



**MATERIAL
ISSUE 4:
DELIVERING A
SUSTAINABLE
FUTURE**

HEALTH

With respect to workplace exposures, Kumba's primary occupational health risks remain noise and dust. In 2013 our operations embarked on a number of initiatives to address these exposures, ranging from engineering to administrative interventions.

The 2013 health improvement plans identified four focus areas:

- Noise and dust exposure reduction
- Fatigue management
- Wellness
- Diseases management

Our approach to noise and dust exposure reduction is to:

- Inspect and, if necessary, reject equipment before using it
- Reduce emissions at source
- Ensure new equipment is 'quiet' and generates minimal dust through our procurement criteria
- Schedule preventative maintenance of moving and fixed equipment
- Engage with contractors on noise and dust control measures
- Ensure the reporting of environmental incidents specifically related to noise and dust at our sites

Each operation assessed the integrity and effectiveness of door seals and air conditioners on drills and surface mobile equipment, especially during processes such as loading, hauling and dumping.

Kolomela mine installed dust-extraction systems at the scalping screen and secondary crusher. In addition, the site initiated investigations on dust-suppression methods at the buffer stockpile. Sishen mine, on the other hand, continued with the installation of the fogger system started in 2012 at the tertiary and quaternary crushers. Dust-extraction systems were also installed on contractor owned and operated drill rigs.

Noise-induced hearing loss (NIHL)

	New cases of NIHL identified		Cases of NIHL submitted for compensation	
	Men	Women	Men	Women
Sishen mine	6	–	6	–
Kolomela mine	1	–	1	–
Thabazimbi mine	–	–	–	–
Group	7	–	7	–

NIHL performance

	2013	2012	2011	2010
NIHL cases identified	7	3	17	1

Other activities that continued to be prioritised in 2013 include watering of roads; roll-out of noise and dust training material; demarcation of noise and dust zones; placing stickers with sound pressure levels on noisy equipment; and issuing of customised hearing protection.

Recent research has indicated that the concentration of machine operators subject to whole-body vibration is an emerging health risk, and a number of complaints have been recorded at Sishen mine. As a result, during 2013, a focus in our occupational-health initiatives has been on reducing this effect on our mobile machinery operators.

HEALTH PERFORMANCE

In 2013 we received three Section 55 notices relating to health, hygiene and medical surveillance from the DMR; one at Sishen mine, and two at Thabazimbi mine. Corrective actions are being addressed through the implementation of the HealthSource database tool, which integrates hygiene monitoring and medical surveillance.

Noise

In 2013 Kumba continued to focus on noise exposure reduction. For example, in certain areas extraction fans were replaced with spraying systems. New pumps and grinders were also installed. Sishen mine tested the use of new material for the gouging process and also introduced a valve to regulate pressure. After these installations, occupational hygiene exposure surveys measured a noise reduction from 116dB(A) to 101dB(A) around gouging activities.

There are no employees exposed to personal noise levels above 110dB(A). The number and magnitude of exposure is expected to decrease further during 2014.

In 2013 Sishen mine identified six new cases of noise-induced hearing loss (NIHL), while Kolomela mine reported one. All cases have been investigated and corrective action implemented as appropriate. Measures are in place to ensure that critical controls are effectively implemented and monitored. These cases were all submitted for compensation.

ENSURING THE SAFETY, HEALTH AND WELL-BEING OF OUR EMPLOYEES AND COMMUNITIES CONTINUED

All our mines supply customised hearing protection devices (HPDs) where required.

By year-end our programme of labelling all noisy equipment was nearing completion. Unlike fixed equipment such as crushers, for which zoning the area is adequate, mobile equipment is repaired at workshops. Labelling helps by warning mobile machine operators, or those in close proximity to it, that they may be exposed to excessive noise levels and may therefore be required to use HPDs. At Kolomela mine, a plant-noise survey for noise-zoning purposes was underway at the end of 2013 using noise-area monitoring results equal to and above 85dB(A) as a base. Noise zoning was completed at Thabazimbi mine during the year, but is work in progress at Sishen mine where it is influenced by revisions in baseline and issue-based monitoring.

Dust

Although dust is one of our primary health risks, silicosis is not a health risk factor at Kumba's operational sites, with no history of reported cases. This does not, however, detract from our strategies for controlling dust, medical surveillance for silicosis and implementation roll-out.

Results from continual monitoring during 2013 indicated significant reductions in dust levels in the sample homogenous exposure groups.

Additional preventative measures were installed by the end of 2013.

Fatigue management

Fatigue impairs the effective execution of physical and/or mental activities. The inherent risks associated with mining, such as the use of surface mobile equipment and shift work, escalate the risk of serious injury and equipment damage. To minimise safety incidents related to transportation, Kumba focuses on collision avoidance, separation of pedestrians from vehicles and fatigue management.

Kumba follows a programmatic approach to the management of fatigue which covers risk-assessment, controls, education and training, monitoring and evaluation, and continual improvement. To implement a successful programme requires a multi-disciplinary team and approach, as well as individual ownership on the part of every employee. In 2013 Kumba's operations continued to implement interventions aimed at enhancing fatigue management and site-specific plans focused on people, systems and technology.

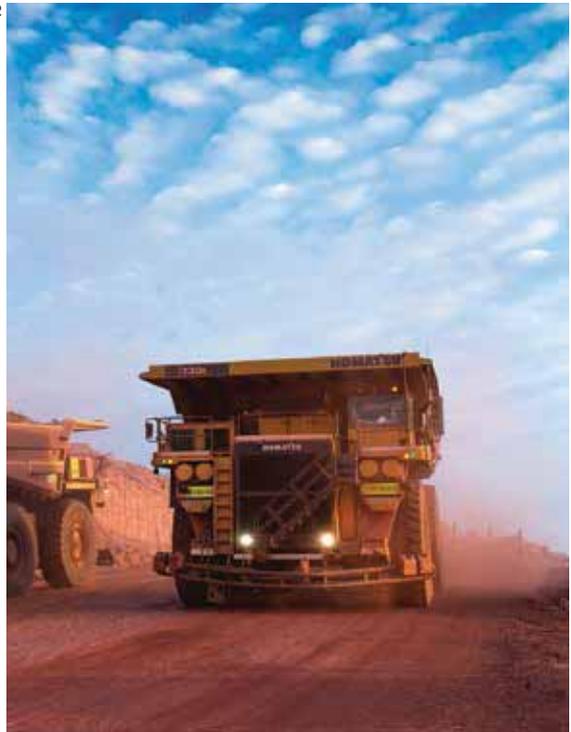
01 Mining is conducted in shifts round the clock. The fatigue centre at Kolomela mine has a canteen, games room, and medical centre allowing employees respite from their taxing routine.

02 Load and haul operations underway at the western ramp area of the Leeuwfontein pit at Kolomela mine.

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Kolomela mine is one of the leading mines when it comes to fatigue management and has been nominated by the Northern Cape Tripartite Health and Safety Committee to lead its fatigue management workstream. Being a relatively new operation, the Kolomela team started introducing fatigue-related interventions as early as 2009. The interventions included:

- **People:** This portion focuses on training, housing, nutrition and hydration, and workplace infrastructure. The training covers awareness, lifestyle planning, sleep hygiene, nutrition, and tips on managing fatigue. The operation started with the training of shift workers and the introduction of bio-rosters and lifestyle planners. This initiative was then extended to office workers and contractors, and subsequently to family members. The family education programme rolled out to schools was identified as best practice within Anglo American plc and won the Gold Quill International Communications Award. In 2013 Kolomela mine completed the construction of its fatigue centre which is located inside the mine. The fatigue centre has been designed to offer appropriate facilities for fatigue breaks.
- **Systems:** The systems portion focuses on the development of policies, processes and procedures. Key activities include conducting risk assessments, developing a fatigue-management plan, designing shift rosters, and conducting formal and informal audits.
- **Technology:** The technology portion focuses on the implementation of the predictive risk intelligent safety module (PRISM) and an advisory system for tired drivers. PRISM monitors and identifies individuals' fatigue-risk at clock-in and predicts fatigue risk for the shift. 2013 enhancements focused on training the trainers and supervisors; adding PRISM to the induction process; developing procedures; and addressing computer network connectivity issues. A PRISM benefit-realisation survey was conducted in the second half of 2013. The report concluded that the implementation of PRISM resulted in a 28% reduction in the high-fatigue risk hours worked by members of the engineering team.

In 2013 the Anglo American safety and sustainable development risk and assurance function conducted fatigue-management audits at Sishen and Kolomela mines. The audit protocol covered policy; leadership and commitment; risk assessment; education and training; controls; monitoring and evaluation; and reporting and

record keeping. The auditors confirmed that the sites have assessed the risk and continue to regard fatigue as a significant risk and have introduced technology, training and education, and other measures to mitigate its impact. Areas for improvement included the need for better interaction with the HR department and monitoring the effectiveness of controls.

Health objectives 2014

Our focus in 2014 will be on cementing the achievements we have made to date, specifically in the following areas:

- Exposure reduction – focusing on further reducing employees' and visitors' exposure to noise and dust, including silica
- Wellness and disease management – focusing on increasing employee participation and behaviour change through prevention initiatives (such as increased involvement of peer educators, and partnerships with government and other stakeholders), and improved access to continuity of care
- Fatigue management – focusing on the implementation of site-specific risk-based and integrated fatigue-implementation plans
- Musculo-skeletal conditions – focusing on improving the prevention, assessment and management of back and neck injuries.

HIV/AIDS AND TB

HIV/AIDS and TB are the main public health challenges in South Africa. Reports on the burden of diseases are also pointing to a rise in lifestyle diseases. Kumba is noticing the same trend among its employees and contractors. The focus on health promotion, health-risk screening, and treatment and care remains a priority for Kumba and the company will continue to pursue innovative ways of improving participation in prevention, treatment and care, and support programmes.

With respect to health awareness and education, the communication messages at our operations focused on the same messages promoted by the Department of Health (DoH). For example, for World AIDS Day our theme was: 'Get wise. Get tested. Get circumcised.' In order to encourage dialogue, our operations also invited people living with HIV/AIDS to tell compelling stories about how they are living positively with the disease.

ENSURING THE SAFETY, HEALTH AND WELL-BEING OF OUR EMPLOYEES AND COMMUNITIES CONTINUED

The National Strategic Plan on HIV/AIDS advocates that all South Africans should be tested for HIV at least once a year. HCT forms part of prevention and is the entry point to care, treatment and support. Consequently, our workplace programmes continue to prioritise HCT and access to counselling and testing is facilitated via wellness campaigns, occupational health surveillance services, and primary care services.

By the end of 2013, a total of 6,966 employees (86% of the workforce) and 8,413 contractors had participated in our HCT programme. During 2013, 93% of Sishen mine's workforce participated in the HCT service, 76% of Thabazimbi's and 64% of Kolomela's. Overall, HIV testing disclosed 139 new cases among our employees, taking the total number of employees known to be living with the disease to 557 (7% of our workforce). Among contractors, 435 new cases of HIV were diagnosed.

At the end of 2013, 478 employees (2012: 432) were enrolled in our HIV/AIDS disease management programme, with 127 receiving anti-retroviral treatment (ART) (2012: 177). Employee enrolment in our disease management programme and numbers registered for ART throughout 2013 are a tribute to the awareness campaigns carried out at all our sites.

It should be noted that these numbers exclude employees who access ART and HIV/AIDS disease management assistance through their private medical aid providers.

A total of 360 contractors were enrolled on the company's HIV/AIDS disease management programme at the end of 2013, of whom 255 were on ART.

Treatment for Sishen mine employees, contractors and the surrounding community living with HIV/AIDS is provided at the Ulysses Gogi Modise (UGM) clinic in Kathu. UGM is a collaborative initiative with Kumba paying the running costs, and providing staff and maintenance; the DoH providing ART medication and medical consumables; and the local municipality providing land, water, electricity and services.

Given the close relationship between HIV/AIDS and TB, we integrated the management of TB into our HIV/AIDS programme and provided the equipment and funding needed by UGM to manage its new responsibilities. Insofar as TB is concerned, we have been challenged by employees' reluctance to participate in TB testing and treatment. There were 27 new cases of non-work related TB recorded in 2013, 25 pulmonary and two non-pulmonary.

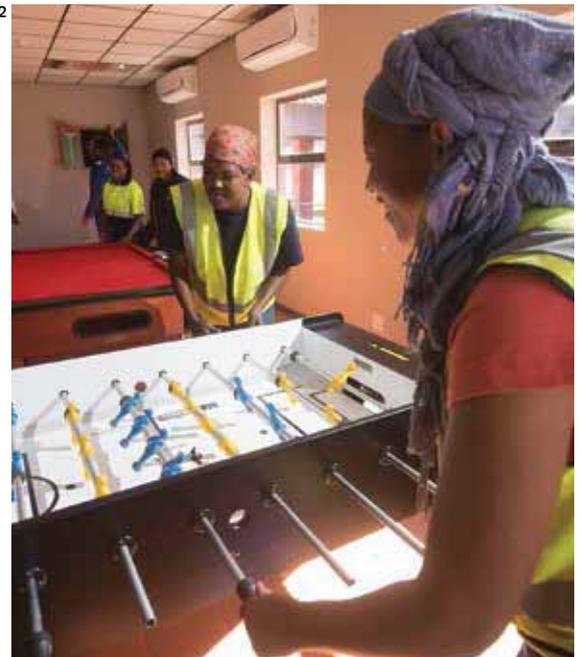
Lifestyle conditions managed at our site and local clinics during 2013 included diabetes, obesity, hypertension, fatigue, and stress (work and non-work related).

Drugs and alcohol

Alcohol screening at Kumba sites continued in 2013. All employees involved in serious incidents undergo drug and alcohol testing. Our contractor companies have similar alcohol and drug abuse policies. No entry is allowed to any individual testing positive for alcohol and, in the case of employees and contractors, disciplinary action is taken. Drug and alcohol rehabilitation and counselling opportunities are available for all employees.

01 The fatigue centre at Kolomela mine has a fully equipped medical centre to care for employees' needs.

02 Shift workers taking a break at the fatigue centre at the Kolomela mine.



HIV/AIDS performance in 2013

	Estimated HIV prevalence %	Number of AIDS-related deaths	Number of HCT participants	HCT as % of workforce	Number of employees on disease management programme	% of HIV+ employees on disease management programme	Number of employees on ART	% of disease management programme participants on ART
Sishen mine	7	–	5,311	93	363	99	113	31
Kolomela mine	5	–	729	64	43	74	–	–
Thabazimbi mine	16	–	622	77	66	52	12	18
Group*	7	–	6,966	86	478	86	127	26

* Includes employees from exploration, the corporate office, Saldanha Bay and other small sites.

Healthcare in 2013

	2013	2012	2011	2010	2009
HCT	6,966	6,546	6,856	5,570	5,258
ART	127	177	178	148	260
Disease management programme	478	432	273	371	442

Outcomes of drug and alcohol testing in 2013

	Number of warnings	Number of dismissals
Sishen mine	42	3
Kolomela mine	4	–
Thabazimbi mine	20	–
Group	66	3

Group occupational health performance

	2013		2012	2011
	Men	Women		
New cases of NIHL identified	7	–	3	17
New cases of occupational lung disease identified	–	–	3	2
New cases of TB identified	27	–	19	16

ENSURING THE SAFETY, HEALTH AND WELL-BEING OF OUR EMPLOYEES AND COMMUNITIES CONTINUED

'ALL IN IT TOGETHER' AT KOLOMELA



Trainee operators Nattie Groenewald, left, and Florencia Bekend, seated, being trained to operate a drill rig at Kolomela mine, with senior instructor Enos Dladla looking on.

With a simple shift in the group's approach to safety through the 'all in it together' mindset, the Kolomela mine team accomplished the remarkable achievement of nine-million injury-free hours and 31.4 million fatality-free shifts at Kolomela – and cut costs at the same time.

Driving the safety message home at Kolomela mine involves more than just posters, hard hats and reflective vests. Role models are seen living the safety ethos instead of just policing employees.

Each member of the safety team and line management jumps in to lend a hand anywhere and everywhere on site instead of confining themselves to their assigned responsibilities – and they spread the safety message to employees and contractors through the example of their actions.

"This approach has changed the safety mindset on the mine," says Aart van den Brink, Kolomela mine's general manager. "It is no longer an onerous obligation but a collaborative effort that gets everyone home safely every day."

Among the positive spin-offs, people working at Kolomela mine now have a better understanding of the effects their actions in one area of the mine can have on all its other areas. This 'all in it together' approach has opened channels of communication from the lowest levels of the workforce right up to management. Aart confirms: "It is critical to the success of our safety team."

Kolomela mine has thus taken the VFL strategy further than the training workshops and presentations, which affirms management's commitment to safety.

"If success is measured by the people you inspire, then Kolomela mine has a safety team of winners," says Aart. "Our safety record and dedication have influenced a number of employees to complete safety training courses, and to go on to work as safety officers at other operations."

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BEN LUBBE – SAFETY ABOVE ALL



The team of operators and engineers responsible for the new UHDMS pilot plan at Sishen mine. Construction of the plant was completed in 2013.

The criteria for recognition in the safety category of Anglo American plc global Applaud Awards are clear: the award recognises outstanding achievements in improving safety processes, performance and culture.

Ben Lubbe, head of Sishen mine's lifting machinery inspection (LMI) workshop, was a worthy recipient of a gold award at Kumba's 2013 Laurel Awards. He is a safety role model who clearly displays real enthusiasm for this most important aspect of the mine's operations, and he has made a measurable difference to improving safety at the mine.

Lifting tackle (including slings, shackles and eye bolts) and lifting machines (mobile cranes, forklifts, overhead cranes and lever hoists) are combined in different ways to carry out specialised load-lifting tasks at the mine. The manner in which these pieces of equipment are used must adhere to numerous South African National Standards and ISO standards governing lifting operations.

When the law governing lifting machinery changed in 2005, the new legislation set limits on the useful life of lifting equipment. This had potential cost implications for the mine and could have led to lost production time when equipment was removed from the operation. Initially Sishen mine appointed contractors to perform the load tests on all machinery and inspectors had to examine the installation and all working parts of each lifting machine each time a machine was dismantled and re-erected. Thereafter, examinations were mandatory every three to six months to ensure safe operation of the equipment.

At Ben's suggestion, it was decided to do this testing and maintenance in-house as the contractors were extremely costly and not readily available. The LMI workshop, a first for Kumba and for Anglo American plc, was introduced in 2012 as a new section headed by Ben, who implemented and guided the change. The LMI team, under his leadership, also devised a work instruction and lifting standard for the entire mine. Not only does Ben's hard work and dedication ensure that Sishen mine employees have the peace of mind of knowing their equipment has been through a stringent safety inspection, but the LMI team has increased their knowledge-base of the machinery, thereby lifting standards and safety at the mine even further. What's more, the on-site testing and repairing performed in the LMI workshop is reducing lost production time resulting in annual cost savings in excess of R6 million.

Ben can be justly proud of his and his team's achievements as the guidelines and standards devised by the LMI team are used not only at Sishen mine but also by all suppliers to the mine. Ben's safety programme has also been implemented at Kolomela mine and at mining operations outside the Anglo American Group. It will be rolled out at other Anglo American Group operations in 2014.

Ben Lubbe exemplifies the company's Zero Harm policy.

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