Mine Health and Safety Inspectorate

mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

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PREFACE

This document is a report by the Chief Inspector of Mines (CIOM) on health and safety at mines and the activities of the Mine Health and Safety Inspectorate, compiled as required by Section 49(1)(j) of the Mine Health and Safety Act (MHSA), 1996 (Act No. 29 of 1996), as amended.

The Mine Health and Safety Inspectorate (MHSI) established in terms of the MHSA, 1996 has the responsibility of protecting the health and safety of persons working at mines or affected by mining activities.

The CIOM also has the responsibility of leading the tripartite structures formed in terms of the MHSA as the chairperson of the Mine Health and Safety Council (MHSC) and the Mining Qualifications Authority (MQA).

The MHSC consists of representatives from the government, employee and employer organizations. The Council was established to advise the Minister on health and safety issues, and promoting a healthier and safer culture in the mining industry.

The MQA is an education and training authority for the minerals and mining sector and is responsible for the education and training needs of the mining industry. The activities of the above-mentioned two bodies are intricately interlinked with that of the MHSI and their reports are captured in their respective annual reports.

2. GENERAL INFORMATION

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2.1 Submission of the Annual Report to the Executing Authority

The Honourable Susan Shabangu, MP
Minister: Department of Mineral Resources
Republic of South Africa

Dear Minister

I am pleased to present to you the annual report of the Mine Health and Safety Inspectorate for the 2011-2012 reporting period. This report is in accordance with the requirements of Section 49(1) (j) of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996).

Yours sincerely

D Msiza
Chief Inspector of Mines
Mine Health and Safety Inspectorate

2.2 Mission Statement

The MHSI strives to promoting a safe and healthy mining industry. This is to be achieved by reducing mining related deaths, injuries and ill health through the formulation of national policy and legislation, the provision of advice, and the application of systems that monitor and enforce compliance with the law in the mining sector.

2.3 Legislative Mandate

The Mine Health and Safety Inspectorate was established in terms of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996), as amended, for the purpose of executing the statutory mandate of the DMR to safeguard the health and safety of mining employees and communities affected by mining operations.

2.4 Executive Summary: Chief Inspector of Mines

It is with great honour and pleasure that I present this report on the state of health and safety in the South African mining industry and the activities of the MHSI for the 2011/12 financial year.

Staffing

Gender	African	White	Asian	Coloured	Total
Male	104	58	0	0	162
Female	71	15	0	3	89

The establishment of the Inspectorate provides for 398 posts of which 304 are funded. Of these posts 251 are filled and 147 are vacant. The demographics of the Inspectorate as on 31 March 2012 was as follows:

Human Resource Development

During the reporting period the inspectorate continued to develop the skill and knowledge base of its staff as follows: One hundred and seven officials attended WITS training on the following modules

Inspections, audits and investigation methods;
Mine Health and Safety Act Legal enforcement Part 1;
Mine Health and Safety Act Legal enforcement Part 2; and
Principals of Occupational Health and hygiene Part 1.
The training will continue during the next financial year, with

the training set-out for the rest of the year.
Eight staff members attended WITS Executive Development Program.
Seventeen staff members attended other administrative and technical courses.

A total of 19 Engineering Assistant Inspectors were placed in various Regional offices of the Department as from 01 August 2010. This was after completion of their practical underground training in preparation for acceptance as candidates for the Government Certificate of Competency (GCC).

They were placed as follows:

- Free State – 4
- Gauteng – 5
- Mpumalanga - 4
- Northern Cape - 2
- North West (Klerksdorp) – 2
- North West (Rustenburg) – 2

A total of four Assistant Inspectors out of 19 are already in possession of their GCC. They are in the process of being permanently absorbed within the Department as part of the human resource capacity pool from which the Department may recruit.

The other fourteen are at various stages towards acquisition of GCC. Some have already been accepted as candidates to write GCC examinations. Some have already acquired one of the two required subjects to be a holder of a GCC. Some are towards the final stages in terms of acquisition of the necessary subjects for acceptance as GCC candidates and commencing with their GCC examination attempts. Only one Assistant Inspector has resigned from the Department thus far, and has been offered employment by the industry prior to acquisition the GCC.

The Department had also invested in 19 nineteen bursary holders, of which six have completed their qualifications. They are busy with their practical underground training at Goldfields Business and Leadership Academy (GFBLA) in preparation to be accepted as GCC candidates. They are at different stages of completing their training, with one scheduled to complete training in October 2012. He will then be placed within one of the Regional offices of the Department for Inspector training.

The Department expects four of the bursary holders currently studying to complete their qualifications at the end of the current academic year (2012). The other two are expected to complete their studies in 2013. The other bursary holders have breached their contracts for various reasons, including not making satisfactory progress in their studies and also being recruited by the industry on completion of their studies, which is becoming a major challenge for the Department.

Current Health and Safety Performance

Mine Safety

The safety track record in the South African mining industry continues to be a matter of great concern to the Department, although the mining industry has in the last year managed to record a year-on-year reduction in fatalities due to mine accidents. During 2011 a total of 123 mine workers were reported dead as compared to 127 in 2010, which translates to about 3% improvement on the actual numbers of mine workers who died year on year. However, when comparing fatality frequency rates per million hours worked between 2010 and 2011, there has been an 8% improvement from 0.12 to 0.11. The major gold and platinum mines are the main contributors of accidents and loss of lives.

Fall of Ground (FOG) and Transportation and Mining accidents are the largest accident categories. The concern in the area of fatalities is that there is a decrease in the total number of fall of ground accidents, but this is still the largest contributor to fatalities in the South African mining industry. The transport and mining fatalities have increased by approximately 3%, from 37% in 2010 to 38% in 2011. This area will require attention from the branch in the coming year.

Disaster-type Accidents

For the first time in five years, there has not been a mine disaster accident. A mine disaster accident is a single event that results in the death of four or more people.

HIV/AIDS and Occupational Health

The DMR, through the MHSC, commissioned a study to review the status of HIV/AIDS and TB in the mining industry. The findings thereof resulted in the commitment and development of TB and HIV Action plan with the aim of improving the situation regarding these two diseases. The Principals representing State, Employers and Organised Labour assembled at the Health and Safety Summit held in November 2011, and agreed to the commitments and action plan developed in an effort to curb the scourge of these diseases in the mines.

Health and Safety Improvement Measures

The branch will continue with the implementation of measures to enhance health and safety within the mining sector. These include enforcing the provisions of the legislation through inspections, Ministerial Group Audits and issuing compliance instructions where necessary.
In terms of Occupational health, the new Chief Directorate

will be working closely with The Mine Health and Safety Council committees to ensure that the commitments made at the summit are implemented. The commitments made at the Summit talk to the prevention of Noise-Induced Hearing Loss, Silicosis, TB and HIV as these are major diseases in the mining industry. The Directorate is also working closely with the Department of Health, which was noted during World TB Day, held on the 24th March 2012, where the focus was TB in the mining industry. The Republic Deputy President, DMR, DOH Ministers and other stakeholders gave speeches relating to TB.

Mining employees have heeded the call to test for TB and HIV in an endeavour to improve the management of these diseases, which was noted by the number of people who were tested on that day.

Key Policy Development and Legislative Changes

The Amendment of the Mine Health and Safety Act (Act 29 of 1996) (MHSA) is underway. Consultations with affected parties were held during 2011 and further consultations will continue into 2012. It is envisaged that the amendments will be adopted and approved during the 2012/13 Financial Year.

The review of the Mine Health and Safety Act seeks:

- To strengthen enforcement provisions;
- To streamline the administrative processes;
- To reinforce offences and penalties;
- To remove ambiguities in certain definitions and expressions; and
- To harmonize the Act with other laws, in particular the Mineral and Petroleum Resources Development Act, 2002 (MPRDA)

Both the Enforcement and Administrative Fine Guidelines have been reviewed, amended and approved during the 2010/2011 Financial Year to assist in strengthening the enforcement function of the Mine Health and Safety Inspectorate.

Service Delivery Achievements

The MHSI strategic plan achievements during the reporting period are outlined in Section 3 of this report. This is an account of progress achieved by the end of the reporting period against the annual targets set for achieving the DMR's strategic objectives.

D MSIZA
CHIEF INSPECTOR OF MINES

2.5 Summary of the Technical Support Services of the Mine Health and Safety Inspectorate

2.5.1 General Overview

The core business of the Chief Directorate: Technical Support is to provide specialist and technical services to the Inspectorate with particular focus on the regional components and other Head Office units. The responsibility of this unit increased during the reporting period with the incorporation of the Directorate: Support Services.

Some of the key responsibilities of the Chief Directorate are to:

- Participate in specialist investigations and inquiries within regions when required;
- Marshall / mobilise specialist skills when required;
- Provide integrated professional advice and make recommendations from incidents, accidents and legislation to other Government Departments, the mining sector and other key stakeholders;
- Liaise with national and international key stakeholders in order to identify key research areas and influence the key research agenda for research institutions and conduct literature research to maintain specialist knowledge;
- Ensure quality assurance of the performance of the Inspectorate by providing mentorship, knowledge transfer and promotion of safety to the Inspectorate;
- Ensure quality information is distributed to the mining industry in the format of guidelines for codes of practice;
- Ensure that the Mine Health and Safety Council Award Scheme is managed and attended by representatives from the unit;
- Develop technical and implementation guidance to the regional Inspectors in areas such as enforcement and administrative penalties;
- Ensure the efficacy of the examination process for the certificates of competency;
- Manage the various certificates of competency examination process;
- Identify technical training needs which exist in the MHSI and recommend appropriate action; and
- Liaise with other Government Departments and key stakeholders for the development of standards and specifications.

Achievements

The Chief Directorate: Technical Support through the Directorate: Mine Safety together with the Directorate: Policy has managed to develop the auditing tools for the Ministerial Audits. These audit tools were introduced to all regional offices and are at present in use. The detailed reporting will assist in

raising the level of compliance of the mines.

With the increase of problems in the mining industry with regard to mine stoppages, the Section 54 and 55 instruction documents were revised. Workshops were held in the regions to instruct the inspectors in the correct manner of handling these instructions. This was carried out to ensure that these instructions were handled similarly in all regions.

The examination team has further addressed methods in streamlining the manner in which the acceptance of candidates is carried out. These changes ensure that an improved system of handling the candidates' applications for acceptance, acceptance to write and the examination process for those examinations for which the unit is responsible.

The team is also spearheading a monthly fatality report with the intention of updating the MHSI and the industry stakeholders on fatalities in the mines.

Challenges

The Chief Directorate: Technical Support, in conjunction with the internal Legal Support unit, are liaising with the National Prosecuting Authority to ensure successful prosecution where necessary.

Inspectors are currently attending training on investigations and inquiries to improve handling of investigations and inquiries; and hence to produce good quality reports.

Strategy to Improve Status Quo

There will be continued visibility and communication with the regions and all industry stakeholders to improve relations and the promotion of legislation.

2.5.2 Activities of the Directorate: Mine Safety

The Directorate has been involved in the following activities during the reporting period:

- Completed the Enforcement Guideline, and conducted workshops the content of the document in the regions;
- Revised the section 54 and 55 instruction document layout and developed a guideline for its use;
- Developed a guideline document for the issuing of an administrative penalty system;
- Develop a monthly Occupational Health and Safety report that includes the fatalities, occupationl diseases and evaluates the 54 instructions that were issued;
- Prepared various statistics and presentations for health and safety meetings;
- Developed various Ministerial audit forms and work-shopped the requirements at the regional offices.

2.5.3 Activities of the Directorate: Mine Surveying

The main functions of this Directorate is the continuous monitoring of mine surveying standards and practices in order to promote a culture of safety and health on the mines, the safe utilisation of undermined land for development purposes, the safe and optimal exploitation of mineral resources as well as the rendering of mapping and draughting services. Additionally, the identification of hazards and risk control together with the training of new personnel are imperative functions.

2.5.3.1 Surveying Matters

The Directorate is rendering a continued service to the Regional offices, in particular with regard to the maintenance of surveying and mapping standards and the monitoring of compliance by mines with the relevant Health and Safety regulations in order to ensure a safe mining environment and the protection of surface structures and underground workings. The Auditing of the departmental copies of mine plans in all regions is an ongoing function.

Underground inspections and check measurements in restricted mining areas, where underground and surface structures are to be protected, were also given priority.

The following table shows a comparison of tasks completed during the year:

ACTIVITIES	2010/2011 Actual	2011/2012 Planned	2011/2012 Actual
Mine survey audits (underground and surface mines)	575	517	558
Underground inspections (control measurements)	223	211	231
Surface utilisation files received and completed • Carried over from previous year • Received during the year • Completed during the year • Carried over to next year	 22 433 427 6		 6 498 498 0
Miscellaneous tasks (Examinations, projects, etc.)	280		492
Permissions and Exemptions	148		192

permissions as well as surface utilisation applications, including:

- applications for undermining of surface structures; and
- land-use applications (township establishments, roads, railways and other rights affected by past, present and future mining operations).

2.5.3.2 Special Surveys

The Directorate: Mine Surveying is constantly involved in practical surveying projects, mostly to assist with any mining boundary disputes as well as verifying the accuracy of survey data submitted by candidates undertaking the trial survey, which is part of the Mine Surveyors Certificate of Competency examination.

The verification surveys of rehabilitation earthworks, carried out by contractors who are paid out of State funds, are normally conducted from time to time on a spot check basis.

To date no verification surveying requests were received by this Directorate during the reporting period. These are all reflected under the item Miscellaneous Tasks.

2.5.3.3 Mapping Services

Management of Mine Survey Data

The Sub-directorate: Mapping and GIS, strive to maintain and promote a sustainable data management of the country's defunct and current mines, prescribed mine plans, maps and related spatial survey data for the lasting benefit of the nation, future land use applications and ensuing possibilities of new mining activities which include indexing and storage of recently closed and current mine plans as an ongoing process.

Scanning of Defunct Mine Plans

Several mine plans have been scanned, including the cadastral maps showing the under-mined areas. A project plan will be developed to monitor different phases along the data capturing and other procurement processes involved.

Technical Draughting

An ongoing mapping and technical draughting service of the sub-directorate includes modern Survey, Mapping and Geographic Information Systems (GIS) technology, which places great emphasis on survey data linkages, database management, spatial queries, data manipulation, specialised analysis and large format scanning and printing. The sub-directorate has, in recent years, accomplished technological advancements in Mapping and GIS software (Arc view) and related equipment in producing the following maps and/or plans:

- Processing of mine dump models, volumetric calculations for earthworks, rehabilitation of the closed mines.
- Updating of under-mined areas on topo-cadastral maps, which will later be integrated on NMPS.

2.5.4 Activities of the Directorate: Support Services

2.5.4.1 Administration

Staffing of SSU

The establishment of the Support Services Sub-directorate provides for 23 posts of which 21 are currently filled and two are vacant. The demographics of the staff as on 31 March 2011 was as follows:

Gender	African	White	Asian	Coloured	Total
Male	8	1	0	0	9
Female	8	4	0	0	12

Administrative Fines Account

The Administrative Fines Account was established in terms of Section 55H (1) of the Mine Health and Safety Act, 1996, as amended. All money received by the Principal Inspectors must be paid into the account and the funds must, with the agreement of the Minister, be utilised for the promotion of health and safety in the mining industry.

The Administrative Fines Account, on 1 April 2011, reflected a credit balance of R 2 332 938-93. Payments totalling R 1 560 000-00 were received for fines issued by the Inspectorate during the reporting period.

Apart from the monthly banking costs, no funds were utilised during the reporting period and the account closed at the financial year-end with a credit balance of R 3 892 270-93.

2.5.4.2 Promotions

Publications

During the reporting period, four quarterly editions of the quarterly newsletter were published and distributed to internal and external stakeholders.
One Mandatory Code of Practices (COPs) has been approved and distributed to regional offices and stakeholders, namely the Guideline for the Mandatory Code of Practice for Offshore Installations.

Awareness and Promotional Activities

The Promotions Sub-directorate participates in health and safety events to promote awareness within the mining industry and communities affected by mining activities.

During the reporting period, the Sub-directorate participated in the following events:

a) International / National conferences and exhibitions (1)
b) Regional exhibitions (1)
c) Mining technical exhibitions (7)

Mine Health and Safety Council (MHSC) Award Scheme

The Promotions Sub-directorate is responsible for the administration of the MHSC Award Scheme.

In the category of *A Million Fatality-Free Shifts* a total of 28 mines achieved 1,000,000 fatality free shifts. Of these:

a) Eight mines achieved 3,000,000 or more fatality-free shifts
b) Four mines achieved 5,000,000 or more fatality-free shifts
c) Two mines achieved 7,000,000 or more fatality-free shifts
d) One mine achieved an exceptional 13,000,000 fatality-free shifts.

In the category of *A Thousand Fatality-Free Production Shifts* a total of 26 mines achieved 1,000 fatality-free production shifts. Of these:

a) Seventeen achieved 3,000 or more fatality-free production shifts
b) Eleven achieved 5,000 or more fatality-free production shifts
c) Six mines achieved 7,000 or more fatality-free production shifts
d) One mine achieved 34,000 fatality-free production shifts.

2.5.5 Activities of the Training Sub-directorate

Implemented training

During the reporting period, the MHSI developed the skills and knowledge base of its staff as follows:

A total of 107 Inspectors have attended WITS training in the following:

- Inspection, audits and investigation methods
- Mine Health and Safety Act Legal Enforcement, Part I
- Mine Health and Safety Act Legal Enforcement Part, II
- Principles of Occupational Health and Hygiene Part I

This training is being considered for implementation during the new financial year. Nine managers attended the Management Development Programme, and nine staff members attended other administrative and technical courses.

Training Interventions

Learner Inspector Programme

- A total number of 19 Learner Inspectors were busy undergoing practical training at various regional offices of the Department during the commencement of the financial year. This was in preparation of permanent appointment as Inspectors of Mines on acquisition of the Government Certificate of Competency (GCC).
- A total of four out of 19 have already attained the GCC. They have been permanently absorbed within the Department as part of the human resource capacity pool from which the Department may recruit.
- One of the Assistant Inspectors resigned during the financial year.
- The other 14 are at various stages towards acquisition of the GCC.

Bursary Scheme

- The Department had also invested in 19 bursary holders, six of whom have completed their qualifications. They are busy with their practical underground training in preparation for being accepted as GCC candidates.
- They are at different stages of completing their training; one of the bursary holders is scheduled to complete training in October 2012. He will then be placed within one of the Regional offices of the Department for Inspector training.
- The Department is also expecting four of these bursary holders who are currently studying to complete their qualifications at the end of this academic year (2012).
- The other two are expected to complete their studies in 2013.
- The other bursary holders have breached their contracts for various reasons including making unsatisfactory progress in their studies; and being recruited by the industry on completion of their studies, which is becoming a major challenge for the Department.

The students are pursuing the following mining-related qualifications at different tertiary institutions:

- Electrical Engineering (Heavy Current);
- Mechanical Engineering;
- Mine Engineering; and
- Mine Surveying.

Examinations

The following table depicts GCC examinations that were recorded during the current reporting period:

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TABLE 2.5.5.1:

Number of Applications vs. Certificates Issued per Examination Category

Type of Certificate	Number of Applications	Certificates Issued	Percentage Pass Rate
Mine Engineer's (Electrical and Mechanical)	820	61	7%
Mine Manager's	1164	100	9%
Mine Overseer's	2371	194	8%
Mine Surveyor's	585	8	1%
Winding Engine Driver's	51	30	59%
TOTAL	**4991**	**393**	**8%**

The Department is greatly concerned with the low pass rate of the Government Certificate of Competency.
Hence, the DMR is collaborating with stakeholders through the Mining Qualification Authority (MQA) to review the examination model.

3. PROGRAMME PERFORMANCE

3. PROGRAMME PERFORMANCE

3.1 Service Delivery Objectives and Indicators

The MHSI strategic plan and achievements during the reporting period are outlined in the table below. This is an account of progress achieved in the reporting period against the annual targets set for achieving the strategic objectives of the DMR.

PURPOSE: "Execute the Department's statutory mandate to protect the health and safety of the mine employees and people affected by mining activities."

CUSTOMER AND STAKEHOLDER

Stakeholder						
Contribute to Skills Development						
Measure	Actual	Target	Variance	Status	Performance Analysis	Recommendations
Number of examination commision meetings held	11	10	1	G	Achieved	
Percentage increase in certificate of competency issued	15	10	5	G	Achieved	
Percentage of Examination board meetings held	100	100	0	G	Achieved	
% of investigations completed	81.25	80	1.25	G	Achieved	
% reduction in occupational injuries, fatalities, diseases and dangerous occurences	15	20	-5	Y	Not Achieved. The number of fatalities was higher than planned.	The Inspectorate will concentrate on the enforcement of legislation during inspections and audits in the next financial year.
Annual performance report prepared	1	1	0	G	Achieved	
Enforcement guideline implemented	1	1	0	G	Achieved	
Information workshops conducted	36	36	0	G	Achieved	
Legislative framework reviewed	1	1	0	G	Achieved	
Number of audits conducted	473	396	77	G	Achieved	
Number of inspections conducted	8161	8000	161	G	Achieved	
Percentage of enquiries completed	83.5	70	13.5	G	Achieved	
Quarterly OHS newsletters published	4	4	0	G	Achieved	
Percentage of identified internal processes developed, implemented and reviewed	100	100	0	G	Achieved	
Percentage of identified procedures and guidelines implented	100	100	0	G	Achieved	
Number of SLAs implemented	2	2	0	G	Achieved	
Percentage adherence to SLAs	100	100	0	G	Achieved	
% administrative tasks completed	114	100	14	G	Achieved	

Stakeholder						
Contribute to Skills Development						
Measure	Actual	Target	Variance	Status	Performance Analysis	Recommendations
% appeals completed	76	100	-24	Y	Not Achieved. The reason for not achieving was the lack of communication between the Department and medical experts.	The Inspectorate will improve communication with medical experts to submit their reports on time, encourage appellants to attend and honour appointments with medical experts timeously The Inspectorate will revise the communication system to improve communication in the next financial year. .
% improvements in adherence to prescriped timeframes	78	80	-2	Y	Not achieved. Resolution 3 and shortage of staff are causes of this problem, but we will continue with recruitment and retention strategies to improve the status.	The Department has applied for exemption from DPSA on Resolution 3 and awaiting outcome.
% MPRDA applications completed	93	100	-7	Y	Not Achieved. Resolution 3 and shortage of staff are causes of this problem, but we will continue with recruitment and retention strategies to improve the status. The Department has applied for exemption from DPSA on Resolution 3 and awaiting outcome.	The Inspectorate will continue with advertising and fill in the vacant positions in the next financial year.
Improved percentages for identified EE categories	35	80	-45	R	Not achieved, Measure developed before the development of the Departmental EE Plan, hence no proper alignment was done.	Measure to be aligned with the departmental EE Plan in the next financial year.
Number of HRD initiatives implemented	15	10	5	G	Achieved	
Reduction in staff turnover rate	-3	1	-4	R	Not Achieved. Resolution 3 and shortage of staff are causes of this problem, but we will continue with recruitment and retention strategies to improve the status.	The Department has applied for exemption from DPSA on Resolution 3 and awaiting outcome.
Number of management programmes implemented	2	2	0	G	Achieved	
Number of managers completed management courses	9	12	-3	Y	Not Achieved. The Inspectorate could not get all schedulled managers (12) to attend "Management Training Courses" as planned, because 3 of them were appointed by the Department by the time the training was already in progress.	The Inspectorate will encourage more managers to attend management development programmes in the next financial year. Attempts wil be made to include the remaining 3 managers to attend courses during the next currenty financial year

Stakeholder						
Contribute to Skills Development						
Measure	Actual	Target	Variance	Status	Performance Analysis	Recommendations
Fill funded vacancies						
Reduction in vacancy rate	5	30	-25	R	Not Achieved	Resolution 3 and shortage of staff is cause of this problem, but we will continue with recruitment and retention strategies to improve the status. The Department has applied for exemption from DPSA on Resolution 3 and awaiting outcome.
% budget allocated to branch priorities	100	80	20	G	Achieved. Spending plans	
Percentage variance (under spending) on allocated branch budget for goods and services	6.22	5	1.22	R	Not Achieved: The final virement of shifting was not effected during the time of reporting	The Branch will align spending with the spending plans and review alignment quarterly
Reduction in waste, fruitless and irregular expenditure cases	75	60	15	G	Achieved	
Percentage reduction in the number of branch assets disposed of prior to the end-of-lifespan	62	15	47	G	Achieved	
Implement loss management procedures.						
Promote corporate governance						
Comply with PFMA	86	100	-14	Y	Not achieved. The underspending under total budget due to vacancies was the cause of under-achieving in this measure. The current vacancy rate is 20%.	The Inspectorate will continue with advertising and filling in the vacant positions in the next financial year.
Percentage execution of fraud prevention and enterprise Risk Management Plans	88	100	-12	Y	Achieved	The Inspectorate will finalise the 4 outstanding issues by next financial year.
Percentage reduction in repeat audit findings in internal audit follow-up report	-33	30	-63	R	Not Achieved. The 2 repeat audit findings were due to non submission of the declaration form for quarter 3 and incorrect reporting.	The inspectorate will ensure that declaration forms are submitted on time. Regions will be workshopped on the reporting system in May 2012 to improve the accuracy of information that is submitted on a monthly basis.

3.2 Service Delivery Improvement Plan

Key service	Service beneficiary	Current standard (2010/11)		Desired standard (2010/11)		Progress as at 31 March 2012
Address health and safety risks in mining through: • Number of Audits conducted • Number of Inspections conducted • Number of Investigations conducted • Number of Inquiries completed	Mining Operations	Quantity	100% of planned audits as per capacity 100 % of planned inspection as per capacity 80% of planned investigations as per capacity 80 % of planned inquiries as per capacity	Quantity	100% of planned audits as per capacity 100% of planned inspections as per capacity 100% of planned investigations as per capacity 100% of planned inquiries as per capacity	119% of planned audits as per capacity 102% of planned inspections as per capacity 81% of planned investigations as per capacity 84% of planned inquiries as per capacity
		Quality	Implementation and compliance to standardized Policies and Procedures	Quality	Implementation and compliance to standardized Policies and Procedures	Achieved
		Consultation	Quarterly consultation with mining operations	Consultation	Monthly consultation with mining operations	Achieved
		Open and transparency	Policies and Procedures is public documents	Open and transparency	Policies and Procedures is public documents	Achieved
		Information	Information is shared on a monthly basis with mines	Information	Information is shared on a monthly basis with mines and an electronic management system would improve the availability of information	Achieved
		Value for Money	Ensure the optimum utilisation of voted funds	Value for Money	Ensure the optimum utilisation of voted funds	Achieved

4. STATE OF HEALTH IN THE SOUTH AFRICAN MINING INDUSTRY

4. STATE OF OCCUPATIONAL HEALTH IN THE SOUTH AFRICAN MINING INDUSTRY

4.1 Occupational Health Overview

The Occupational Health Chief Directorate has been established to elevate the prevention of occupational diseases in the mining sector. This Chief Directorate comprises three Directorates; namely, Occupational Hygiene, Occupational Medicine and the Medical Inspector.

Overexposure to occupational hygiene stressors remains a challenge respecting airborne pollutants (dust-bearing silica) and noise. Even though there is an improvement of 4.42% for the current reporting period towards the achievement of the 95 % compliance target set in 2003 on the silica exposures; a challenge remains reaching the set target. General overexposure to airborne pollutants remains high at 27.5% of overexposures in the A and B classification bands.

Noise remains a worrying factor with both A and B classification bands at 84% above the OEL (Occupational Exposure Limit).

Heat stress overexposures on the A classifications band seem to be manageable at 0.4%. More effort is required from the industry to reduce and eliminate the 23.03% in the B classification band.

The mining industry must continue to place more effort into reducing these occupational hygiene stressors in order to reduce the occurrence of occupational diseases.

Although there is a latency period between exposures and occurrence of occupational diseases, it remains critical to keep records of all occupational hygiene measurements in a manner that can be linked to each employee's record of medical surveillance.

The apparent reduction in the reported occupational diseases is a major concern because not all mines submitted their annual medical reports. The data from annual medical reports shows an increase of occupational diseases in the coal and platinum mines, whereas there is a decrease in the gold, diamond and other mines.

There is an increase in Silicosis cases in platinum mines and an increase in Pulmonary Tuberculosis (PTB) cases in coal mines. The more common medical appeals received are against Epilepsy, injuries and other diseases; and these are the highest in the 2011 reporting period. A concerted effort is needed to popularise section 20 of the MHSA amongst employees because of the conflicting understanding of the section in which some employees and their representatives use it to address Compensation matters.

4.2. Occupational Hygiene at Mines

One of the integral provisions of the Mine Health and Safety Act, Act 29 of 1996, is to protect the workers in the mining industry from the adverse health effects of being exposed to occupational health hazards such as dusts, fibres, chemicals, noise, thermal stresses and radiation.

Regulation 9.2(2) of the Mine Health and Safety Act, read with Section 12 of the MHSA, requires the Employer to establish, maintain, and record occupational Hygiene Measurements.

The information below is collected to assist in assessing the magnitude of the occupational hygiene problems so that corrective action can be planned and prioritised. This also sheds light on whether or not current interventions are bearing fruit. The information is further utilised as lead indicators for the industry's Silicosis and Noise milestones.

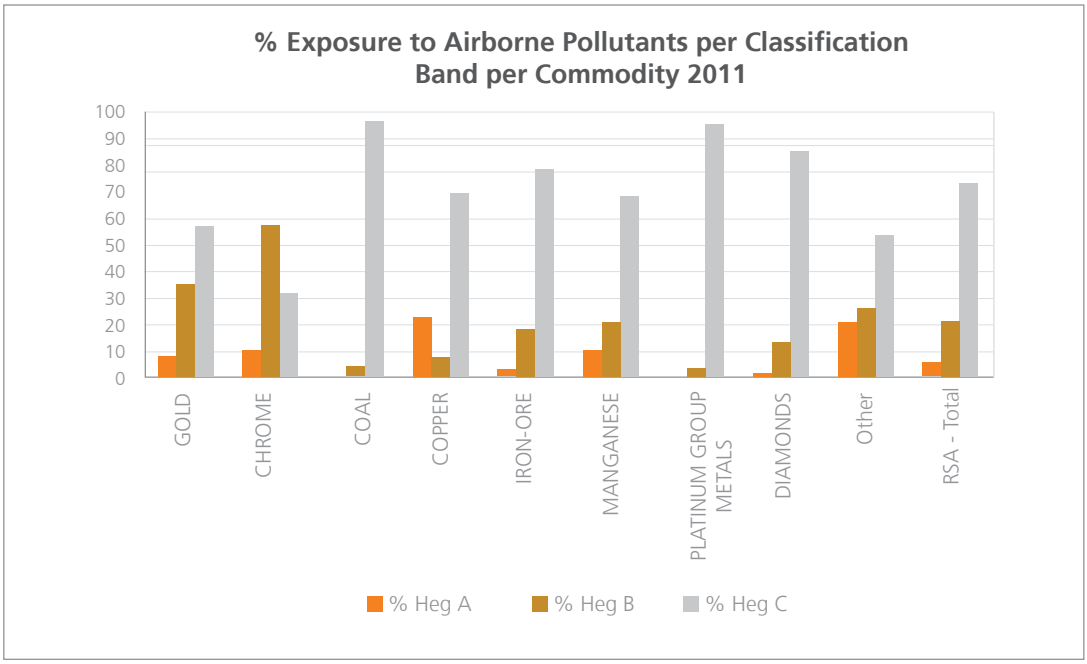
4.2.1 Occupational Hygiene Measurements

4.2.1.1 Airborne Pollutants Exposures

i. The exposure classifications are based on the Air Quality Index (AQI) due to exposure to multiple pollutants in the mining environment.
ii. The AQI index of multiple pollutants is determined by dividing the dust concentration of each pollutant in the mixture by its Occupational Exposure Limit (OEL) and adding the results together. The sum should not be greater than Unity.
iii. The number of persons depicted on the table below is derived from the number of samples collected, and does not reflect the actual number of people employed in the mining industry.

GRAPH 4.2.1.1(a):

Exposure to Airborne Pollutants per Exposure Classification Band per Commodity



Exposure Classification Bands

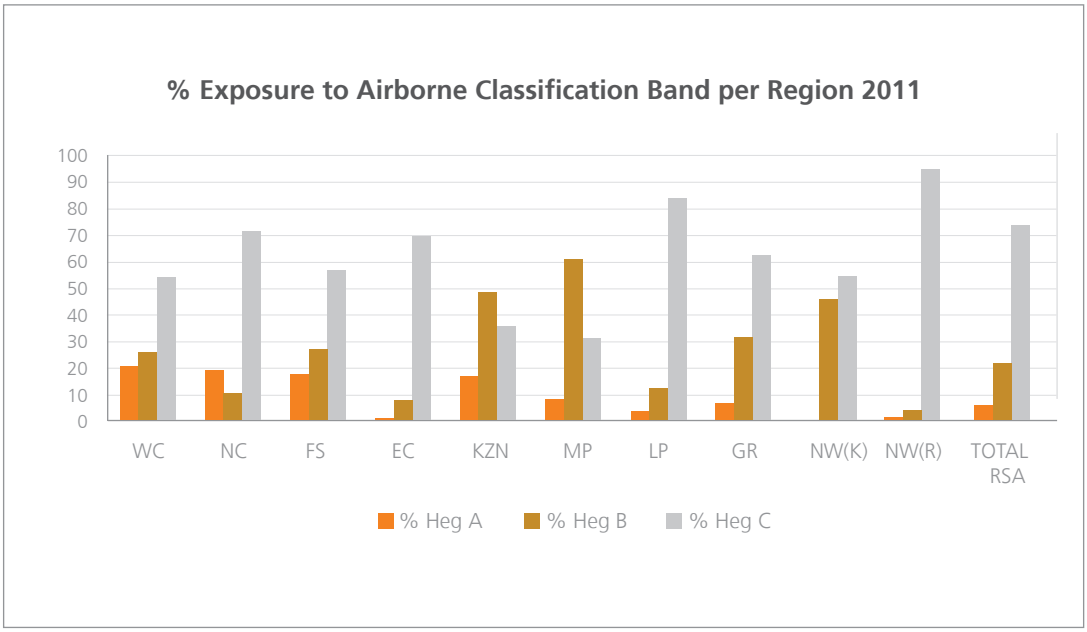
A = Exposures ≥ the OEL or mixture of exposures ≥ 1

B = Exposures ≥ 50% of the OEL and < OEL or mixtures of exposures ≥ 0.5 and < 1

C = Exposures ≥ 10% of the OEL and < 50% of the OEL or mixtures of exposures ≥ 0.1 and < 0.5

GRAPH 4.2.1.1(b):

Exposure to Airborne Pollutants per Exposure Classification Band per Region



Exposure Classification Bands

A = Exposures ≥ the OEL or mixture of exposures ≥ 1

B = Exposures ≥ 50% of the OEL and < OEL or mixtures of exposures ≥ 0.5 and < 1

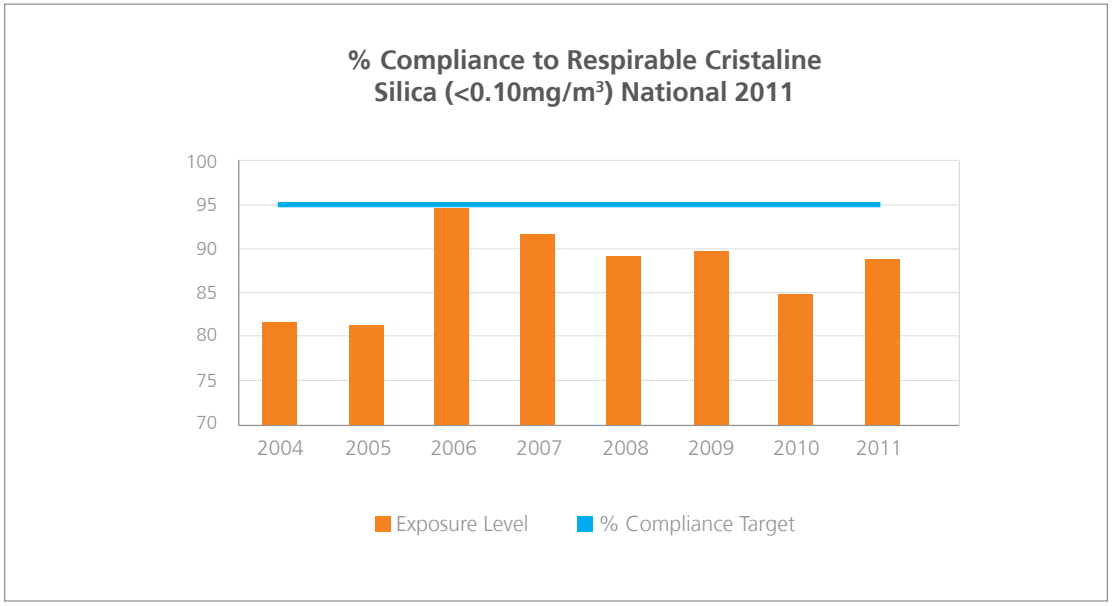
C = Exposures ≥ 10% of the OEL and < 50% of the OEL or mixtures of exposures ≥ 0.1 and < 0.5

A concerted effort is required to reduce the 27.5 % percentage of overexposures in the A and B classification bands for both regional and per commodity if the achievement of the elimination of Silicosis milestones is to be achieved.

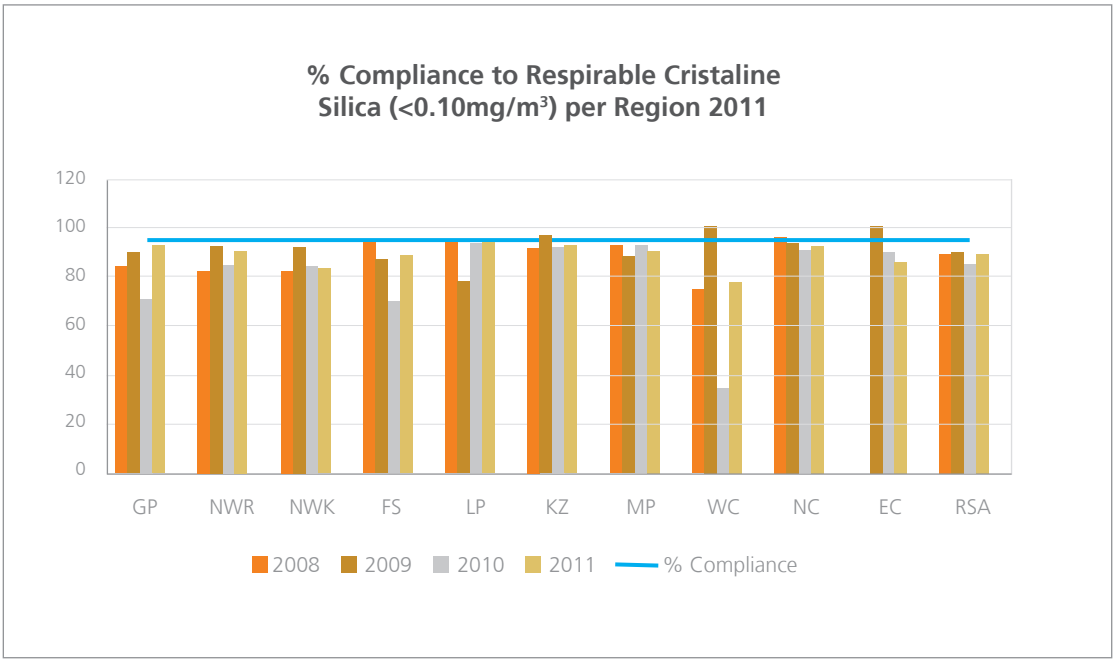
The control of dust at source remains the integral part in the reduction and ultimate elimination of over exposures.
The milestone set by the Mine Health and Safety Council regarding the elimination of Silicosis is that:

1. By December 2008, 95% of all exposure measurement results will be below the occupational exposure limit for Respirable Crystalline Silica of 0.10 mg/m³.
2. By December 2013, using present diagnostic techniques, there will be no new cases of Silicosis.

GRAPH 4.2.1.1(c):
Achievements against the Milestones for Respirable Crystalline Silica (National)



GRAPH 4.2.1.1(d):
Achievements against the Milestone for Respirable Crystalline Silica - Regional



There is an improvement of 4.42% for the current reporting period towards the achievement of the 95% compliance target set in 2008. However more effort is required in order to achieve and maintain the set compliance level.

4.2.1.2 Noise Exposures

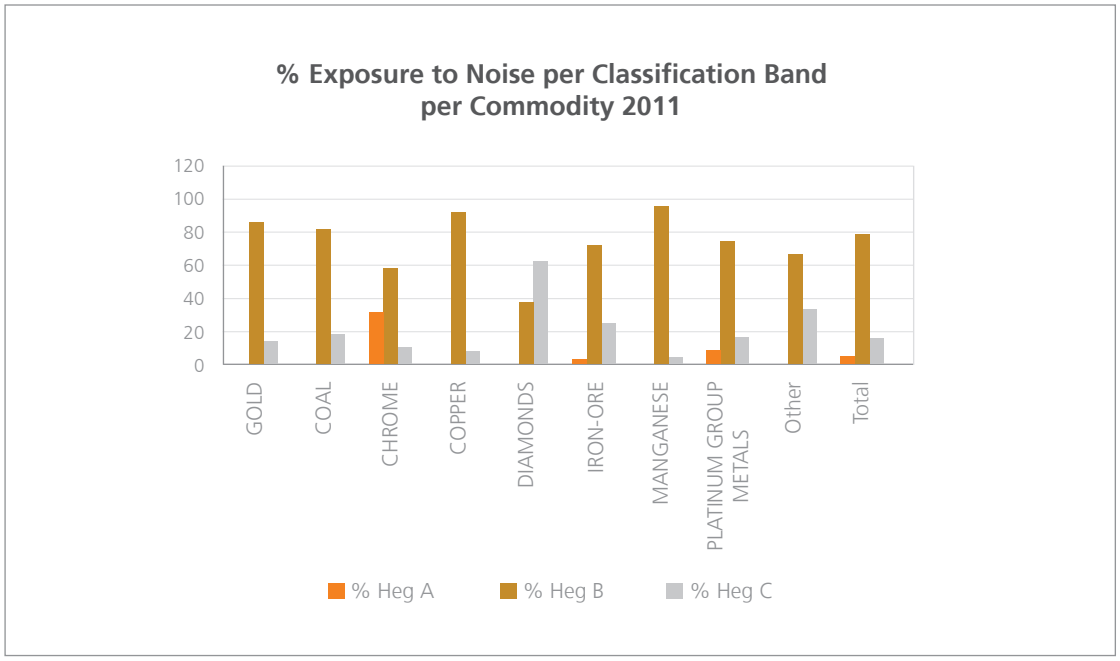
1. The Occupational Exposure Limit for Noise is 85 dB (A) based on an eight hour exposure shift.
2. No special precautions are required, except monitoring for the C classification Band.
3. The Implementation of Hearing conservation programme is required for A and B classification Band.
4. Persons in A and B classification Bands are over-exposed.

The Milestones towards meeting the target on the elimination of Noise Induced Hearing Loss are that:

1. After December 2008 there must not be any deterioration in hearing of greater than 10% amongst occupationally exposed individuals.
2. By December 2013, the total noise emitted by all equipment installed in any workplace ≤ 110dB(A) at any location in that workplace

GRAPH: 4.2.1.2(a):

Exposures to Noise per Classification Band per Commodity



Exposure classification band:

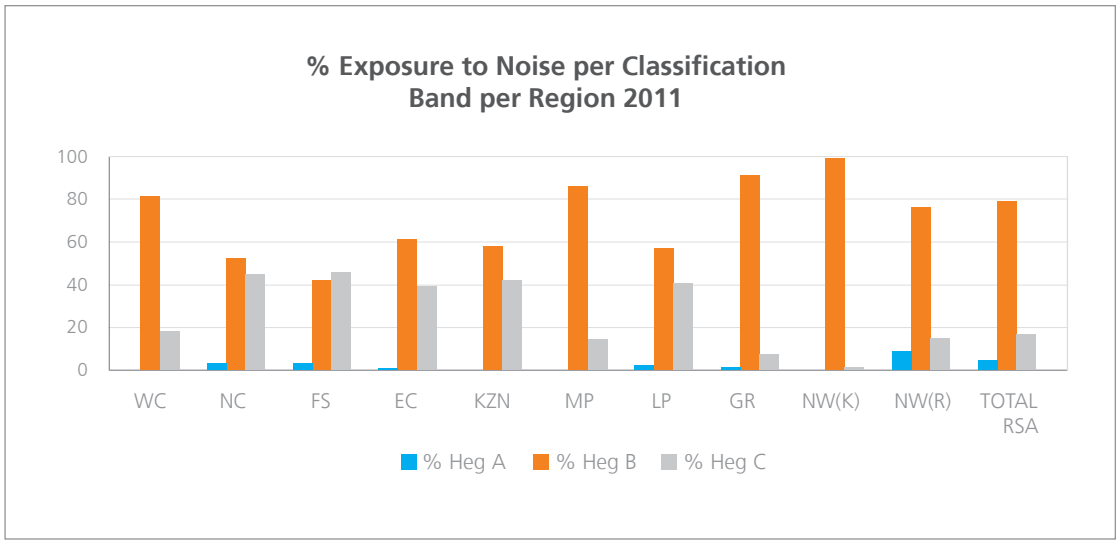
A = Exposures ≥ 105 $L_{Aeq, 8h}$

B = Exposures 85 ≤ 105 $L_{Aeq, 8h}$

C = Exposures ≤ 82 $LAeq_{, 8h}$

GRAPH: 4.2.1.2(b):

Exposures to Noise per Classification Band per Region



Exposure classification band:

A = Exposures ≥ 105 $L_{Aeq, 8h}$

B = Exposures 85 ≤ 105 $L_{Aeq, 8h}$

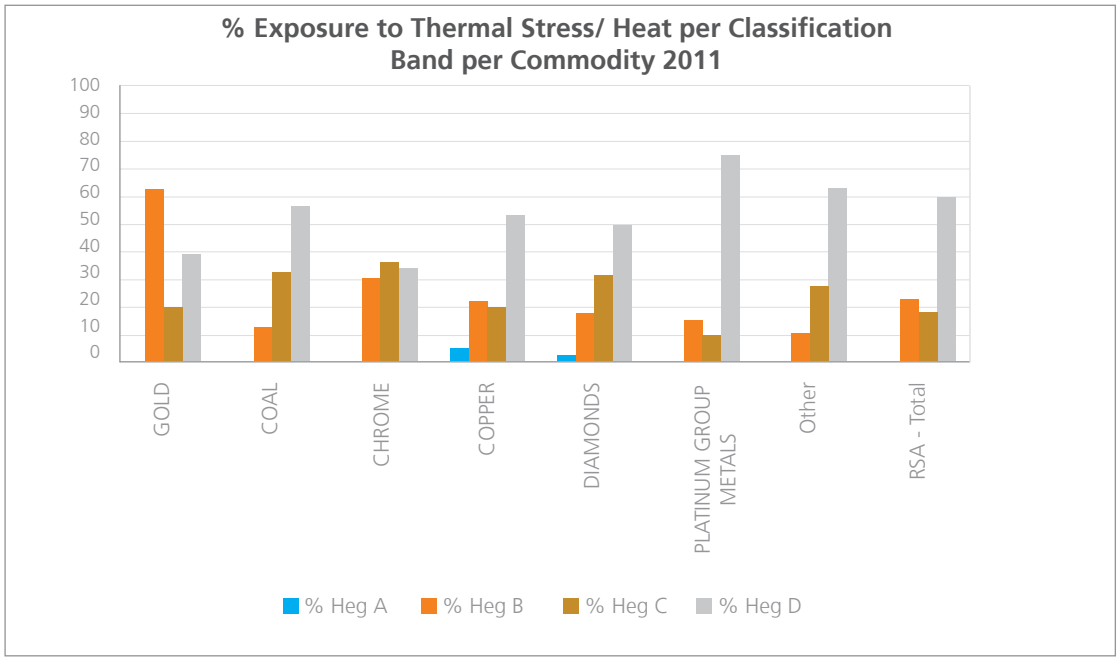
C = Exposures ≤ 82 $LAeq_{, 8h}$

The overexposure in the A classification is 5% and 79% in B classification. Both classification A and B are 84% above the OEL. More focus is needed on the reduction of noise at source, including training and awareness of the workforce.

4.2.1.3 Thermal Stress Exposure

Heat Stress

Exposure to Heat per Exposure Classification Band per Commodity



Heat stress Exposure Classification Band:

A = WB > 32.5 °C or DB > 37 °C or Globe Temperature > 37 °C

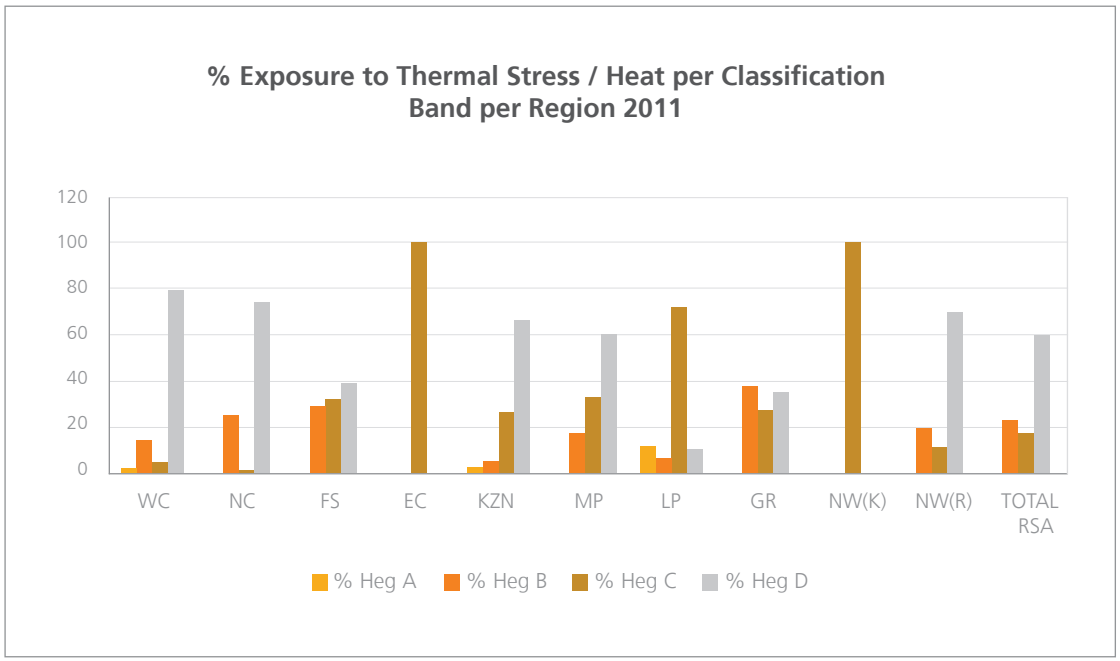
B = 29.0 >WB ≤ 32.5 °C and DB ≤ 37 °C Globe Temperature as for DB

C = 27.5 >WB ≤ 29.0 °C and DB ≤ 37 °C Globe Temperature as for DB

D = ≤ 27.5 °C and DB ≤ 32.5 °C Globe Temperature

GRAPH: 4.2.1.3(b):

Exposure to Heat per Exposure Classification Band per Region



Heat stress Exposure Classification Band:

A = WB > 32.5 °C or DB > 37 °C or Globe Temperature > 37 °C

B = 29.0 >WB ≤ 32.5 °C and DB ≤ 37 °C Globe Temperature as for DB

C = 27.5 >WB ≤ 29.0 °C and DB ≤ 37 °C Globe Temperature as for DB

D = ≤ 27.5 °C and DB ≤ 32.5 °C Globe Temperature

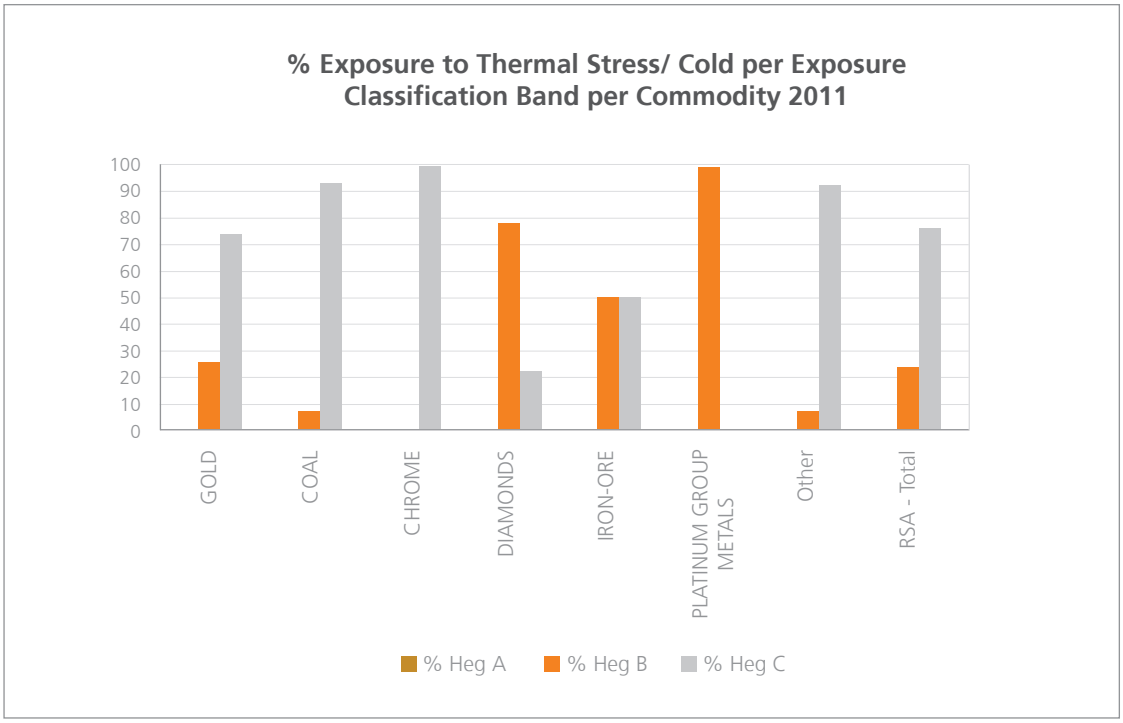
A total of 0.4% of the workers is in the A and 23 % are in the B heat stresses classification band for 2012 respectively. The mining industry must continue to put more effort into reducing the 23.43 % of employees' exposure to heat stress in classification A and B.

Cold Stress

1. Temperature ranges are given in terms of equivalent chill temperature (ACGH).
2. CSM: Cold Stress Management.
3. Thermal environment in excess of 10.0°C Dry – Bulb temperature must not be reported.
4. Generally for Cold Stress: Quarter – June to August.

GRAPH: 4.2.1.3(c):

Exposure to Cold stress per Exposure Classification Band per Commodity



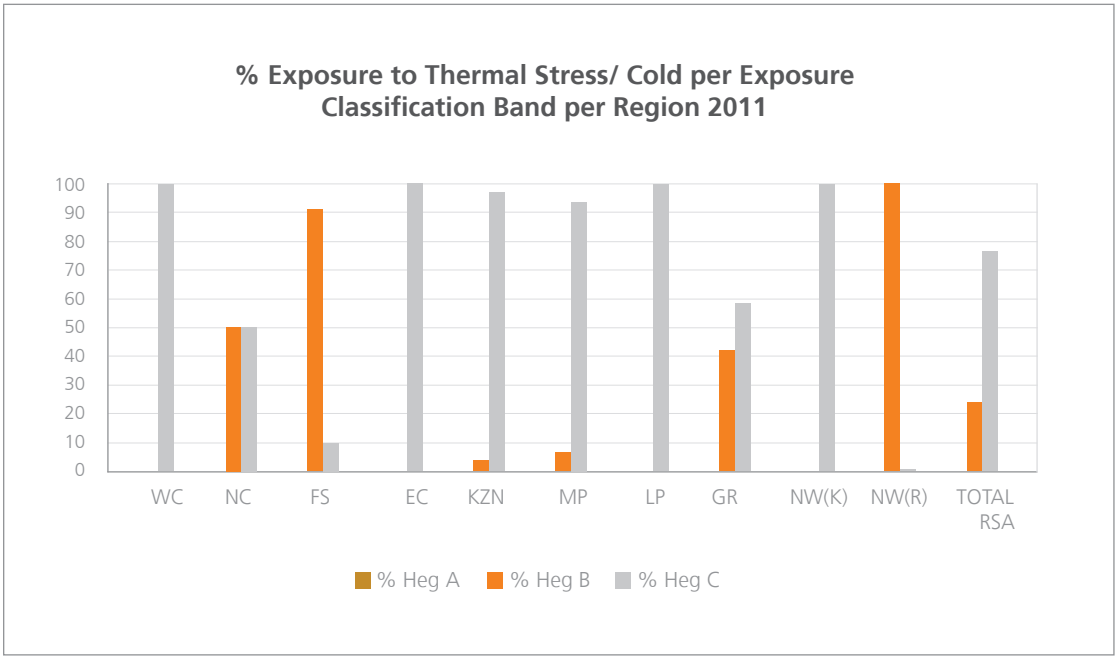
Cold Stress Exposure Classification Band:

A = Temperature ≤ -30.0° C

B = Temperature ≤ 5.0 ° C, Temperature ≤ -30.0 ° C

C = Temperature > 5.0° C

GRAPH: 4.2.1.3(d):
Exposure to Cold Stress per Exposure Classification Band per Region



Cold Stress Exposure Classification Band:

A = Temperature ≤ -30.0° C

B = Temperature ≤ 5.0 ° C, Temperature ≤ -30.0 ° C

C = Temperature > 5.0° C

Exposures on the A category seems to be well controlled; however more effort is required to reduce and eventually eliminate the 24% cold stress overexposure in the B category. This is an indication that the mining industry is employing more effort and resources to reduce workers' exposure to extremely cold conditions.

General

1. There is still a challenge when it comes to achieving the milestones on noise and Silicosis. If stringent measures to reduce personal exposures are not implemented, the milestones will not be achieved.
2. Late submission of statutory reports, inaccurate and nil reporting by the mines remain a problem.
3. Different practices to reduce personal exposure to the identified significant health hazards need to be implemented.
4. The validation and verification of the Respirable Silica Quartz project, which was identified, will be embarked upon by the Department in the near future.

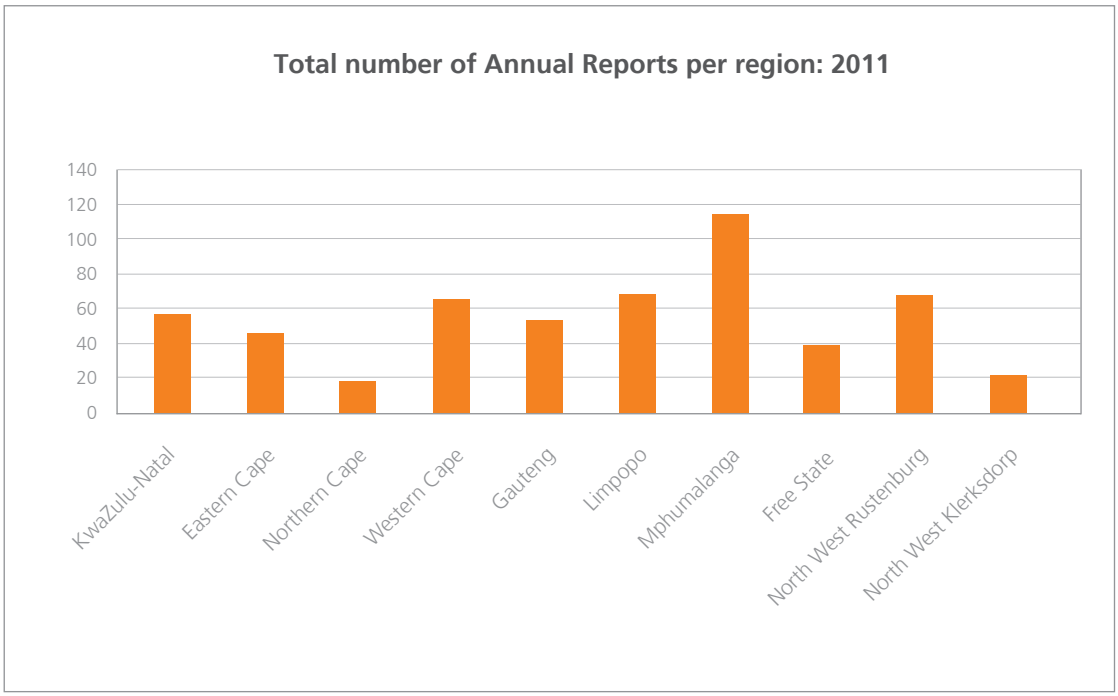
4.3 Occupational Medicine at Mines

4.3.1 Annual Medical Report 2011

The number of Annual Medical Reports received for the period under review has increased slightly from 564 in 2010 to 629 in 2011. Some employers must comply with the Chief Inspector of Mines' instruction of submitting copies of Annual Medical Reports to the Medical Inspector through the relevant regional office on/or before the end of February each year.

TABLE: 4.3.1: Total number of Annual Medical Reports received per Region: 2011

GRAPH: 4.3.1:
Total number of Annual Medical Reports received per Region: 2011



Region	Number
KwaZulu-Natal	63
Eastern Cape	51
Northern Cape	23
Western Cape	74
Gauteng	60
Limpopo	78
Mpumalanga	133
Free State	45
North West Rustenburg	77
North West Klerksdorp	25
TOTAL	629

4.3.2 Medical Surveillance

In terms of Section 13 (1) of the Mine Health and Safety Act, Act 29 of 1996, as amended, the employer must establish and maintain a system of medical surveillance of employees exposed to health hazards. Every system of medical surveillance must consist of an initial examination and other medical examinations at appropriate intervals.

4.3.2.1 Analysis of Medical Surveillance Trends

The analysis from the annual medical reports received shows a slight increase in the number of employees who have undergone medical surveillance during the reporting period versus the same period for 2010:

GRAPH: 4.3.2.1(a)
Medical Surveillance Conducted as Reported on Annual Medical Reports for 2010 and 2011.

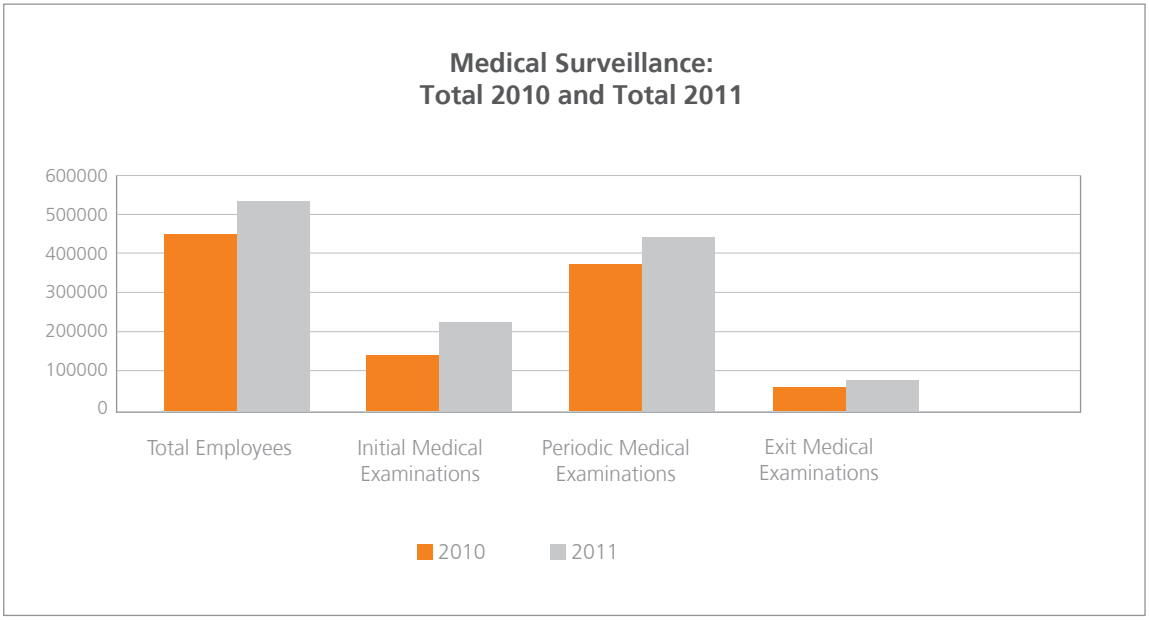


TABLE: 4.3.2.1:
Medical Surveillance Conducted as Reported on Annual Medical Reports for 2010 and 2011

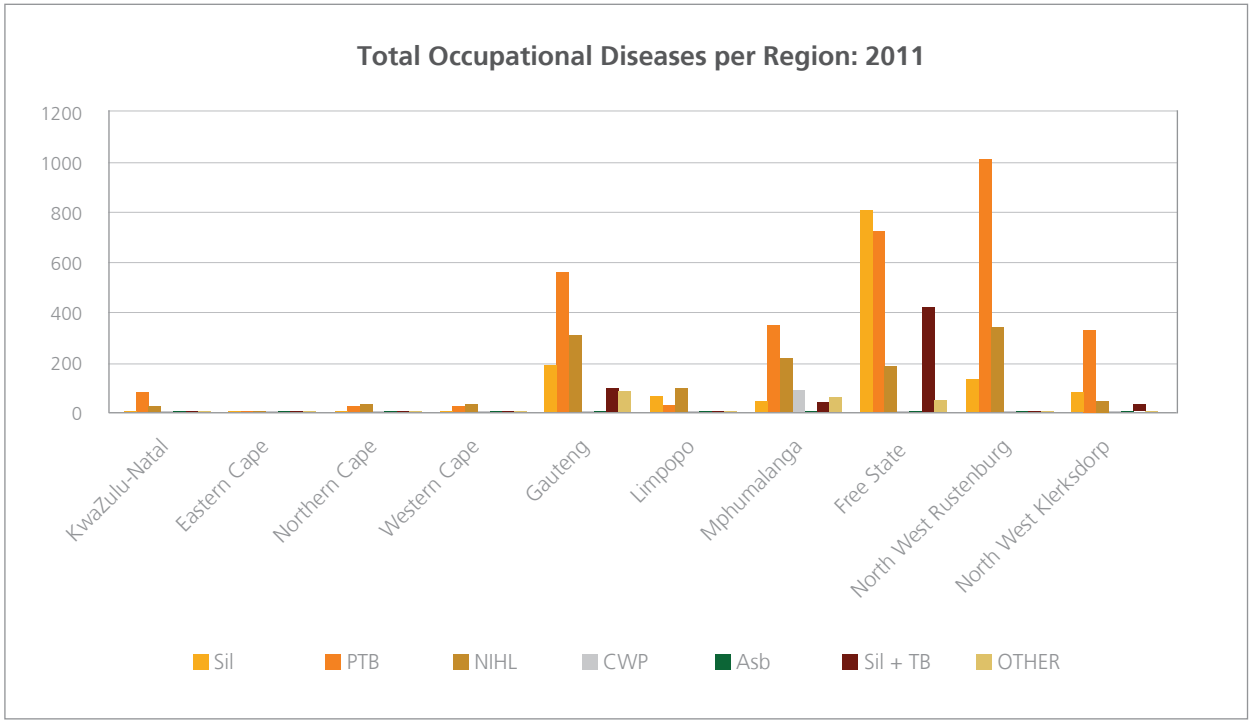
Description	2010	2011
Employees	485174	580584
Initial Medical Examinations	190545	260035
Periodic Medical Examinations	407207	470794
Exit Medical Examinations	96434	106079

Below are the figures that indicate the difference between the number of employees and categories of medical surveillance system in 2010 and 2011.

- 95410 more employees
- 69490 more initial medical examinations;
- 63587 more periodic medical examinations; and
- 9645 more exit medical examinations.

GRAPH 4.3.2.1(b)

Occupational Diseases as Reported on Annual Medical Reports per Region for 2010 and 2011



Region	Occupational Diseases							
	Sil	PTB	NIHL	CWP	Asb	Sil+TB	Other	Total RSA
KwaZulu-Natal	1	73	16	0	0	0	2	92
Eastern Cape	0	0	0	0	0	0	0	0
Northern Cape	0	19	28	0	0	2	5	54
Western Cape	0	14	28	1	0	0	6	49
Gauteng	182	556	302	0	0	86	75	1201
Limpopo	60	19	90	7	3	0	7	186
Mpumalanga	36	342	212	83	6	31	51	761
Free State	804	717	182	0	1	413	40	2157
North West Rustenburg	127	1005	334	0	1	0	8	1475
North West Klerksdorp	76	325	37	0	0	23	8	469
TOTAL	1286	3070	1229	91	11	555	202	6444

The Eastern Cape is the only region that has not reported occupational diseases during the year 2011.

GRAPH 4.3.2.1(c)

Occupational Diseases per commodity as reported on Annual Medical Reports 2011

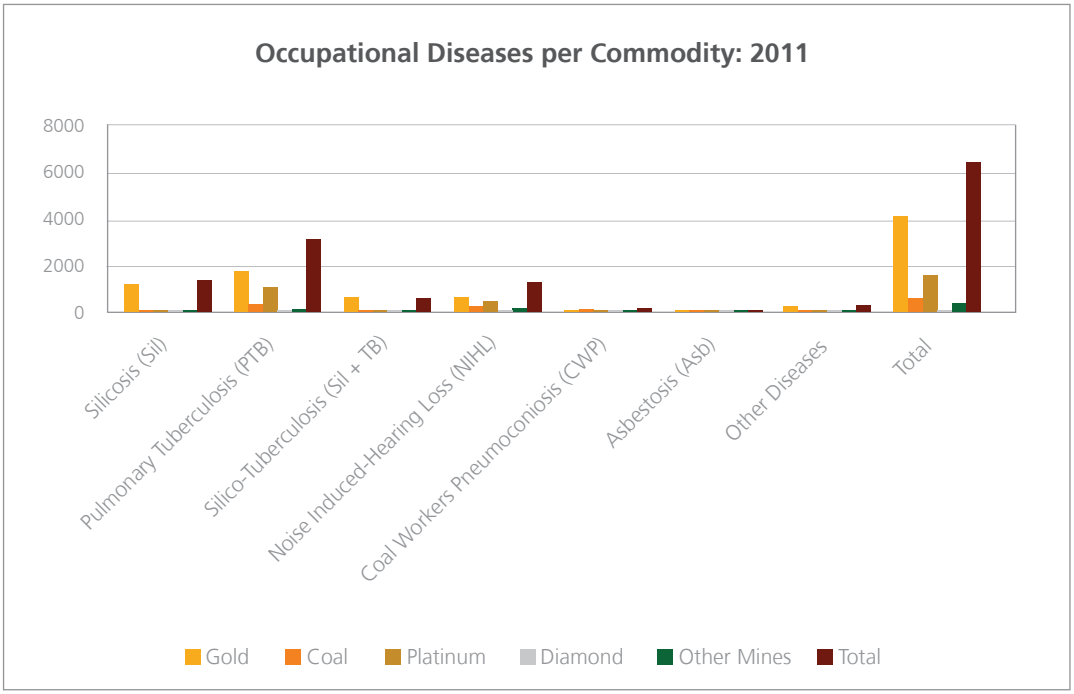


TABLE: 4.3.2.1(c):

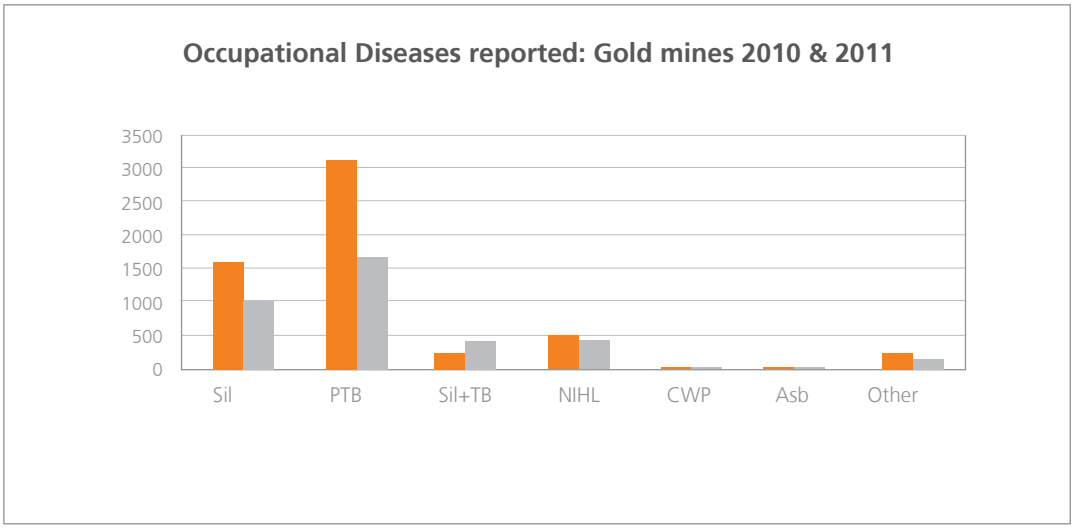
Occupational Diseases per commodity as reported on Annual Medical Reports 2011

Occupational Diseases	Commodity					
	Gold	Coal	Platinum	Diamond	Other Mines	Total
Silicosis (Sil)	1095	2	129	0	60	1286
Pulmonary Tuberculosis (PTB)	1696	249	1005	6	92	3048
Silico-Tuberculosis (Sil+TB)	553	0	0	0	2	555
Noise Induced Hearing Loss (NIHL)	560	158	367	11	105	1201
Coal Workers Pneumoconiosis (CWP)	0	87	2	0	1	90
Asbestosis (Asb)	2	3	1	0	4	10
Other Diseases	145	22	13	3	14	197
Total	4051	521	1517	20	278	6387

The slight decrease on occupational diseases reported during the year 2011 is based on data received from a total of 629 Annual Medical Reports. There has been an increase of sixty five (65) mines that submitted Annual Medical Reports from a total of 564 during the year 2010 to a total of 629 during the year 2011.

GRAPH 4.3.2.1(d)

Occupational Diseases as reported on Gold Mines' Annual Medical Reports for 2010 and 2011



Diseases	Sil	PTB	Sil+TB	NIHL	CWP	Asb	Other	Total
2010	1642	3243	239	590	1	3	346	6064
2011	1095	1696	553	560	0	2	145	4051

Although Silicosis, Pulmonary Tuberculosis (PTB) and other diseases show a decrease as compared to the previous year, there is an increase in the number of Silico-Tuberculosis cases. Noise Induced Hearing Loss (NIHL) cases show a slight decrease compared to the previous year.

GRAPH 4.3.2.1(e)
Occupational Diseases as reported on Platinum Mines' Annual Medical Reports for 2010 and 2011

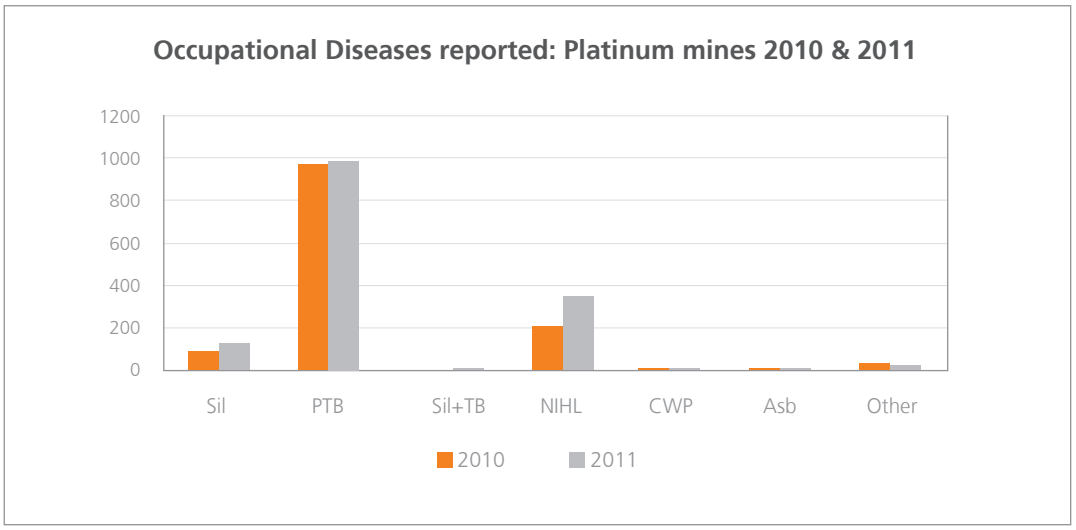
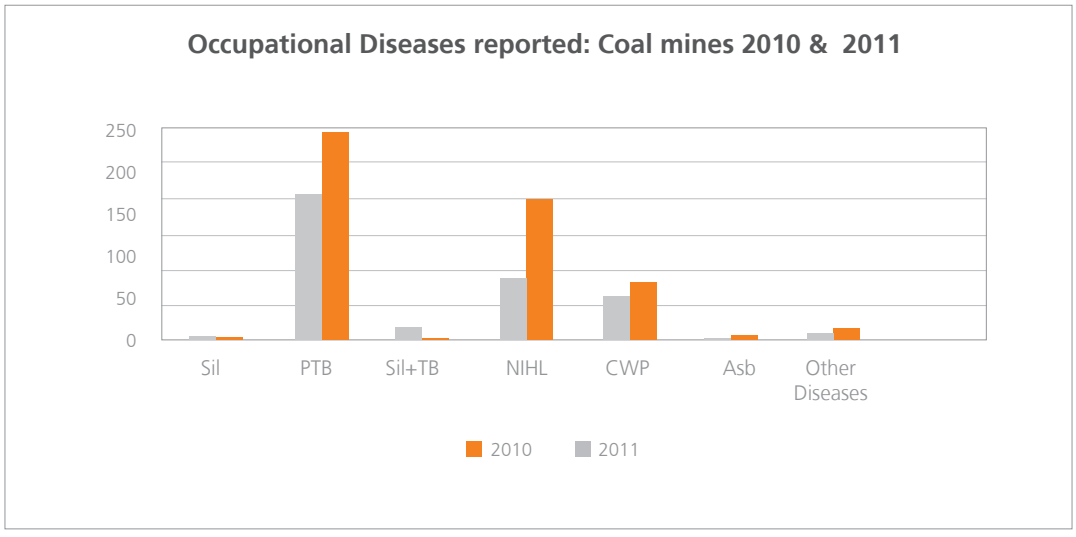


TABLE: 4.3.2.1(e):
Occupational Diseases as reported on Platinum Mines' Annual Medical Reports for 2010 and 2011

Diseases	Sil	PTB	Sil+TB	NIHL	CWP	Asb	Other	Total
2010	89	993	1	237	0	5	25	1349
2011	129	1005	0	367	2	1	13	1517

Although Silicosis and PTB cases show a slight increase, other diseases show a slight downward trend. A significant increase in NIHL cases indicates a need to monitor adherence to the hearing conservation programmes that must be in place in the platinum sector. Furthermore, the increase in the number of NIHL cases is a concern in terms of the set health milestones that must be achieved by December 2013.

GRAPH 4.3.2.1(f)
Occupational Diseases as reported on Coal Mines' Annual Medical Reports for 2010 and 2011



The coal sector shows a significant increase in the number of PTB, NIHL and other diseases. There is also a slight increase in the number of Coal workers' pneumoconiosis (CWP) cases.

TABLE: 4.3.2.1(f):

Occupational Diseases as reported on Coal Mines' Annual Medical Reports for 2010 and 2011

Diseases	Sil	PTB	Sil+TB	NIHL	CWP	Asb	Other	Total
2010	3	162	9	93	78	2	9	356
2011	2	249	0	158	87	3	22	521

GRAPH 4.3.2.1(g):

Occupational Diseases as reported on Diamond Mines' Annual Medical Reports for 2010 and 2011

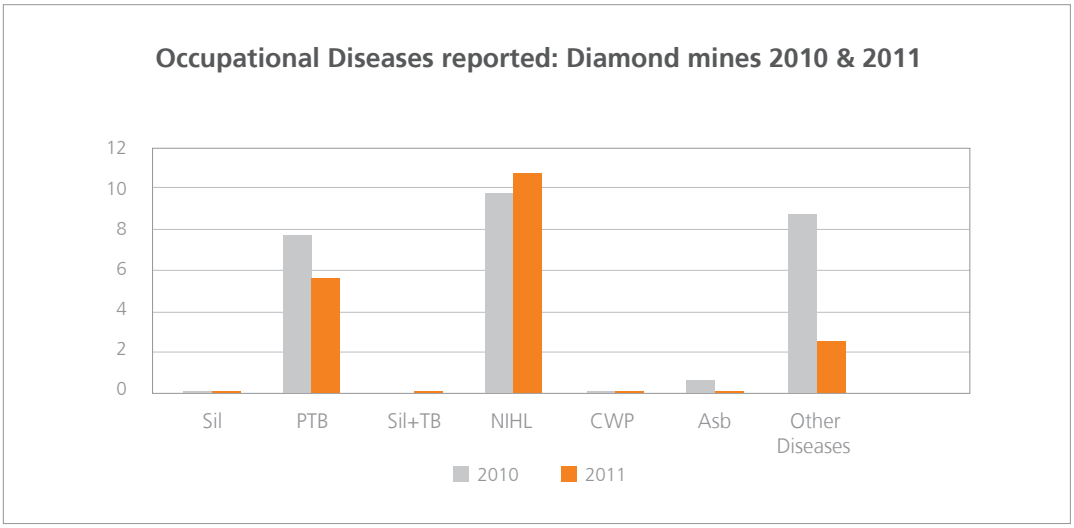


TABLE: 4.3.2.1(g):

Occupational Diseases as reported on Diamond Mines' Annual Medical Reports for 2010 and 2011

Diseases	Sil	PTB	Sil+TB	NIHL	CWP	Asb	Other	Total
2010	0	8	0	10	0	1	9	28
2011	0	6	0	11	0	0	3	20

There is generally a slight downward trend in the number of PTB cases and other diseases in the diamond sector.

GRAPH 4.3.2.1(h)

Occupational Diseases as reported on Other Mines' Annual Medical Reports for 2010 and 2011

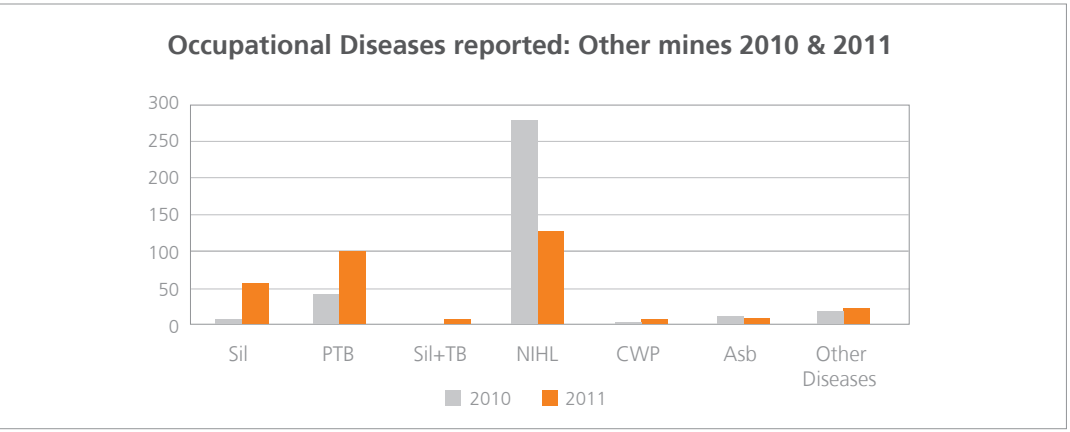


TABLE: 4.3.2.1(h):

Occupational Diseases as reported on Other Mines' Annual Medical Reports for 2010 and 2011

Diseases	Sil	PTB	Sil+TB	NIHL	CWP	Asb	Other	Total
2010	8	46	0	282	1	9	17	363
2011	60	106	2	132	2	4	20	326

Although Silicosis and PTB show a significant increase as compared to the previous year, the NIHL cases seem to have decreased compared to the year 2010.

4.4 Medical Inspector Report

In terms of Section 20 of the Mine Health and Safety Act, Act 29 1996, (MHSA) employees may appeal to the Medical Inspector against a decision that the employee is unfit to perform any particular category of work; or any finding of an Occupational Medical Practitioner (OMP) contained in an Exit Certificate.

An appeal must be lodged with the Medical Inspector within 30 days of the relevant decision or finding of an occupational medical practitioner or such further period, with valid grounds for a late appeal, acceptable to the Medical Inspector.

A total of 152 items of correspondences were received by the Medical Inspector for the reporting period of 2011/2012. Out of these, 119 appeals were completed and the remaining 33 were complaints and compensation matters.
The turnaround time has improved, but certain challenges are still apparent; and these can be divided into three categories as follows:

1. **Employee related.**
   - Incomplete completion of forms (e.g. no name or contact details of OMP given).
   - No reasons for appeal stated.
   - No relevant supporting documents sent.
   - Appointments made with specialists not honoured.
   - Late submission of appeal.

2. **Employer related**
   - Medical incapacity procedure is misused for terminating employment.
   - Delay in sending relevant medical records when requested by the Medical Inspector.
   - Inadequate involvement and advice by the OMP on the appeal process.
   - Reasons for incapacitating employee not clearly stated.

3. **Service provider related**
   - Scarcity of medical specialists for second opinion in certain regions
   - Delay in obtaining medical specialist appointments for the employees
   - Delay in obtaining medical specialists' reports after assessments have been done.

Much needs to be done to improve the knowledge of employees and their representatives with regard to Section 20 as enshrined in the MHSA. A concerted effort is needed to popularise Section 20 among the employees because comprehension of the Section is varying; and in some instances, employees and their representatives use Section 20 to address Compensation Matters.

GRAPH 4.4.1:
Appeal Diseases for 2011

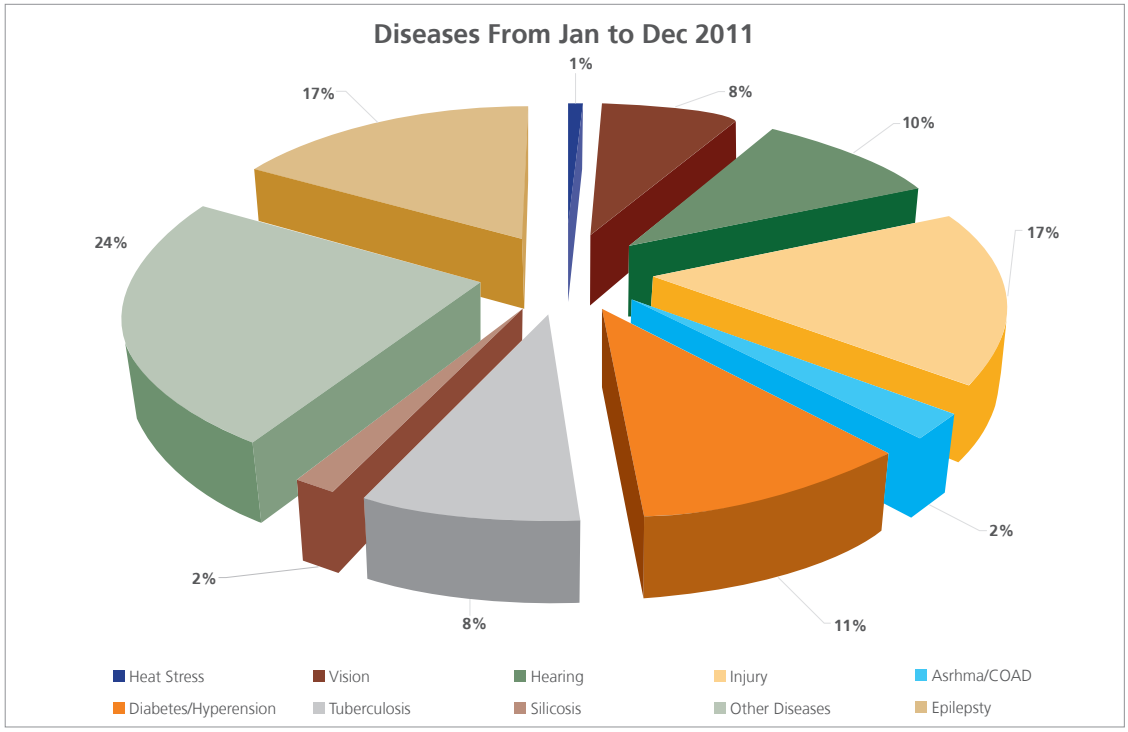


TABLE 4.4.1:
Diseases for 2011

Diseases for 2011	
Heat Stress	1
Vision	9
Hearing	12
Injury	20
Asthma/ COAD	3
Diabetes/Hypertension	13
Tuberculosis	10
Silicosis	2
Other Diseases	29
Epilepsy	20
Total	**119**

The most common appeals received are against Epilepsy, injuries and other diseases, and these are the highest in the current reporting period. Epilepsy is highly disputed because employees who have a convulsion do not have a recollection of the seizure when it occurs; and though some of the subsequent medical investigations suggest the patient/employee to have suffered a 'normal' seizure, this does not mean the employee is not, in fact, a sufferer of Epilepsy. Other diseases usually include, but are not limited to:— Psychiatric disorders, trauma and HIV-related illnesses.

In terms of Appeals, Silicosis is the least reported disease even though it is the most common disease in the mining industry. The fact that it is compensable, may suggest an element of satisfaction is present; and therefore the need to appeal may be viewed as unnecessary.

A great deal of consideration is necessary when determining the final outcome of an Appeal. The final decision is based on the following: an employee's' medical records, work environment, fitness status, detail of job experience of current post, and, second opinion results, and best practice.

Complaints arise from the employers' side if an OMP's decision is set aside. These complaints are usually based on the following:

- Not implementing the guideline on minimum standards of fitness to perform work holistically.
- OMP's not treating each case on its own merits.

The guideline mentioned above is a guideline only; and it is also advised that OMPs should have a holistic approach and should consider employees' experience and other factors before decisions on Fitness Status are made. The guideline also points to Fitness Status being made ***conditional***, thereby contributing to the eradication of simple declarations of Unfitness without consideration of other factors.

TABLE 4.4.2:

Outcome of Appeals

Appeal Findings Jan-Dec 2011				
Status	**Fit**	**Unfit**	**Other**	**Total**
January	0	8	10	18
February	0	2	8	10
March	3	5	6	14
April	3	6	6	15
May	4	13	6	23
June	0	6	6	12
July	1	5	9	15
August	0	8	1	9
September	3	5	3	11
October	1	3	3	7
November	4	5	3	12
December	2	0	4	6
TOTAL	**21**	**66**	**65**	**152**

Of the appeals completed for the reporting period, at least 13% of the employees were found to be fit while 43% were found to be unfit. Most of the cases that were found fit had provisions in which the employee must comply; and the rest were cases made fit by the OMP, but were disputed; and finally the fitness was confirmed by the Medical Inspector.

Other findings that were made included compensation issues, labour-related complaints, which were eventually referred to relevant departments or to the regional offices for further investigations.

5. STATE OF SAFETY IN THE SOUTH AFRICAN MINING INDUSTRY

5. STATE OF OCCUAPTIONAL SAFETY IN THE SOUTH AFRICAN MINING INDUSTRY

5.1 Occupational Safety Overview

In terms of the requirements of the MHSA regulations, employers must report certain accidents and dangerous occurrences that occur at a mine to the Regional Principal Inspector of Mines. The data is then captured onto the South African Mines Reportable Accidents Statistical System (SAMRASS) from which the information is analysed.

As there were fewer fatalities (123) reported during 2011 than in 2010 (127), the provisional fatality rate per million hours worked decreased by 8.33%. As the number of reportable injuries dropped by 139 year-on-year; the injury rate decreased by 7.69%.

5.2 Accident Statistics

TABLE 5.2.1:
Actual Fatalities and Rates (per million hours worked) per Region

	2010	Fatality rate	2011	Fatality rate	% change in rates
All mines	**127**	**0.12**	**123**	**0.11**	**-8.33**
Western Cape	0	**0**	0	**0**	0
Northern Cape	4	**0.06**	3	**0.04**	-33.33
Free State	22	**0.27**	17	**0.21**	-22.22
Eastern Cape	0	**0**	0	**0**	0
KwaZulu-Natal	3	**0.12**	2	**0.08**	-33.33
Mpumalanga	13	**0.08**	18	**0.10**	25.00
Limpopo	11	**0.11**	9	**0.08**	-27.27
Gauteng	29	**0.14**	29	**0.14**	0
Klerksdorp	14	**0.09**	11	**0.07**	-33.33
Rustenburg	31	**0.14**	34	**0.14**	0

*** Provisional figures because statistics may change due to late reporting and subsequent deaths**

*** A negative (-) figure denotes a decrease in frequency rate**

In 2011 the North West region was divided into two sections; namely, Rustenburg and Klerksdorp. The Western Cape and the Eastern Cape were the two regions that succeeded in having a fatal-free year. Gauteng and Rustenburg regions managed to maintain the same fatality rate as the previous year. Although the number of fatalities increased in the Rustenburg region, the number of workers also increased and therefore the rate remained the same. The Mpumalanga region had an increase in fatality rates (25%) while the Northern Cape, Free State, KwaZulu-Natal, Limpopo and Klerksdorp had a reduction in the fatality rates of 33.3%, 22.2%, 33.3%, 27.3% and 33.3% respectively.

TABLE 5.2.2:
Actual Reportable Injuries and Rates (per million hours worked) per Region

	2010	Injury rate	2011	Injury rate	% change in rates
All mines	**3 438**	**3.25**	**3 299**	**3.00**	-7.69
Western Cape	13	**0.96**	21	**1.49**	55.21
Northern Cape	63	**0.92**	61	**0.77**	-16.30
Free State	388	**4.69**	374	**4.68**	-0.21
Eastern Cape	2	**0.52**	5	**1.09**	109.62
KwaZulu-Natal	29	**1.1**	36	**1.49**	35.45
Mpumalanga	304	**1.85**	297	**1.59**	-14.05
Limpopo	255	**2.43**	226	**2.05**	-15.64
Gauteng	617	**2.87**	722	**3.57**	24.39
Klerksdorp	439	**2.73**	431	**2.52**	-7.59
Rustenburg	1 328	**5.98**	1 126	**4.77**	-20.19

*** Provisional figures because statistics may change due to late reporting and subsequent deaths**

*** A negative (-) figure denotes a decrease in frequency rate**

This table shows that there has been an improvement of about 8% on injury rates. There has been an increase in injuries in Western Cape, Eastern Cape, KwaZulu-Natal and the Gauteng regions while the other regions show a decrease.

TABLE 5.2.3:
Actual Fatalities and Rates (per million hours worked) per Commodity

	2010	Fatality rate	2011	Fatality rate	% change in rates
All mines	**127**	**0.12**	**123**	**0.11**	-8.33
Gold	62	**0.20**	51	**0.17**	-15.00
Platinum	34	**0.09**	37	**0.09**	0
Coal	12	**0.07**	12	**0.07**	0
Diamonds	4	**0.15**	3	**0.11**	-26.67
Copper	1	**0.14**	1	**0.14**	0
Chrome	3	**0.09**	5	**0.14**	55.56
Iron ore	3	**0.06**	0	**0**	-100.00
Manganese	1	**0.07**	2	**0.13**	85.71
Other	7	**0.07**	12	**0.12**	71.43

*** Provisional figures because statistics may change due to late reporting and subsequent deaths**

*** A negative (-) figure denotes a decrease in frequency rate**

In terms of the major commodities, the gold, diamond and iron ore sectors have registered a reduction in the fatality rate of 15%, 27% and 100% respectively during the period under review. However, it is a concern that the coal and platinum commodities have not managed to reduce its fatality rate; indeed, the percentage-change of the fatality rates has remained at naught.

TABLE 5.2.4:
Actual Reportable Injuries and Rates (per million hours worked) per Commodity

	2010	Injury rate	2011	Injury rate	% change in rates
All mines	**3 438**	**3.25**	**3 299**	**3.00**	**-7.69**
Gold	1379	**4.36**	1498	**5.07**	16.28
Platinum	1515	**4.08**	1283	**3.20**	-21.57
Coal	273	**1.73**	241	**1.44**	-16.76
Diamonds	50	**2.04**	42	**1.58**	-22.55
Copper	19	**2.61**	19	**2.66**	1.92
Chrome	84	**2.78**	71	**1.99**	-28.42
Iron ore	18	**0.44**	20	**0.39**	-11.36
Manganese	17	**1.36**	13	**0.82**	-39.71
Other	82	**0.83**	112	**1.12**	34.94

*** Provisional figures because statistics may change due to late reporting and subsequent deaths**

*** A negative (-) figure denotes a decrease in frequency rate**

Whilst reportable injury rates in platinum (22%), coal (17%), diamonds (23%), chrome (28%), iron ore (11%) and manganese (40%) rates dropped, it is of concern that the other commodities registered an increase.

TABLE 5.2.5:
Number of Fatalities for All Mines per Classification for 2010 to 2011

	2010 fatalities	2011 fatalities	% change
Fall of ground	48	39	-18.75
Machinery	3	5	66.67
Transportation and mining	37	38	2.70
General	20	25	25.00
Conveyance accidents	1	3	200.00
Electricity	3	4	33.33
Fires	5	0	-100.00
Explosives	5	4	-20.00
Heat sickness	2	2	0
Miscellaneous	3	3	0
Total	**127**	**123**	**-3.15**

*** Provisional figures because statistics may change due to late reporting and subsequent deaths**

*** A negative (-) figure denotes a decrease in frequency rate**

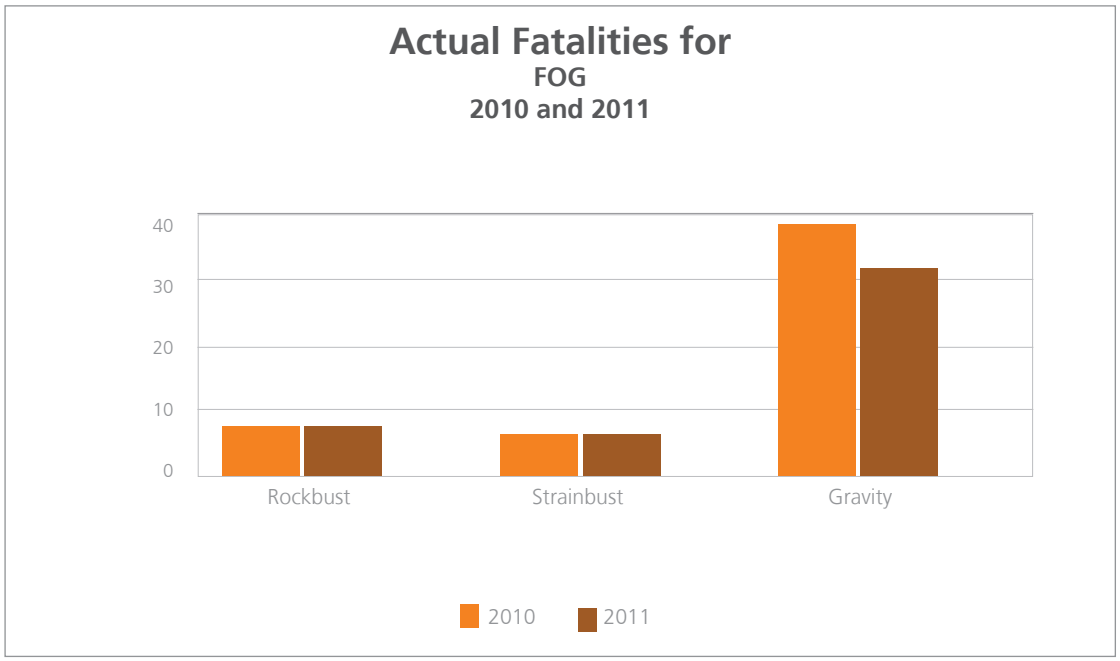
There has been a 19% improvement regarding Fall of Ground fatalities, from 48 to 39 actual fatalities during 2011. In addition, there has been a reduction in explosives and fires of about 20% and 100% respectively during the period under review. Although there was an improvement, as is noted above, there was an increase in the other classifications. This is an indication that more attention is required in these other categories..

The fatalities that have occurred during 2011 have been in the following classifications which are as follows:

- **Fall of Ground**

There were 39 Fall of Ground fatalities and of these the causes were rock burst (4), strain burst (4) and gravity (31). This is an indication that more attention needs to be given to the areas where there is the possibility of gravity Falls of Ground. This is still the highest cause classification of fatal accidents that face the mining industry at a total of 32%.

GRAPH 5.2.1:
Fall of Ground Fatalities



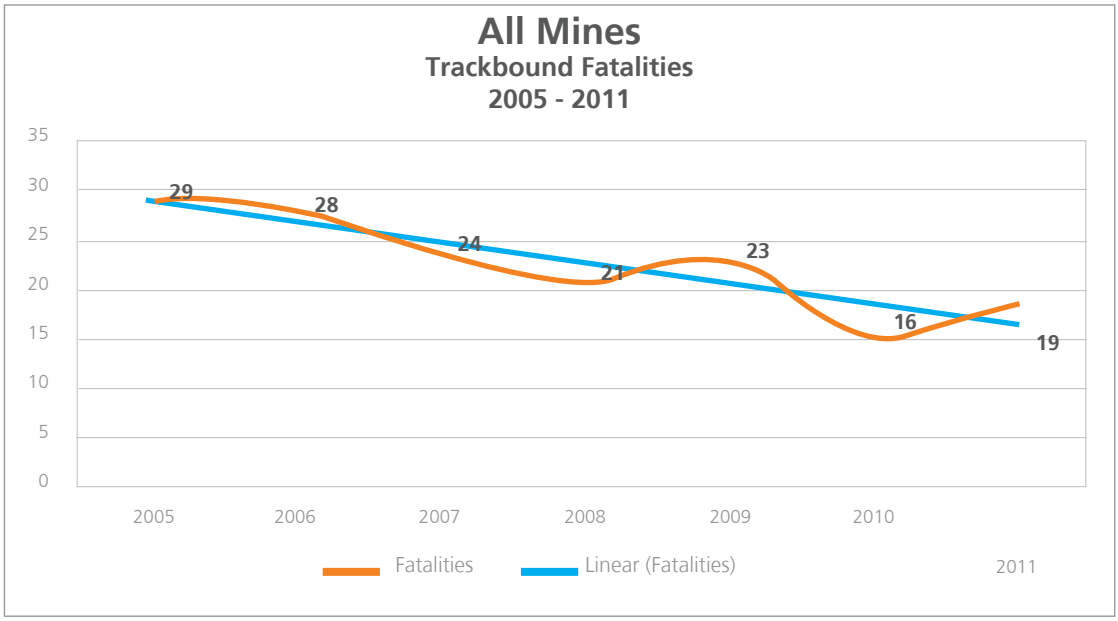
- **Transportation and mining**

There were 38 transportation and mining fatal accidents that occurred in 2011, caused mainly by trackless mobile machines and rail-bound equipment. These accidents are related to collisions of equipment striking either persons or other equipment; striking persons who are in confined areas that are in close proximity to this equipment and with rail-bound equipment is re-railed.

The trend in the trackbound fatalities shows a downward trend since 2005, and all these accidents have occurred at the underground workings of the gold and platinum mines.

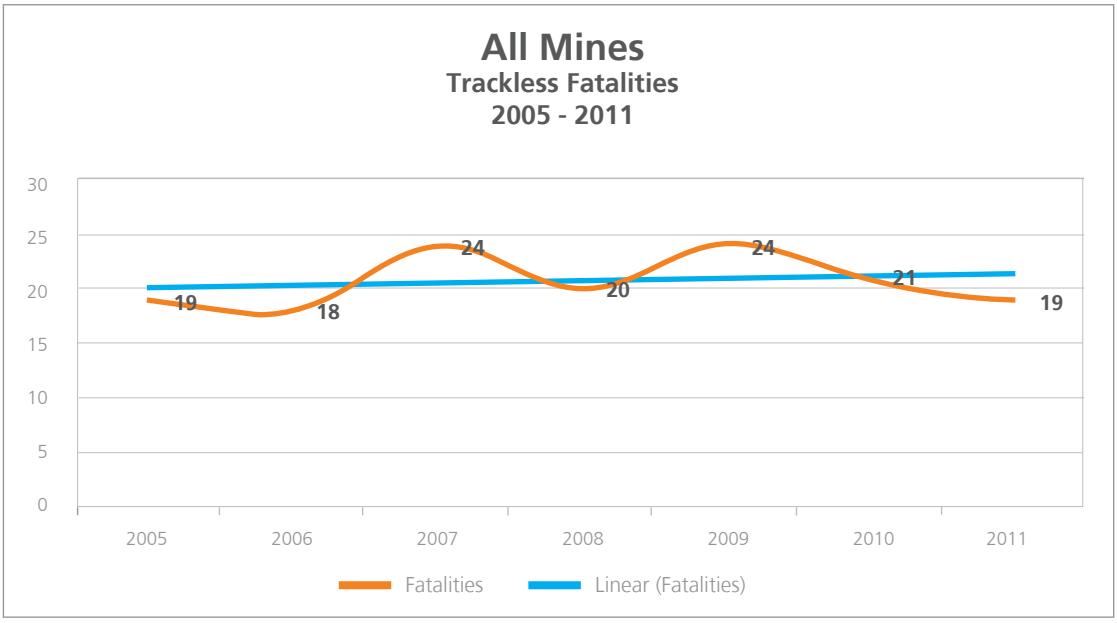
GRAPH 5.2.2(a):

Trackbound Fatalities



GRAPH 5.2.29(b):

Trackless Fatalities



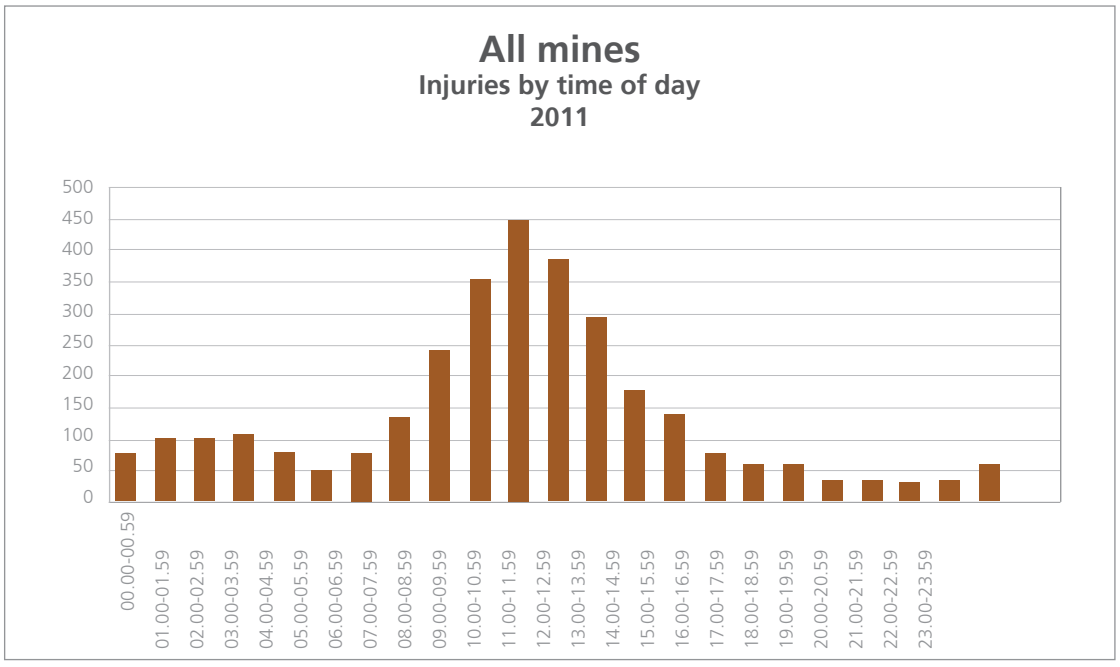
The trackless fatalities are accidents that occur across all the mining commodities. These are found on gold, coal, platinum, diamond and other mines. There has been technical advancement in the area of Vehicle Avoidance Systems; and some mines have successfully installed these systems with measurable results. The employers via their Mine Occupational Safety and Health (MOSH) initiatives are looking at best practices to assist the industry in reducing these types of accidents.

TABLE 5.2.6:
Injuries Classification by Casualty Classification – All Mines

Actual fatalities by classification:2010 - 2011			
	2010 Injuries	2011 Injuries	% change
Fall of ground	720	655	-9.0
Machinery	232	213	-8.2
Transportation and mining	667	634	-4.9
General	1 630	1 611	-1.2
Conveyance accidents	20	28	40.0
Electricity	31	24	-22.6
Fires	24	25	4.2
Explosives	18	17	-5.6
Subsidence or caving	1	0	-100
Occupational Disease	1	0	-100
Heat sickness	16	7	-56.3
Diving Sicknesses	2	0	-100
Miscellaneous	76	85	11.8
Total	**3 438**	**3 299**	**-4.04**

The largest number of injury accidents fall in the classification of "General" and these accidents are caused by falling material, rolling rock, manual handling of material, falling from or in, slipping and falling, burning and scalding, splinters, gas explosions, gas ignitions inhalation, inundation, drowning or struck by. Conveyance and fire related accidents have shown a 40% and 4% increase respectively, but the rest show a decrease.

TABLE 5.2.7:
Accident Classification by Time of Occurrence



When addressing the time of day when the accidents occur it has been noted that the majority of the accidents occur during the day shift when there should be sufficient supervision and oversight.

1.1 Analysis of Accident Rate Trends

The statistics must be interpreted and analysed with a view to highlight problems. The following are some of the topics which must be handled with room for additional analysis that can add value to understanding what, how, where and when people are injured on mines.

TABLE 5.3.1:
Accident Rate Trends by Region

	2010	Fatality rate	2011*	Fatality rate	% change in rates
All mines	**127**	**0.12**	**123**	**0.11**	-8.33
Western Cape	0	0	0	0	0
Northern Cape	4	0.06	3	0.04	-33.33
Free State	22	0.27	17	0.21	-22.22
Eastern Cape	0	0	0	0	0.00
KwaZulu-Natal	3	0.12	2	0.08	-33.33
Mpumalanga	13	0.08	18	0.10	25.00
Limpopo	11	0.11	9	0.08	-27.27
Gauteng	29	0.14	29	0.14	0
Klerksdorp	14	0.09	11	0.07	-22.22
Rustenburg	31	0.14	34	0.14	0

*** Provisional figures because statistics may change due to late reporting and subsequent deaths**

*** A negative (-) figure denotes a decrease in frequency rate**

1.2 Labour Statistics

The Mineral Economics Directorate of the DMR is responsible for collecting and publishing the labour figures for the South African Mining industry.

The labour at work statistics reveals an overall increase of the labour force. There has been a decrease in the Free State, KwaZulu-Natal, and Gauteng; the other regions have shown an increase. The North West region has been divided into two regions, namely: Rustenburg and Klerksdorp. Limpopo region has increased due to the movement of mines from the Mpumalanga Region.

TABLE 5.4.1:
Labour statistics

The labour in the gold, coal, diamonds chrome, Iron ore, manganese and other categories has increased by 7.9%, 6.1%, and 8.6%, 18.1%, 24.8%, 25.94% and 9% respectively.

	2010					2011					
	U/G	Surface	Opencast	At sea	Total	U/G	Surface	Opencast	At sea	Total	% change
All mines	277658	163513	40002	336	481509	281635	173547	44261	340	499783	3.8
Gold	117400	26063	284	0	143747	108735	25255	266	0	134256	-6.60
Platinum	125388	39380	3817	0	168585	134522	43887	3617	0	182026	7.97
Coal	19064	38210	14312	0	71586	20133	41672	14184	0	75989	6.15
Diamonds	1937	6088	2798	336	11159	2538	6609	2689	284	12120	8.61
Copper	733	2518	58	0	3309	779	2404	67	0	3250	-1.78
Chrome	8552	4433	734	0	13719	9878	5384	940	0	16202	18.10
Iron ore	0	8352	10226	0	18578	0	9142	14058	0	23200	24.88
Manganese	2153	2780	757	0	5690	2761	3649	756	0	7166	25.94
Other	2431	35689	7016	0	45136	2289	35545	7684	284	45574	0.97

6. REGIONAL ACTIVITIES OF THE SOUTH AFRICAN MINE HEALTH AND SAFETY INSPECTORATE

6. REGIONAL ACTIVITIES OF THE SOUTH AFRICAN MINE HEALTH AND SAFETY INSPECTORATE

6.1 Regional Operations: Coal

The Chief Directorate consists of the KwaZulu-Natal, Limpopo and Mpumalanga Regions. The major commodities mined are coal, platinum, gold, copper and industrial minerals. Numerous base minerals are mined and there are a large number of crushers, quarries, brickworks and borrow pits in these regions.

The total number of employees in KwaZulu Natal, Limpopo and Mpumalanga we 142 240 which correspondents to an increase of 8 445 employees or 6% compared to 2010. The regions accounted for 20% of the total employees in the mining sector. The coal sector was the major contributor of the increase in the number of employees about 4 403. It is also important to note that the number of mines increased from 347 in 2010 to 452 in 2011. ESKOM is currently building Medupi and Kusile power stations in Limpopo and Mpumalanga. These figures bode well with the increase of employment in the mining sector. The platinum mine that were in Mpumalanga were transferred to Limpopo to be aligned with the provincial boarders.

Occupational Health Performance

The average for KwaZulu Natal, Limpopo and Mpumalanga occupational % exposure to airborne pollutants per exposure classification band was 9%, 40% and 50% for the respective Heg A, B and C. While the national average for the various Heg was 6%, 22% and 74%.

The average for KZN, Limpopo and Mpumalanga % compliance respirable crystalline silica for 2010 and 2011 was 93% for both years. This means the regions were 4% above average and 2% below the compliance of 95%. It is also important to highlight that Limpopo Achieved 95%, KZN achieved 92% and Mpumalanga at 90%.

The total number of occupational diseases reported in KwaZulu Natal, Limpopo and Mpumalanga were 1039. The occupational diseases cases were; 97 silicosis; 434 PTB; 318 NIHL; 90 CWP; 9 Asbestosis; 31 Silicosis and TB and 60 other diseases.

The coal sector occupational diseases increased by 46% from 356 in 2010 to 521 in 2011. The major increase was due to; NIHL 158 cases and PTB with 249 cases. The mine equipment manufacturers must use technology to reduce noise levels of their equipment. The mining companies must also procure mining equipment which compliant noise levels. PTB is a serious concern in the mining sector due to confined space working environment. The mining companies must improve their case findings and ensure that employees complete their medication course.

Safety Performance

It is with regret to report that there was an increase in the total number of fatalities in the regions from 27 to 29 in 2011. This was a great concern because we failed to achieve the target of at least 20% reduction of fatalities. KwaZulu Natal and Limpopo had a decrease of 33% and 18% respectively. Mpumalanga had an increase of 38%.

The analysis of injured persons showed that 50% of injuries were due to general accidents, 32% due to machinery and transportation system and 9%. The accidents classified under general are: manual handling of national/mineral, slipping and falling, falling in/from and exposure to dust, gas and fennel. More effort must be in eliminating general injuries by importing housekeeping and material handling.

The majority of fatalities were caused by machinery and transportation system. A total of 14 persons were killed or 52% of fatalities were due to this classification. The second highest cause of accidents was general fatalities, which accounted for 21 and rock falls caused 5 fatalities or 17 % of the total. The majority of machinery accidents are preventable through engineering solutions.

Safety Achievements

There are many mines in Mpumalanga and Limpopo that achieved a million and more fatality free shifts and thousand fatality free production shifts. These mines are living proof that mining can be done safely and we want to congratulate them and that the list will become longer. The mines that received awards were: Grootegeluk Colliery; Graspan Colliery; Halfgewonnen Colliery; Forzando Colliery North; Marula Platinum; Modikwa Platinum; Goedehoop Colliery; Bokoni Platinum Mine; Barberton Mines; Woestalleen Colliery; Vuna Colliery; Spitzkop Colliery ; Zibulo Colliery; Landau Colliery; Mooiplaats Colliery; Tselentis Colliery; Dwarsrivier Mine and Greenside Colliery

Illegal Mining

Mpumalanga had established an illicit Mining stakeholder forum consisting of DMR, Department of Home Affairs and Immigration, Directorate: Priority Crime Investigation (Hawks); SAPS Barberton; Crime Intelligence, State Security

Agency, National Prosecuting Authority: Assets Forfeiture Unit, Department of Justice, Local Municipality, Mining companies: Galaxy Gold Reefs Mining Gold, Barberton Mines, Evander Gold Mines, Transvaal Gold Mines Estates and Vantage Goldfields, and Community Policing Forum.

The level of illegal mining has been significantly reduced in the Barberton area due to the great efforts and action taken by all the stakeholders at provincial and national level. In Limpopo 2 police officers in uniform were arrested with platinum worth R1,2 million. In another major conviction 1 person was sentenced to 15 year imprisonment and 4 were sentenced to 10 years imprisonment. We hope that these will act as deterrent to those that are planning to trade with illicit precious metals.

Strategies to improve Health and Safety

The Coal Regional Operations will take the following actions to improve health and safety.

- Convene meetings with company CEO and other stakeholder leadership to improve health and safety.
- Ensure consistent implementation of the enforcement Guideline.
- Promote the use of personnel detection systems and the declaration of working place safe.
- Focus on strategies to reduce noise levels and exposure levels to respirable crystalline silica.
- Improve the quality of audits and inspections
- Mining companies must improve the case finding and treatment of PTB.

6.1.1 Inspections and Audits

Category	Inspections			Audits		
	KwaZulu-Natal	Limpopo	Mpumalanga	KwaZulu-Natal	Limpopo	Mpumalanga
Planned	450	542	947	52	37	488
Actual	393	670	983	31	44	369
% Compliance	87%	124%	104%	60%	119%	76%

The shortfall in inspections and audits is attributed to the current staff complement and availability. The appointment of both the hygiene and medicine inspectors will assist in ensuring achievement of the regional operational objectives. Budget constraints have also been a contributing factor, especially during the January 2011 to March 2011 period.

6.1.2 Total Accidents Reported

Category	Total Accidents Reported		
	KwaZulu-Natal	Limpopo	Mpumalanga
Fatal Accidents	2	9	17
>14 Day Accidents	39	226	288
1 to 13 Day reportable Accidents	43	32	109

Late reporting of accidents and non-reporting of accidents remain a challenge and have a considerable influence on the quality and reliability of the statistics.

The reporting of the "one to 13 days" accidents has improved.

6.1.3 Investigations and Inquiries

Category	Investigations			Inquiries		
	KwaZulu-Natal	Limpopo	Mpumalanga	KwaZulu-Natal	Limpopo	Mpumalanga
Initiated	39	99	339	2	11	40
Completed	20	102	68	0	7	18
% Completed	51%	103%	20%	0%	64%	45%

The delays are caused mainly by the availability of the witnesses and the representatives. With regard to investigations, mines are also encouraged to focus rather on system failures during accident investigations.

Outcomes of the investigations have highlighted, amongst others:

- Failure to identify hazards;
- Risk assessments done haphazardly or not done at all;
- Insufficient illumination;
- Poor use of fall-protection equipment;
- Guards not replaced after maintenance;
- Use of unsafe equipment;
- Insufficient barricading;
- Poor housekeeping/ incorrect stacking of material;
- Failure to secure loads;
- Inadequate engineering design;
- Not adhering to laid-down procedures / practice;
- Inadequate planned maintenance / housekeeping;
- Poor examination / preparation before work commences;
- Poor supervision or no supervision;
- Deviation from standards and procedures;
- Contractor management system inadequate.

6.1.4 Statutory Notices

Category	Section 54 Notices			Section 55 Notices		
	KwaZulu-Natal	Limpopo	Mpumalanga	KwaZulu-Natal	Limpopo	Mpumalanga
Number	115	152	54	108	184	100

Section 54 and 55 instructions were issued on issues relating to:

- Unsafe overhangs.
- Working place inspections not carried out.
- No safety berms erected.
- Availability of personal protective equipment.
- No gas monitoring instruments available.
- Provision and use of checklists.
- Electrical switchgear not locked out.
- Labelling of electrical panels not done.
- Conveyor belt emergency stop mechanisms not in place.
- Conveyor belt without guards/ guards worn out.
- Pre-start sirens not audible/ not installed.
- Use of unsafe lifting equipment.
- Unlicensed operators operating Trackless Mobile Machinery (TMM)
- Blasting procedure not followed.
- Refuge bays not adequately equipped/ not safe to use.
- No stone-dust barriers in place.
- Codes of Practices not revised.
- Dust suppression measures not in place.
- No provision of drinking water and latrine facilities.
- Change-house facilities not available.
- Training not provided for contractors.
- Inadequate supervision.
- TB programme not in place.
- Occupational illnesses not investigated.
- Milestones progress reports not submitted.
- Appointments not in place.
- Hazard Identification and Risk Assessments (HIRA) and Health Risk Assessments not done.

6.1.5 Administrative Fines

Category	Administrative Fines		
	KwaZulu-Natal	Limpopo	Mpumalanga
Number of fines recommended by Inspector	0	0	5
Value recommended	0	0	R 200,000
Number set aside by Principal Inspector	0	0	2
Value set aside	0	0	R 200,000
Number imposed by Principal Inspector	0	0	1
Value of fines imposed	0	0	R 200,000
Appeals	0	0	1
Value of fines paid	0	0	0

6.1.6 Examinations

Category	Blasting Examinations		
	KwaZulu-Natal	Limpopo	Mpumalanga
Examination Boards	0	0	0
Number of Candidates	0	0	0
Certificates Issued	0	0	0

Category	Lampsman Examinations		
	KwaZulu-Natal	Limpopo	Mpumalanga
Examination Boards	0	3	4
Number of Candidates	0	11	7
Certificates Issued	0	10	7

Category	Mine Overseers Examinations		
	KwaZulu-Natal	Limpopo	Mpumalanga
Examination Boards	0	25	37
Number of Candidates	0	248	596
Certificates Issued	0	8	46

Category	Onsetters Examinations		
	KwaZulu-Natal	Limpopo	Mpumalanga
Examination Boards	0	9	2
Number of Candidates	0	44	5
Certificates Issued	0	30	5

6.1.7 Land-use Applications and Complaints

Category	Township Development		
	KwaZulu-Natal	Limpopo	Mpumalanga
Received	33	111	52
Completed	32	111	64
% Completed	97%	100%	123%

Category	Mining and Prospecting Rights		
	KwaZulu-Natal	Limpopo	Mpumalanga
Received	76	5	101
Completed	47	5	113
% Completed	62%	100%	112%

Category	Closure Certificates		
	KwaZulu-Natal	Limpopo	Mpumalanga
Received	2	97	3
Completed	3	96	3
% Completed	150%	99%	100%

Category	Environmental Management		
	KwaZulu-Natal	Limpopo	Mpumalanga
Received	40	265	20
Completed	32	265	18
% Completed	80%	100%	90%

Category	Complaints		
	KwaZulu-Natal	Limpopo	Mpumalanga
Received	2	5	20
Completed	2	4	13
% Completed	100%	80%	65%

6.2 Regional Operations: Gold and Platinum

Topical Issues and Matters of Interest

The Gold and Platinum Chief Directorate is made up of the North-West, Gauteng and Free State regions. A wide variety of minerals is mined in these regions with gold and platinum group metals being the main commodities. Owing to diminishing ore reserves, some mines are already planning to go deeper to increase the life of the mine.

The Regional Operations: Gold and Platinum labour force is approximately 350 000 and represents about 70% of the mining industry's labour force in South Africa. Despite record-high commodity prices the mining industry is still struggling to create new jobs as it had anticipated.

The North-West region has been split into two new regions: Klerksdorp and Rustenburg. A new Principal Inspector of Mines was appointed in September 2011 to be in charge of the Rustenburg region. The combined labour force of both regions is about 210 000 with about 140 000 in Rustenburg.

Unfortunately, the Principal Inspector of Mines for Free State, Mr. Joseph Tsoeute passed away in a car accident on 27 February 2012.

Acid Mine Drainage

The rising water levels in the Witwatersrand basin compartments remain a critical concern. The pumping of water from the mine voids in the Central Basin, which extends from Roodepoort to Boksburg, ceased in October 2008. The water has been rising steadily since then and is now some 359 metres below surface at the South West Shaft of ERPM where pumping was last carried out. The water in the basin is currently rising at approximately 0, 35 metres per day.

Central Rand Gold has a mining right over much of the Central Rand and is planning to mine at a depth of 300 metres below surface. The decision with regard to the pumping and treatment of the water from the basin and the apportionment of costs is required as a matter of urgency. A plant to treat 30 Ml per day of mine water from the Western Basin is under construction in Randfontein and is due to be commissioned in April 2012.

As reported last year, Pamodzi Gold Mine (Grootvlei), which is in provisional liquidation, ceased pumping operations during January 2010. The water level in the basin was then being measured at Sub Nigel No 1 Shaft until that shaft had to be abandoned in October 2011 because of the rising water. It is rising at 0, 36 m per day and is currently 563 metres below surface at that shaft.

Occupational Health

There was a worrying trend in cases of medical or natural deaths at mines mainly as a result of heart attacks. TB and the effects of HIV and AIDS, Silicosis and NIHL are the main occupational health challenges facing the mining industry. Although there is minimal improvement realised in dealing with occupational diseases, the effort and level of success by these mines is commendable and all the mines are encouraged to develop and implement similar programmes.

Occupational health issues are still the main challenge facing the mining industry and will take a collaborative and well-dedicated effort to overcome. The regional working groups have been formed and maintained by the Inspectorate to support and monitor progress made by the mines on the health milestones.

Occupational Safety

During the period under review the Regional Operations reports: Gold and Platinum experienced 88 fatalities compared to 96 in 2010. This is a marginal 8% improvement compared to the results achieved in 2010. The majority of these accidents were repeat, foreseeable and preventable accidents.

Falls of Ground and Transportation and Mining (T & M) still constitute the majority of accidents. Regrettably, two seismically-induced Fall of Rock accidents at Driefontein and Kloof Gold Mines respectively resulted in the deaths of two persons in each mine. The Gold and Platinum Regional Operations achieved about 17% reduction in the injuries from 2 770 in 2010 to 2 294 in 2011.

The engagement and cooperation of the Inspectorate, employers and unions on mine health and safety is continuously encouraged and promoted. However, the inspectors are also expected and encouraged to take critical actions where necessary to ensure compliance with the provisions with the Mine Health and Safety Act.
The respective working places and mines have been stopped where serious contraventions have been revealed during inspections and accident investigations. The mines had to do a presentation giving details on the steps they will be taking to prevent recurrence.

Illegal Mining

With the cessation of mining at the Pamodzi and Gravelotte Gold Mines in Gauteng region, illegal mining activities have become a major problem for the region. A number of illegal miners were fatally injured during the year in Gauteng, Free State and North West (Klerksdorp) regions. In each case the Body Recovery presented the Department with logistical problems and required the assistance of the Mine Rescue Services.

The Free State and Gauteng regions have already established Illegal Mining Forums to attempt addressing challenges related to illegal mining operations. Illegal mining remains the biggest threat to employee health and safety at the mines. Appropriate measures, including effective access control and eliminating corruption at the mines, are continuously encouraged

Challenges

Although positive milestones have been achieved on the way to zero harm of the employees, occupational health issues are still the main challenge facing the mining industry. Also, the fatalities and injuries are still high, and the recurring fatal accidents at most of the mines are still of great concern. A significant effort is still needed for achieving the 2013 Mine Health and Safety Summit milestones.

High staff turn-over remains a challenge for the Mine Health and Safety Inspectorate at large, and this is mainly due to skills shortages in the mining sector.

Achievements

For the first in five years no disaster-type accident was reported in 2011. A substantial number of mines celebrated their million fatality-free shifts and their thousand fatality-free production shifts during the period under review. A change in attitude in the industry is generally noticed and this encouragingly should result in the revived focus and commitment on health and safety matters.

The level of commitment and effort that has been demonstrated by all Gold and Platinum Regional Operations staff is encouraging and commendable. The Regional Operations Manager extends his gratitude to the staff for their hard work in the past in their contribution to the improved overall compliance with legal requirements at the mines.

Strategies for Improving Status Quo

The Gold and Platinum Regional Operations will continue to maintain the following actions to ensure sustainable health and safety improvements:

- Engagements with the respective stakeholders to ensure that we are well informed on the health and safety challenges and that a common approach is adopted.
- The regional Tripartite Forums have been formed and maintained by the Inspectorate to support and monitor progress made by the mines on health and safety milestones.
- The discussions with CEOs and other stakeholder leadership to ensure that appropriate measures are put in place to enhance health and safety in mines.
- The implementation of the DMR and Inspectorate policies and procedures to ensure that a common approach is adopted by all the regions.
- The promotion of the Mine Health and Safety Council's initiatives for enhancing health and safety.
- The involvement and support of the respective mines' health and safety initiatives.
- Proactive measures for capacity building within the Inspectorate and to provide the necessary assistance to our staff to achieve that goal.
- Promotion and enforcement of the provisions of the Mine Health and Safety Amendment Act.
- The respective working places and mines are stopped where serious contraventions have been revealed during inspections and accident investigations.

A brief report on the activities of the Regional Inspectorate with respect to challenges and progress, if any, regarding the following:

6.2.1 Inspections and Audits

Category	Inspections			Audits		
	Free State	Gauteng	North West	Free State	Gauteng	North West
Planned	1 086	2 254	1 371	60	58	76
Actual	769	1 554	1 281	85	57	69
% Completed	71	69	93	142	100	91

6.2.2 Total Accidents Reported

Category	Total Accidents Reported		
	Free State	Gauteng	North West
Fatal Accidents	18	29	45
> 14 Day Accidents	412	722	1557
1 to 13 Day Reportable Accidents	327	410	994

6.2.3 Investigations and Inquiries

Category	Investigations			Inquiries		
	Free State	Gauteng	North West	Free State	Gauteng	North West
Initiated	223	210	67	24	28	11
Completed	140	211	67	38	20	40
% Completed	63	100	100	158	71	78

6.2.4 Statutory Notices

Category	Section 54 Notices			Section 55 Notices		
	Free State	Gauteng	North West	Free State	Gauteng	North West
	336	207	321	302	891	223

6.2.5 Administrative Fines

Category	Total Accidents Reported		
	Free State	Gauteng	North West
Number of fines recommended by Inspector	10	0	18
Value recommended	R 260 000	0	R1.5 million
Number set aside by Principal Inspector	1	0	6 set aside and still 10 under consideration
Value set aside	0	0	0
Number imposed by Principal Inspector	6	0	2
Value of fines imposed	R 260 000	0	R 1.5 million
Appeals	6	0	0
Value of fines paid	R 0	0	R 1.5 million

6.2.6 Examinations

Category	Blasting		
	Free State	Gauteng	North West
Examination Boards	0	0	10
Number of Candidates	0	0	108
Certificates Issued (Duplicates)	57	0	42

Category	Lampsman		
	Free State	Gauteng	North West
Examination Boards	3	7	13
Number of Candidates	3	13	88
Certificates Issued	3	13	42

Category	Mine Overseers		
	Free State	Gauteng	North West
Examination Boards	27	56	36
Number of Candidates	407	681	418
Certificates Issued	46	49	43

Category	Onsetters		
	Free State	Gauteng	North West
Examination Boards	26	20	26
Number of Candidates	36	188	192
Certificates Issued	34	77	139

6.2.7 Land-use Applications and Complaints

Category	Township Development		
	Free State	Gauteng	North West
Received	37	82	25
Completed	36	82	25
%	97	100	100

Category	Mining and Prospecting Rights		
	Free State	Gauteng	North West
Received	115	46	81
Completed	122	50	81
%	105	108	100

Category	Closure Certificates		
	Free State	Gauteng	North West
Received	28	14	56
Completed	28	7	56
%	100	50	100

Category	Environmental Management		
	Free State	Gauteng	North West
Received	69	37	62
Completed	75	31	62
%	109	84	100

Category	Complaints		
	Free State	Gauteng	North West
Received	59	22	18
Completed	59	22	18
%	100	100	100

6.3 Regional Operations: Other Mines and Offshore

General

The Chief Directorate: Other Mines and Off-shore Operations is responsible for the Cape regions comprising the Eastern Cape, Western Cape and the Northern Cape effectively covering the largest percentage of the surface area of South Africa. These regions, compared to others, employ less labour and the Eastern and Western Cape regions are surface operations with the exception of a coal mining operation in the Indwe area of the Eastern Cape.

Mining activity occurs over a range of commodities which includes base metals, industrial minerals, diamonds, salt, sand and petroleum products. Mining operations occur on surface, underground and off-shore.

Achievements

The Chief Directorate through the regional offices has conducted a total of 140 audits, 1 396 inspections 83 investigations and three inquiries against a target of 124 audits, 1482 inspections, 83 investigations and three inquiries respectively. This translates into the achievement of 110% audits, 94% inspections, 91% investigations and 100% inquiries.

The underachievement relates to staffing and resource issues in the regional offices. With the exception of the Northern Cape, the Western and Eastern Cape regional offices operated with a full complement of staff for the period under review. The Northern Cape does not have certificated mine equipment inspectors; however two learners are to study toward obtaining the GCC. Existing vacant posts are to be re-advertised.

The Northern Cape region recorded three fatalities for the period under review against four during the previous reporting period. The Western Cape recorded no fatalities for the second successive year. The Eastern Cape recorded no fatalities for the third successive year.

Challenges

Resources remain a challenge in the areas of staff, finances as well as equipment. Regions battle to attract personnel with the requisite mining skills, which is mainly due to uncompetitive salaries offered by the Public Sevice. Since the Cape regions cover the greatest geographical area in South Africa, it requires inspectors to be away from their permanent work stations for lengthy periods of time; and not having the necessary state-of-the-art, portable equipment presents challenges with respect to communication and access to information.

Accurate, timeous and reliable data for both health and safety remains a challenge because it complicates determining the effect the Inspectorate will have when enforcing strategies. This challenge is currently being addressed by the MHSI. Also, the Inspectorate's new management information system introduced needs additional attention before significant progress can be reported. A Steering Committee has been established to take this matter further.

The Mining Qualifications Authority has been requested to be more visible in the Cape regions due to a lack of sufficient training facilities.

Topical Issues and Matters of Interest

By and large there is strong willingness by mine owners and managers in the regions to comply with the requirements of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996). Inspectors have also contributed to a large extent in encouraging owners / managers not just to comply but to improve health and safety cultures on the mines; and the fruits of this are evident in the accident statistics.

There has been a sharp increase in ATM bombings in the Cape Town Metropole. Investigations indicate that commercial explosives from mines are being used. Mines have been put under strict instruction to improve storage and control of explosives, especially accessories, very diligently.

As a consequence of the ongoing depressed global and local economy, coal mining operations in the Eastern Cape area of Indwe have not progressed as expected. Open Cast operations have been extended and underground mining operations are now expected to commence in the later part of 2012.

Illegal mining operations have increased in all the Cape regions. Inspectorate staff have met with District Municipalities and the National Prosecuting Authority in order to develop startegies to address this serious matter. Where these operations are found it has been recommended that they be reported to the local SAPS as criminal offences.

Strategy to improve status Quo

A total of 96 and 257 section 54(1) and 55 notices respectively were issued during the period of review. Owing to staff shortages, insufficient staff complements and long distances required to be travelled to perform follow up inspections these are not always possible. Four Administrative Fines were recommended and one set aside.

Regional staff continue to participate in structures established to deal with challenges relating to all mining issues as well as those related to training and capacity building in the mining industry. Tri-partite meetings have also been introduced in all three regions.

Ministerial Audits which involve the auditing of mandatory codes of practice issued in terms of section 9 of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996) commenced in December 2011 and are due for completion in June 2012. Arising from these audits many mines were issued with section 55 as well as section 54 instructions included in the figures reported above.

Inspectors are continually motivated to influence mines to improve the quality and effectiveness of risk management, training and safety based behaviour.

6.3.1 Inspections and Audits

Category	Inspections			Audits		
	Eastern Cape	Northern Cape	Western Cape	Eastern Cape	Northern Cape	Western Cape
Planned	344	586	552	44	48	32
Actual	391	524	481	60	48	32
% Compliance	114	89	87	136	100	100

6.3.2 Total Accidents Reported

Category	Total Accidents Reported		
	Eastern Cape	Northern Cape	Western Cape
Fatal Accidents	0	3	0
> 14 Day Accidents	6	64	21
1 to 13 Day Reportable Accidents	12	39	40

6.3.3 Investigations and Inquiries

Category	Investigations			Inquiries		
	Eastern Cape	Northern Cape	Western Cape	Eastern Cape	Northern Cape	Western Cape
Initiated	6	64	13	0	3	0
Completed	6	64	13	0	3	0
Total	6	64	13	0	3	0
% Completed	100	100	100	100	100	100

6.3.4 Statutory Notices

Category	Section 54 Notices			Section 55 Notices		
	Eastern Cape	Northern Cape	Western Cape	Eastern Cape	Northern Cape	Western Cape
	11	83	2	153	26	78

6.3.5 Administrative Fines

Category	Total Accidents Reported		
	Eastern Cape	Northern Cape	Western Cape
Number of fines recommended by Inspector	Nil	Nil	4
Value recommended			R 60 000
Number set aside by Principal Inspector			1
Value set aside			0
Number imposed by Principal Inspector			3
Value of fines imposed			R 60 000
Appeals			0
Value of fines paid			R 60 000

6.3.6 Examinations

Category	Blasting		
	Eastern Cape	Northern Cape	Western Cape
Examination Boards	0	0	0
Number of Candidates	0	0	0
Certificates Issued	0	0	0

Category	Lampsman		
	Eastern Cape	Northern Cape	Western Cape
Examination Boards	0	0	0
Number of Candidates	0	0	0
Certificates Issued	0	0	0

Category	Mine Overseers		
	Eastern Cape	Northern Cape	Western Cape
Examination Boards	0	4	0
Number of Candidates	0	21	0
Certificates Issued	0	2	0

Category	Onsetters		
	Eastern Cape	Northern Cape	Western Cape
Examination Boards	0	1	0
Number of Candidates	0	2	0
Certificates Issued	0	7 (5 duplicates)	0

6.3.7 Land-use Applications and Complaints

Category	Township Development		
	Eastern Cape	Northern Cape	Western Cape
Received	18	0	104
Completed	24	0	104
%	133		100

Category	Mining and Prospecting Rights		
	Eastern Cape	Northern Cape	Western Cape
Received	156	142	40
Completed	159	142	40
%	102	100	100

Category	Closure Certificates		
	Eastern Cape	Northern Cape	Western Cape
Received	34	76	39
Completed	33	69	39
%	97	92	100

Category	Environmental Management		
	Eastern Cape	Northern Cape	Western Cape
Received	115	43	36
Completed	114	43	36
%	99	100	100

Category	Complaints		
	Eastern Cape	Northern Cape	Western Cape
Received	4	10	2
Completed	4	10	2
%	100	100	100

7. ANNEXURES

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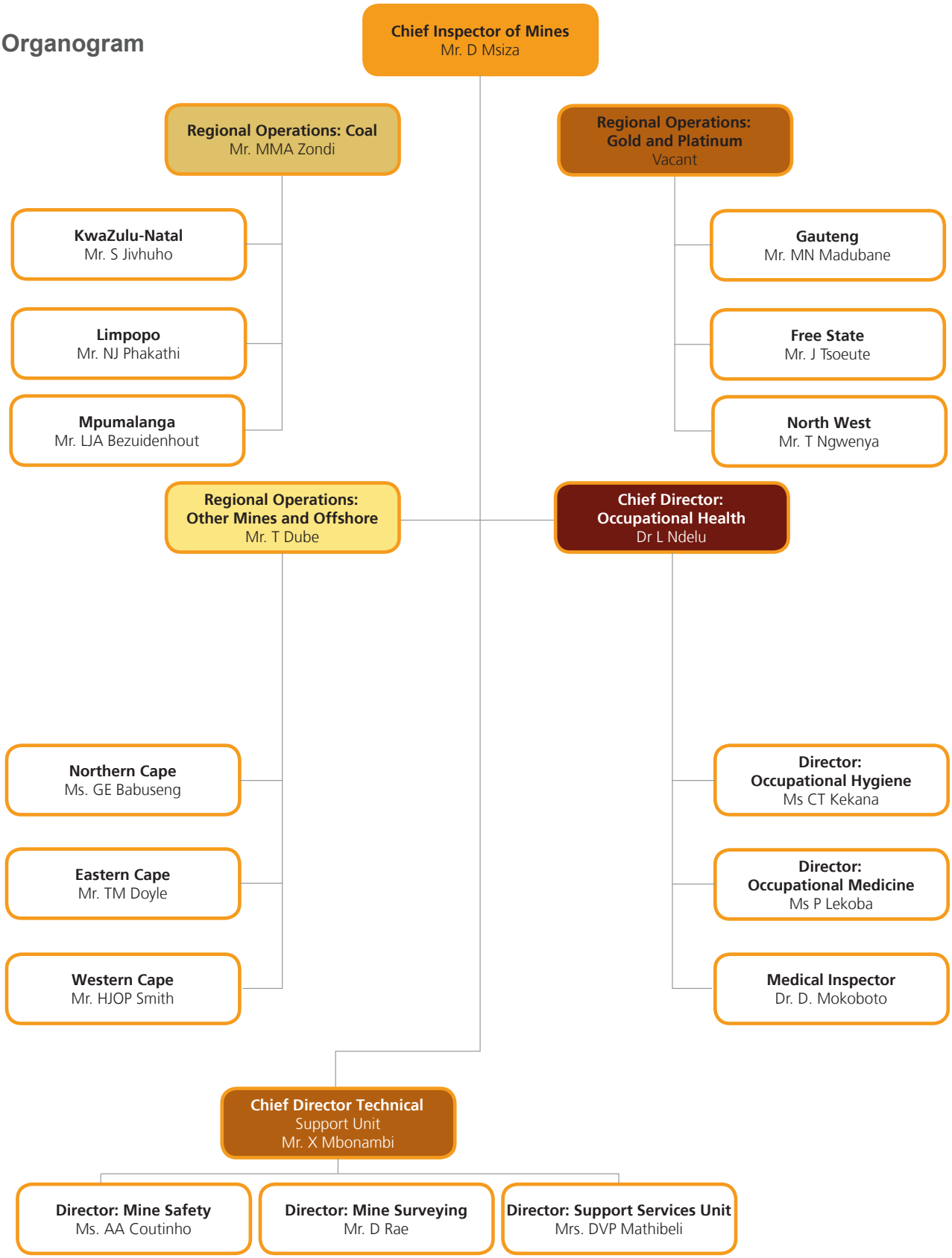
7.1 Organogram



7.2 Contact List

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7.3 Acronyms

ACOSH	Advisory Council for Occupational Health and Safety
AIDS	Acquired Immune Deficiency Syndrome
AQI	Air Quality Index
ASPASA	Aggregate and Sand Producers' Association of South Africa
CIOM	Chief Inspector of Mines
COAD	Chronic Obstructive Airway Disease
COP	Code of Practice
CSIR	Council for Scientific Industrial Research
CSM	Cold Stress Management
DG	Director-General
DMR	Department of Mineral Resources
EE	Employment Equity
EMP	Environmental Management Plan
EMPR	Environmental Management Programme Report
GIS	Geographic Information Systems
GTT	Government Task Team on Mine Closure and Water Management
HDI	Historically Disadvantaged Individuals
HDSA	Historically Disadvantaged South Africans
HIV	Human Immune Virus
JIPSA	Joint Initiative for Priority Skills Acquisition
KRA	Key Responsibility Areas
LDC	Legal Drafting Committee
MBOD	Medical Bureau of Occupational Diseases
MHSA	Mine Health and Safety Act, 1996
MHSC	Mine Health and Safety Council
MHSI	Mine Health and Safety Inspectorate
MOHAC	Mine Occupational Health Advisory Committee
MOSH	Mine Occupational Safety and Health
MPRDA	Mineral and Petroleum Resources Development Act, 2002
MQA	Mining Qualification Authority
NCMMA	Northern Cape Mine Managers' Association
NIHL	Noise Induced Hearing Loss
NIOH	National Institute of Occupational Health
NMPS	National Minerals Promotion System
NOSHCON	National Occupational Safety and Health Conference
NQF	National Qualifications Framework
NSP	National Strategic Plan
NUM	National Union of Mineworkers
OEL	Occupational Exposure Limit
OHS	Occupational Health and Safety
OMP	Occupational Medical Practitioner
PGM	Platinum Group Metals
PTB	Pulmonary Tuberculosis
RMDEC	Regional Mining Development and Environment Committee
SABS	South African Bureau of Standards
SADC	Southern African Development Community
SAMINDEX	South African Minerals Information Database
SAMODD	South African Mines Occupational Diseases Database

SAMRASS	South African Mines Reportable Accidents Statistical System
SANAC	South African National Aids Council
SAPS	South African Police Service
SAQA	South African Qualifications Authority
SDM	Systems Development and Maintenance Directorate
SIMRAC	Safety in Mines Research Advisory Committee
SMME	Small Micro and Medium Enterprises
STI	Sexually Transmitted Infections
TB	Tuberculosis
TRG	Technical Research Group
TTG	Technical Task Group
UASA	United Associations of South Africa

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