continue to make use of this opportunity to become property owners.

## **COMMUNITY ENGAGEMENT**

The following communities surround our operations and are influenced by Namakwa Sands activities:

### **Southern Operations: (Smelter Site)**

The Saldanha Bay municipal area including the neighbouring farming communities i.e. Saldanha Bay, Diazville, Middelpoos, Vredenburg / Louwville, Langebaan, Langebaan Road and Hopefield.

### **Northern Operations (Mine Site and MSP)**

The Matzikama Municipality and neighbouring farming communities i.e. Vredendal, Lutzville, Uitkyk, Koekenaap, Ebenhaezer and Nuwerus.

We take pride in the relationship we have with neighbouring farmers and property owners over whose land services such as water and electricity to our mine site were erected.

The following interest groups within the communities were identified and are recognised as interest and affected parties:

- employees and their families;
- schools and educational institutions;
- other major employers;
- local business;
- chambers of commerce;
- tourism committees;
- environmental interest groups;
- charity organisations;
- health services and medical service providers;
- the wider community;
- local government;
- local offices/representatives of state departments; and
- the local media.

We engage our communities through the following means:

- **Community Road Shows**

Namakwa Sands has for the second year embarked on a special communications strategy with representatives of the surrounding communities, in order to inform and consult with them on activities, progress, performance and future direction. The sessions also provide the opportunity to listen to and address questions or concerns which representatives may have. Community sessions were held in Saldanha and Vredendal on 24 April 2003 and 16 May 2003 respectively. Representatives from the abovementioned interest groups were invited. The number of attendees and interaction experienced at these sessions is encouraging.

- **Employee Community Involvement**

Managers and all employees are encouraged to volunteer and serve on bodies and structures within the communities in their personal capacity in order to assist with capacity building, upliftment and the sharing of expertise. Several employees are involved in and serving on various committees and structures.

- **Media Coverage**

Two newspapers are circulated in the communities around our operations. *Ons Kontrei* is circulated in the communities of our northern operations while *Die Weslander* serves the communities of our southern operations.

Namakwa Sands has established and maintains sound relationships with the local press. Press releases following

incidents are made available as soon as possible and the Company also frequently participates in special topic editions e.g. promotion of tourism, environmental awareness and nature conservation, by means of supporting advertisements.

One potentially negative article was published during the year. This involved two buildings owned by Namakwa Sands that were badly vandalised and which subsequently attracted criminal elements in the community. This issue was resolved and the buildings were sold to a BEE company.

## • Local Recruitment

Namakwa Sands' policy regarding preference to local recruitment is well known and appreciated within the communities. A total of 78.5% of employees have been recruited locally. This, as well as the fact that significant skills development has taken place since the start of the project is well recognised, especially due to the development of a fairly high-tech industry in a traditionally agriculture/fishing-based environment.

## • Social Impact Assessment and Environmental Impact

A complete pre-mining social and environmental impact assessment was completed as part of the project evaluation and feasibility phases for Namakwa Sands. The impacts were communicated to the local communities, regional and national interested and affected parties. Comments received were incorporated in the Environmental Management Programme.

A re-assessment of the social and economic impacts will be undertaken in 2004 as part of the revision of the Community Engagement Plan.

## • Formal Engagement

Formal engagements is maintained with governmental institutions as stipulated in the Environmental Management Programme Report (EMPR) and, or as per statutory requirements.

Routine reports are generated and supplied to the local authorities, the Chief Air Pollution Control Officer and the National Nuclear Regulator. Frequent interaction has also been instituted in order to respond to intended legislation regarding Waste Management, Biodiversity, Coastal Zones and Protected areas.

## • Informal Engagement

Namakwa Sands continuously strives to promote the image of an 'open and transparent' organisation. Groups of visitors and interest groups are frequently received and given a tour of the Company.

A total of nineteen groups were received during the year. This included visits by groups from Cape Town and Stellenbosch Universities, the Military Academy in Saldanha, the South African Police Association, the Vredendal Vroue Landbouvereniging and schools in the area.

## HIV/AIDS AND COMMUNITY HEALTH

Namakwa Sands recognises its obligations to community health. Despite the rural nature of the West Coast area in which the Company operates, the surrounding communities have access to state provided hospitals,

primary health care clinics and both state and private doctors. Access to specialists and special health care facilities is however limited. Namakwa Sands has on several occasions joined interest groups in making representations to local and provincial government and state departments to address issues of mutual interest and to improve facilities within the communities.

The major emphasis of Company involvement has been to mobilise the communities towards addressing HIV/AIDS. Significant monetary contributions and management time has been spent motivating communities to pro-actively address the threat of HIV/AIDS.

## West Coast Community HIV/AIDS Initiative

The concept of a community based initiative representative of all sectors of the community was born after the Company conducted its first HIV prevalence study during October 2000. The low prevalence of 0.59% recorded during this survey highlighted the need for a parallel approach in the Company's fight against AIDS, i.e. an external campaign supporting its internal programmes. A baseline document was developed and following consultations on the proposed initiative with both formal and informal sectors in the community, Namakwa Sands hosted a Community HIV/AIDS Conference on 7 March 2001.

Delegates in attendance included representatives from local government, state organisations, non-governmental organisations (NGO's), the local Taxi Association, the local Chamber of Commerce, school principals, representatives from the informal



settlements and the unemployed. Proposals regarding the establishment of the West Coast Community HIV/AIDS Initiative consisting of seven community consultative sub-forums, i.e. Community/Informal Sector, Social Welfare, Health, Local Government/State Departments, Employee Organisations, Employers and Youth forums, were accepted and established. The forum's Chairpersons, Vice-chairpersons and committees were also elected. The mayor of the Saldanha Bay Municipality accepted the role as patron.

The Initiative has since established and registered a section 21 Company which, as a legal entity, is able to own property and conduct its business in terms of its objectives.

The Initiative managed to secure the use of an old hostel from Propnet and the Anglo American Chairman's Fund has pledged an amount of R400 000 to purchase the building. It is the intention to use the hostel as a multi-purpose and multi-disciplinary base from which to drive the Initiative.

Since the appointment of a full-

time manager for the Initiative in September 2002, the following has been achieved:

- three support groups for HIV positive women and one for males were established;
- regular workshops on positive sexuality and gender empowerment for young adults are presented;
- the establishment of both a Men In Partnership Against AIDS and Women In Partnership Against AIDS working groups;
- a structured youth empowerment and life skills programme, and
- a comprehensive home based care project.

The Initiative is currently serving a caseload of 115 people living with HIV/AIDS and provides care and support to them and their families.

One of Namakwa Sands' objectives for 2002 was to extend the Initiative to the Lutzville/Vredendal communities. This was however only achieved during 2003 with a conference in Vredendal hosted by Namakwa Sands on 20 March 2003. A total of 103 delegates from 43

organisations attended the conference. A number of local businesses have subsequently joined.

We are proud to report that Namakwa Sands employees continue to be involved in the initiative and are often leading community projects. Peer Educators based at the Mineral Separation Plant visited the Vanrhynsdorp Prison on 25 November 2003 and presented an awareness programme to a group of 76 juveniles. It was also the initiative and drive of Namakwa Sands employees serving on the local branch of the Initiative that saw the first co-ordinated AIDS Day celebration in Vredendal.

Seven of our employees are closely involved with the Community Initiative and are serving as chairperson of the board, board members and members of the sub-forums.

### **loveLife Project**

It was as a result of demonstrable successes in the community by the Initiative and high level lobbying by the Company that the Vredendal/Lutzville and Vredenburg/Saldanha areas were approved as participating sites in the loveLife partnership between the Anglo American Chairman's Fund, NGOs, the state and employees.

loveLife will undertake its full complement of project programmes in the area. These programmes include their nationwide media campaign and are supported in the areas by:

- a National Adolescent Friendly Clinic Initiative (NAFCI);
- a helpline for adolescents called Thetha Junction as well as a helpline for parents;
- a community mobilisation programme of groundBREAKERS;



*Children at the West Coast HIV/AIDS Community Centre*



# CASE STUDY

## “Rehabilitation of Moria as a BEE venture through the cultivation of people.”

The Moria farm was originally bought to secure additional fresh water for the Namakwa Sands’ northern operations. Changes to legislation however prevent Namakwa Sands from utilising this agricultural water allocation for industrial purposes. The condition of the farm has deteriorated due to the vineyards nearing the end of their productive life and, during the early years, the farm was leased to various cash crop farmers on short term lease agreements.

The agricultural sector in South African is in the process of transformation and Namakwa Sands, as a farm owner, can contribute to job creation and development of the local, historically disadvantaged community through the restoration of the farm.

Employees who participated in the 2003 Management Development Programme (MDP) seized the opportunity and presented a formal proposal for the development of Moria. This study won them the best presentation award at the graduation ceremony.

The MDP team rejected options to leave the farm in its existing condition and lease out the water quota to local farmers or sell the farm and agreed to present a proposal for the development of Moria into a sustainable Black Economic Empowerment (BEE) venture.

In order to generate initial revenue cash crops will be planted. These cash crops will include tomatoes, bean and cabbage seeds. Vineyards will be phased in over the next couple of years and different cultivars of white and red grapes will be produced.

The farm will then be developed over the next seven years during which 12ha of vineyards per annum will be established until a balance between vineyards and cash crops has been obtained in 2011.

Upon the full re-habilitation of the farm, the farm will be sustainable and produce over 1300 tonnes of grapes, 720 tonnes of factory tomatoes, 25 tonnes of bean seed and 1 tonne of cabbage seed per annum.



*Current view of Moria Farm*



Using year 2003 as a base date, nett present values (NPVs) of 6%, 8%, 10% and 15% were calculated. The IRR returned a value of 21%. In all four cases a positive NPV was calculated, which indicates that the project is financially viable.

The project does not only focus on the financial viability of the farm, as the fourth and most important product of the Moria project will be the advancement of historically disadvantaged individuals from the



*The original Moria farmhouse*

Lutzville/Koekenaap area. The Moria Trust will be established to enhance the interests of all stakeholders and will be contributing significantly towards the Namakwa Sands social plan. The project is committed to the principles of sustainable development by striking an optimal balance between economic, environmental and social development. The project will be handed over to BEE individuals that have developed into productive farmers and shareholders within the next 10-12 years.

The experience of Moria could well serve as a blueprint for returning mined out land to agriculture at mine closure.

- loveLife franchise, and
- loveLife sport games.

The full programme roll-out is scheduled for 2004.

### Small Business Development

Namakwa Sands is one of the founder members of the West Coast Business Development Centre. The main objective of the Centre is to provide a service, training and assistance to small, medium and micro businesses and to link such businesses with opportunities created by corporations in the area. The performance contracts of managers at Namakwa Sands

## Stakeholder Engagement

hold the creation of BEE business as a performance criterion and extending the existing levels of BEE engagement is actively encouraged.

### SUPPLIERS

Namakwa Sands values suppliers as an integral part of our business and recognises their input as essential. It is therefore deemed important that their performance is measured and that they are given feedback.

Supplier performances are evaluated on the basis of their quality of supply, competitiveness, delivery, after sales service, savings initiated by the supplier and supply innovation.

This was the third year that Namakwa Sands rewarded top suppliers for their supply excellence. A Supplier of the Year Award function was held on 10 October 2003 to recognise the five top suppliers for 2003. received the award as top supplier.

At this ceremony suppliers were thanked for their support of the Good Citizenship Business Principles campaign launched during 2002 and asked for their support in improving supply chain functions within Anglo American operations.

### Suppliers Golf Day

The annual Namakwa Sands



*Pictured at the Supplier of the Year Award function are: Neil Deverill (Anglo American), Brian Beamish (Anglo American), Petrus Rossouw (Katdoringvlei Rehabilitasie), Paul Henry, (Namakwa Sands), John Hoeben (NEFCO Industrial Supplies), Reggie Maran (Universal Steel) Gert Brits (Unitrans Freight) and Hennie Smit, (Namakwa Sands).*



suppliers' golf day has become a highlight on the Vredendal/Lutzville sporting calendar. Proceeds from this event are donated to schools attended by children of our employees alternating on an annual basis between schools in Vredendal and Lutzville.

In 2002 an amount of R94 000 was divided between the Uitkyk Primary and Lutzville High and Primary schools. A full field of 108 golfers turned out for the 2003 Suppliers Golf Day on 29 November and this year it was the turn of Vredendal North Secondary and Primary and

the Company's social engagement policy.

#### GOVERNMENT AND STATE DEPARTMENTS

Part of the Namakwa Sands' Mission Statement and commitments is the undertaking to operate within the legislative framework as promulgated by the State and associated departments. Notable achievements of meeting legislative requirements include the following:

- Namakwa Sands has since its inception achieved a 100% success rate in terms of individual dismissal disputes litigation;



*"This programme has given me a wonderful opportunity to broaden my horizon in the business world and gain first hand experience after leaving school".*

*Wilbur Engelbrecht  
(Participant in the School Leavers Project 2003)*

#### NON-GOVERNMENTAL ORGANISATIONS

Namakwa Sands frequently interacts with non-governmental organisations that are considered to be interested and affected



*Enjoying the supplier's golf day*

Vredendal High and Primary schools to benefit when more than R100 000 was handed over. This initiative by the Company best demonstrates how business, through the involvement of its supplier relationship, and with the necessary stakeholder involvement, can advance the interests of a community.

Namakwa Sands pays tribute to all its suppliers who, through events like this, demonstrate a commitment to and support of

- full approval of the EMPR as well as subsequent amendments
- submission of the Employment Equity plan and subsequent reports on time; and
- submission of the Skills Development plan and reports on time and receiving maximum grants back from the fund for complying with requirements.

parties. These include the West Coast Association for the Disabled, SANTA, West Coast Business Development Centre and bodies representing local business and tourism amongst others.

#### BUSINESS PRINCIPLES - MANAGEMENT OBJECTIVES AND ACCOUNTABILITIES

Namakwa Sands has made significant progress with committing the entire organisation, business partners,

## Stakeholder Engagement

contractors and suppliers to the objectives and accountabilities contained in the publication Anglo American Good Citizenship: Our Business principles. These principles and the associated values and standards were again reinforced with the briefing of all employees on the *speakup* programme.

### Disclosure of Information

Namakwa Sands has formulated and communicated its policy on the protected disclosure of information. While an emphasis is placed on internal procedures and the reporting of irregularities or unlawful business practices to

management, employees are free to utilise the reporting mechanisms put in place by Anglo American for anonymous reporting. Each employee has also been issued with a card detailing the principles contained in the policy and the contact details of the internal callfree number and the Anglo *speakup* programme.

The details have also been communicated to suppliers and published in the local newspapers to afford business contacts and the community at large the opportunity to disclose information.

These details are:

Namakwa Sands Freecall  
0800 203 896.

Anglo American  
Freecall: 0800 203 572

e-mail:

anglocorporate@anglospeakup.com

Freefax :0800 00 77 88

Freepost:speakup,

Freepost DN 298,  
Umhlanga Rocks  
4320

Republic of South Africa

Web: [www.anglospeakup.com](http://www.anglospeakup.com)

### SOCIO-ECONOMIC FOOTPRINT ON LOCAL COMMUNITIES

The establishment of the Namakwa Sands operations on the West Coast of South Africa is well recognised as a major contribution to the economy of the area.

### Investment

The value of Anglo American plc's original investment in the area was R2,1 billion. Part of the investment included the construction of some 545 houses and the development of associated infra-structure and services to the value of R92 million. Houses were built in the following areas:

### Namakwa Sands speakup 0800 203 896

- Vredendal - 95
- Lutzville - 216
- Saldanha - 18
- Vredenburg - 216

### Annual spend on services and salaries

The following amounts were paid during 2003.

- R3.2 million paid for rates, taxes and services to local authorities.
- R92.6 million paid for industrial water use and electricity.
- R80 million paid in salaries to an average of 998 employees.
- R1.6 million levies paid to Regional Services Council (RSC).

### Local Business Spend, Outsourcing and BEE companies

Procurement spend with Black Economic Empowered suppliers amounted to < R 76 million for 2003. Our number of active BEE suppliers has increased by 155% since December 2002. Namakwa Sands strongly promotes the development of SMME suppliers in the local BEE supply market and plays an active role in supporting the West Coast Business Development Centre in developing such suppliers in the Saldanha municipal area. Intshona Manufacturers is an example of a new BEE micro supplier who secured an order for the company's total work shirt requirements for 2003.

### Education and Youth Development

Namakwa Sands remains committed to preferential local recruitment. The nature of the business will however in future require entrants to the industry



Employees of Intshona working on an order from Namakwa Sands



with high level qualifications in mathematics, science as well as the ability to communicate fluently in English.

- **English Tuition**

The lack of first language English tuition in the West Coast area remains a significant hurdle in attracting highly skilled English speaking employees. Parents are reluctant or unable to send their children to English schools with boarding facilities in Cape Town, Stellenbosch and Paarl in the early stages of their school careers.

During 2003 Namakwa Sands continued its subsidy of salaries for additional teachers at the Saldanha and Lutzville primary schools. These teachers are dedicated to maintain English tuition streams at the schools.

In the case of Saldanha Primary the Western Cape Education Department reciprocated by extending the grades taught at the school to Grade 8 in 2002 and grade 9 in 2003.

Namakwa Sands was for the first time involved in the annual Young Communicators Award. This is one of the largest public speaking events in the country and is sponsored jointly by the Sowetan newspaper and Anglo American. The main objective of this competition is the improvement of the quality of oral English communication by young people and participation is restricted to high school learners whose home language is not English. Four of five high schools in the Vredenburg region participated in the eliminating rounds.

- **Mathematics and Science**

Mathematics and Science remain a strong focal point to increase the base of potential future recruits. Namakwa Sands has been involved in improving the standard of tuition in Mathematics and Science as well as creating opportunities and stimulating interest in maths and science at the higher grade. These initiatives through the West Coast Centre for

Mathematics, Science and Computer Science and the Institute for Mathematics and Science Teaching at the University of Stellenbosch have started to pay significant dividends and serve as an example of what can be achieved.

**West Coast Centre for Mathematics, Science and Computer Science**

In 1998 a neighbouring industry (Saldanha Steel) initiated a mathematics project to increase the number of learners from disadvantaged community that could successfully complete Grade 12 mathematics at the higher grade.

Since then a major shift in nature and focus has taken place. A centre was established at Weston High School in Vredenburg that serves all the schools in the area and a trust was registered that assumed full responsibility for activities of the Centre and for fund raising. The focus was also broadened to include science and computer science.



*The finalists in the Young Communicator competition visited Namakwa Sands*

## Stakeholder Engagement

The main objective of the project is to enhance the standard of mathematics, science and computer science through computerised tuition and results recorded from the centre have demonstrated the success of this initiative.

Saldanha Steel remains a major sponsor. In the initial stages

The number of senior grade learners at Weston High School taking mathematics as a subject has doubled in the five years that the project has been running and has increased from 162 in 1998 to over 400 during 2003. The most encouraging aspect of the project is the number of learners who are continuing with maths to Grade 12 level. This number has increased from 13 in 1998 to 103 in 2003.

Namakwa Sands has also assisted the Matie Community Services unit to fund the purchase of computers for a community computer centre based at St Andrew's Primary School in Saldanha. This centre was opened on 27 November 2003. At this ceremony a total of 27 Grade 6 learners received basic competency certificates.

### **Institute for Mathematics and Science teaching (IMSTUS)**

IMSTUS functions under the auspices of the Division for Academic Development Programmes of the University of Stellenbosch. The main objective of this project is to develop and enhance the tuition skills of Mathematics and Science teachers in the area in order to ensure an improved standard of teaching in the above subjects. Namakwa Sands initially funded the trial project in the Saldanha area during 2000. The success of the project was met with such enthusiasm that Engen and the National Ports Authority joined as sponsors in the Saldanha / Vredenburg area. During 2001 Namakwa Sands requested that the IMSTUS project be extended to the Lutzville/Vredendal and surrounding West Coast areas which are situated near the Company's Northern operations. The Company has to date carried the full sponsorship for this part of the programme. It is envisaged that the wine and agriculture business in the area will join as co-sponsors in the foreseeable future. The successes achieved in enhancing the capacity of teachers in the field of Mathematics and Science are contained in an annual report and are well recognised by the Western Cape Education department.



*Learners at the Maths and Science Centre*

Namakwa Sands recommended an application for funding to the Anglo American Chairman's Fund which sponsored R100 000 of the set-up capital. During 2002 the Fund donated an additional R100 000 based on the progress being made and results achieved to date.

Namakwa Sands is a trustee member of the Centre and has also pledged an annual contribution. Several other local employers have subsequently joined the Initiative and are contributing towards the success.

Some of the other successes are:

- In 2002 pupils from Weston High obtain 4 distinctions in Mathematics higher grade and two in science higher grade - a first!
- Three learners from Weston High School received merit awards at the annual University of Cape Town Mathematics Olympiad with one of these learners receiving the Oxford Merit Award.
- a selected number of learners participated in the demanding national Harmony Gold Olympiad with two learners progressing to the second round.



IMSTUS and Namakwa Sands launched a pilot pupil and parent programme during the last quarter of 2002. The objective is to orientate pupils and parents towards the importance of maths and science in an attempt to retain more students in the subjects in the higher grades.

#### **Higher Grade Maths - Vredendal Secondary School**

Discussions between the Governing body of the Vredendal Secondary School and Namakwa Sands resulted in the parties co-sponsoring one additional position for a senior grade mathematics teacher at the school. The school serves the historically disadvantaged community of Vredendal and was struggling with the standard of tuition. This initiative coupled with the IMSTUS project mentioned above has also started to show encouraging results.

#### **General Assistance to Schools and Youth Programmes**

Namakwa Sands is the annual sponsor of Winter and Spring schools for grade 12 learners in both the Vredendal/Lutzville and the Vredenburg/Saldanha areas. The objective of these programmes is to assist the learners with preparation for their final examinations. Other donations and assistance mainly centre on merit awards at prize giving ceremonies, visits to educational institutions and fundraising projects in general.

For the second year Namakwa Sands hosted an art competition for primary schools in the area as part of its Youth Day celebrations. The objective was to promote the Company's activities through art.

#### **Technikon Experiential Students**

Namakwa Sands has since 1995 worked closely with mainly the Western Cape based technikons to afford students the opportunity to complete their experiential training with the Company.

The project has, from a recruitment perspective proven beneficial to the Company in that four students with special potential were sponsored to complete their B- tech studies and subsequently joined the Company. During 2003 nine students, four coloured females and five black males, completed their experiential training with Namakwa Sands.

Namakwa Sands' role and contribution to higher education has been recognised by the Technikon with a special recognition award.

#### **School Leavers Project**

Namakwa Sands annually affords a number of school leavers the opportunity to gain practical experience in a large business environment on a one year fixed-term contract basis. During 2001 and 2002 this practice was confined to the finance and information technology disciplines, but has been extended in 2003 to facilitate the placement of a number of school leavers in the commercial services department.

A total of 11 school leavers were engaged in 2003.

#### **Bursary Scheme**

The Company has introduced a full time bursary scheme with emphasis on local school leavers. During 2003 a total of eight students benefited from bursaries awarded by Namakwa Sands. Of



*"Thank you for the input into education at large, Thank you for creating opportunities for the youth to discover their talents. Thank you for making the school communities a part of a winning team".*

*Jenny Martin (Principal of Vredendal North Primary School)*

the eight, six students are from the designated group.

#### **Small Business Development**

The West Coast community historically comprised mainly of fishing and agricultural industries. The establishment of heavy industry had a significant impact on these communities in terms of employment opportunities, the establishment of support industries and small to medium size service type businesses.

Local small, medium and micro enterprises, especially those from previously disadvantaged communities, experienced great difficulty in successfully exploiting business opportunities that arose.

In order to address these difficulties Namakwa Sands, in partnership with industry and the local communities, became one of the founder members of the West Coast Business Development Centre in February 1998.

**West Coast Business Development Centre (WCBDC)**  
The main purpose of the WCBDC is to develop and enhance small, medium and micro enterprise growth in the West Coast Region

## Stakeholder Engagement

through the delivery of cost effective business support services. The centre has experienced significant growth and gained considerable recognition from State Departments, Non-Governmental Organisations and the private sector. The Anglo American Chairman's fund has also recognised the progress and achievements of the centre and has made contributions.

Some of the Centre's successes during the year included the following:

- A Small Scale Fisherfolk Learners Project was launched to empower small scale operators and fishers in disadvantaged communities to participate productively in the mainstream fishing industry.
- The establishment of a Tender

Advice committee between SMME and local corporate businesses as part of the Centre's business linkage programme.

- The Centre received accreditation as a service provider of the Umsobomvu Business Development Service Voucher Programme. This is a World Bank initiative aimed at enabling young entrepreneurs to purchase business support services.
- The design and acceptance of an accreditation system of SMME's that was implemented. This process will resolve most of the issues retarding corporate business in outsourcing their services to SMME's.

The Centre has also continued to provide a service to business entrepreneurs by means of the following established

programmes:

- Entrepreneurial Development;
- Conflict Management;
- First Aid;
- Time Management;
- Life Skills;
- Business Planning;
- Tender Advice;
- Business Management skills; and
- Business linkage programme.

The training resulted in the establishment of seventeen new businesses i.e. 6 construction, 8 service, and 3 retail businesses.

The business linkage programme resulted in 100 business opportunities being identified. This was forwarded to 337 SMME's and resulted in contracts to the value of R20 million.

Namakwa Sands is represented on the Board as one of the





	Education & Youth	Community Health	Small Business	Environment	Other	Total
2004	1 063	100	190	136	167	1 656
2005	1 063	100	190	136	179	1 668
2006	1 063	100	190	136	179	1 668
Total	3 191	300	570	408	525	4 994

*Table 5: Budgets for Community Spend (R1 000s)*

corporate members and has been elected to the position of Chairperson for the years 2002 and 2003.

#### **Local charities and Support organisations**

During the year Namakwa Sands has continued its support of local charities and welfare organisations by means of small donations and fund raising events.

The emphasis for support in this regard is mainly directed at care for the aged, disabled and the poor.

#### **Company spend and budgets**

The following contributions were made during 2003.

#### **Direct Monetary Contributions**

Education and Youth Development	R	853 416
Community Health	R	201 000
Small Business Development	R	45 212
Environment	R	65 000
Local charities and support organisations	R	191 000
<b>Total</b>	<b>R</b>	<b>1 355 628</b>

#### **Indirect Contribution - Employee Time**

Employees are encouraged to

get involved in the local communities. They are invited twice annually to indicate their direct involvement both during and after business hours.

A total of 5 472 hours were recorded for 2003 at an approximate cost of R329 331 for the year.

#### **Budgets**

Based on current ongoing projects as well as the new initiatives planned for 2004, the amounts indicated in Table 5 have been budgeted for community spend over the next three years.

*Handprints of Namakwa Sands personnel*



	No. of Employees	No. of Contractors	No. Fatalities	No. Lost Time Injuries	No. Medical Treatment Cases	No. First Aid cases	No. Shifts Lost	(FIR) Fatal Injury Frequency Rate	(LTIR) Lost Time Injury Frequency Rate	(LTISR) Lost Time Injury Severity Rate	(MTCR) Medical Treatment Case Rate	(FACR) First Aid Case Rate
2002	1020	428	0	4	-	277	30	0.00	0.23	14.90	-	16.19
2003	988	305	1	4	22	274	128	0.05	0.21	57.51	1.16	14.48
2004 Target	-	-	0	0	15	NA	0	0.00	0.00	0.00	0.78	-

**Table 6: Safety statistics**

\* 2002 statistics were revised to include an additional LTI as a result of an injury sustained in 2002 that necessitated an operation in 2003

	Irreversible Occupational Illness Cases	Reversible Occupational Health Cases	Noise Induced Hearing Loss cases	Fatalities as a result of Occupational Illness	Occupational illness Case Rate	Pre-placement Medicals	Periodic Medicals	Exit medicals	Audiometry testing	Lung function testing	Vision screening/testing	Biological Monitoring
2002	0	3	0	0	0.18	284	763	38	1256	998	1011	18
2003	0	2	0	0	0.11	166	871	72	1071	1037	998	23
2004 Target	0	0	0	0	0.00	All employees and contractors exposed as per risk assessments and Occupational Health programme						

**Table 7: Occupational Health statistics**

	Mine CO <sub>2</sub> Equivalent Emissions	MSP CO <sub>2</sub> equivalent emissions	Smelter CO <sub>2</sub> equivalent emissions	Mine energy used	MSP energy used	Smelter energy used	Mine water use*	MSP water use*	Smelter water use*	Land disturbed by mining (excluding infrastructure)	Land stabilised with windbreaks and vegetation
Normalised units	tonnes CO <sub>2</sub> /tonnes mined	tonnes CO <sub>2</sub> /tonnes processed	tonnes CO <sub>2</sub> /slag tapped	GJ/tonnes mined	GJ/tonnes processed	GJ/tonnes slag tapped	m <sup>3</sup> /tonnes mined	m <sup>3</sup> /tonnes processed	m <sup>3</sup> /tonnes slag tapped	ha	ha
Totals 2001	0.0072	0.1015	3.50	0.0473	0.8487	16.23	0.0844	1.0475	3.30	1 138	585
Totals 2002	0.0075	0.1090	3.48	0.0448	0.8742	14.71	0.0781	1.1932	3.55	1 302	718
Totals 2003	0.0087	0.1388	3.09	0.0487	1.1325	14.10	0.0947	1.4780	3.29	1 572	881
Target 2004	0.0086	0.1374	♦	0.0482	1.1212	♦	0.0865	1.1932	2.88	☆	☆

**Table 8: Namakwa Sands comparative environmental statistics**

\* Water use is determined by the permit limit and water resources

♦ The Smelter will investigate alternate energy sources in 2004 in order to set quantitative targets in 2005

☆ Mine rehabilitation target is for rehabilitation rate to equal mining rate



# Glossary of Terms

AA plc	Anglo American plc
Bagging	The process of placing product into bags according to customer requirements
Base Metals Division	A division of Anglo Operations Limited that is a subsidiary of AA plc
Behavioural Based Safety Programme	A formal programme targeting employee behaviour. In behaviour-based safety, effective safety management is a process that begins with human behaviour and manages systems that proactively affect safety performance
Benchmarking	A process of comparing various performance areas against other similar operations
Biodiversity	Totality of the variety of living organisms, the genetic differences among them and the communities and ecosystems in which they occur
CHD	Centre for Human Development
CO	Carbon monoxide gas
CO <sub>2</sub>	Carbon dioxide gas
CO <sub>2</sub> from processes and fossil fuels	Calculated quantity of CO <sub>2</sub> emitted from processes and from fossil fuel combustion.
DEADP	Department of Environmental Affairs, Development and Planning
DWAF	Department of Water Affairs
EAP	Employee Assistance Programme
EIA	Environmental Impact Assessment
Endemic	Species of plants or animals that are specific to a region
EMPR	Environmental Management Programme Report
FACR	First aid case rate – the number of first aid injuries per 200 000 hours worked
Fatality	The death of an employee or contractor resulting from a work-related injury
FIFR	Fatal injury frequency rate - the number of fatalities per 200 000 hours worked
Fugitive gas emissions	Emissions of gas or fume not captured by the emission collection system (e.g. Fume extraction, dust plant)
Golden Rules	A set of non-negotiable corporate safety standards
Greenhouse gas	Gases that enhance global warming, predominantly CO <sub>2</sub>
Hours worked	Total number of hours worked by employees, including overtime and training, excluding leave, sickness and other absences. It includes the total number of contractor hours worked on site during the year
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
ISO	International Standards Organisation
ISO 9001	A quality management system standard published by the International Standards Organisation.
ISO 14001	An environmental management systems standard published by the International Standards Organisation
ISO 17025	A quality management system standard specifically for laboratories aimed at ensuring sample test accuracy published by the International Standards Organisation
KAP Survey	Knowledge, attitude and practice survey
Level I Incident	Minor impact, short term effect on the physical or biological environment with no significant or long-term impairment of ecosystem function or surface / ground water resource; an inconvenience / disturbance / disruption / annoyance of short duration with no long-term effect on the community
Level II incident	Moderate impact, medium term effect on the physical or biological environment with limited impairment of ecosystem function or surface / ground water resource; an inconvenience / disturbance / disruption / annoyance of moderate duration with medium-term effect on the community
Level III incident	Significant impact, extensive or long-term effect on the physical or biological environment with extensive or long-term impairment of ecosystem function or surface / ground water resource; an inconvenience / disturbance / disruption / annoyance of long duration or with long-term effect on the community
LOM	Life of Mine
Lost Time Injury (LTI)	Any occupational lost time injury which renders the person unable to carry out his/her regular duties on the next day, and which results in one or more days away from work
LTIFR	Lost-time injury frequency rate - the number of lost-time injuries hours worked

# Glossary of Terms

Magnetic concentrate	Heavy mineral concentration comprising mainly ilmenite
Meerkat Process	Name given to the Namakwa Sands behavioural safety process. “Meerkat” standing for “Making the Effective Elimination of at Risk behaviour a Key Attitude Together”
MSP	Mineral Separation Plant
MTC	Medical treatment case – an injury requiring more than basic first aid
MTCR	Medical treatment case rate – the number of medical treatment cases per 200 000 hours worked
NIHL	Noise Induced Hearing Loss
NNR	National Nuclear Regulator
Non-magnetic concentrate	Heavy mineral concentration comprising mainly zircon and rutile
NOSA	The international NOSA integrated 5-star system provides an auditing and certification service in occupational health and safety risk management. Star ratings, awarded according to an operation's level of compliance with NOSA standards, range from 1 (fair) to 5 (excellent)
Northern Operations	The Company's operations comprising of the Mine and Mineral Separation Plant situated at Brand-se-Baai and Koekenaap respectively
NOSCAR	NOSA's 'Oscar', or top award, judged annually from the ranks of the best performers in industry and mining. These awards are made to NOSA graded companies with excellent occupational SHE standards that have achieved and maintained at least 95% compliance to the NOSA 5-star system objectives
NS	Namakwa Sands
Occupational Disease	A disease or illness arising out of and in the course of an employee's employment
Occupational Health	The promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations
Occupational Hygiene	Technical preventative measures that must be applied in the workplace in order to safeguard it
OHSAS 18001	Occupational Health and Safety Assessment Series (specifications for occupational health and safety management systems)
Opacifier	Reduces transmission of light
OTTO	Anglo American's safety management is founded on OTTO - “zero tolerance, target zero” - an approach to safety that requires an absolute adherence to standards at all times and an intolerance of unsafe acts or conditions.
Particulate emissions	Solids suspended in a medium
PCP	Primary Concentration Plant
Pig Iron	A by-product of the ilmenite smelting process
Ramsar (Iran, 1971)	The Convention on Wetlands (known popularly as the Ramsar Convention) provides the framework for national action and international co-operation for the conservation and wise use of wetlands and their resources. The convention covers all aspects of wetland conservation and wise use, recognising wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities
Rutile	Natural titanium dioxide mineral
SANAS	The South African accreditation body that accredits all certification bodies (example: SABS) and accredits tests methods
SCP	Secondary Concentration Plant
SHE	Safety, Health and Environment
SHEQ	Safety, Health, Environment, Quality
Stakeholders	Employees, contractors and other parties who have a material interest in Namakwa Sands
Tailings and tailings dam	The fine fraction of waste rock remaining after the mining and on-site processing of mineral resources. This consists of finely ground particles and traces of process reagents and chemical residues. Tailings are piped into engineered impoundments known as tailings dams, which are developed, operated, monitored and maintained to prevent seepage and water contamination both during and after mining operations
TiO <sub>2</sub>	Titanium dioxide slag – one of the products produced when ilmenite is smelted
Tonnes mined	Total tonnes of ore and waste/overburden mined
Total energy used	Calculated from electricity purchased and fossil fuels consumed
Visible, Felt Leadership (VFL)	An initiative to ensure increased management visibility in workplaces aimed at the proactive identification and rectification of unsafe acts and conditions



Thank you for your valued feedback.

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**Please give us your views on the Namakwa Footprint 2003 report**

Format: \_\_\_\_\_

Content: \_\_\_\_\_

Level of detail: ☐ Insufficient detail ☐ Too much detail

Other comments \_\_\_\_\_

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Name: \_\_\_\_\_

Organisation: \_\_\_\_\_

Address: \_\_\_\_\_

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Thank you for your valued feedback.

NAMAKWA  
SANDS 

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Thank you for your valued feedback.

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