MINERAL RESOURCES
MINE HEALTH AND SAFETY INSPECTORATE

ANNUAL REPORT 2012-2013

mineral resources
Department:
Mineral Resources
REPLUBLIC 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 Mining Health and Safety Inspectorate (MHSI), compiled as required by Section 49(1)(j) of the Mining Health and Safety Act (MHSA) 1996 (Act No 29 of 1996) as amended.

The MHSI established in terms of the MHSA, 1996 - as amended - 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 state, employee and employer organisations. The Council was established to advise the Minister on health and safety issues and to promote 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 facilitating education and training in the mining industry. The activities of the above mentioned two bodies are intricately interlinked with that of the MHSI and their accounts are captured in their respective reports.

GENERAL INFORMATION

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GENERAL INFORMATION

1.1 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 MHSI for the 2012/13 reporting period. This report is in accordance with the requirements of Section 49(1) (j) of the MHSA (Act No. 29 of 1996), as amended.

Yours sincerely

D Msiza
Chief Inspector of Mines
Mine Health and Safety Inspectorate

1.2 CHIEF INSPECTOR OF MINES' OVERVIEW/EXECUTIVE SUMMARY

Introduction

It is my honour and pleasure to present this report on the state of health and safety in the South African mining industry and the activities of the MHSI for the 2012/13 financial year.

Staffing

The establishment of the Inspectorate provides for 317 posts of which 253 are currently filled and 64 are vacant. The demographics of the Inspectorate at 31 March 2013 were as follows:

Human Resource Development

GENDER	AFRICAN	WHITE	ASIAN	COLOURED	TOTAL
Male	103	50	0	0	153
Female	80	14	0	6	100

Implemented Training

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

- A total of 71 MHSI officials attended technical and non-technical training courses.
- Three managers attended Project Khaedu as well as advanced management development programmes.

Training Interventions

- **Assistant Inspector Programme**

A total number of 14 assistant inspectors - with a(n) electrical/mechanical engineering tertiary qualification - were undergoing inspector training at various regional offices of the Department at the beginning of the financial year. This was in preparation for permanent appointment as inspectors of mines on acquisition of the Government Certificate of Competency (GCC).

One of the 14 assistant inspectors obtained the GCC during the reporting period and has been permanently employed by the Department. The remaining 13 are in the process of acquiring their GCC.

- **Learner Inspector Programme**

The Department had five learner inspectors at the beginning of the reporting period. These learners, who had initially been recruited as bursary holders, completed their undergraduate qualifications during various stages and were then placed for mine experiential training at a mining site.

Three learner inspectors completed their mine experiential training in surveying, mining engineering and electrical engineering during the reporting period. They will now be placed in various regional offices of the Department to prepare them for their GCC.

The other two mining engineering learner inspectors are still busy with their mine experiential training at a mining site.

- **Bursary Scheme**

The Department had 20 bursary holders during the reporting period. Five were issued bursaries by the Department of Mineral Resources (DMR) while the other 15 are currently sponsored by the MQA. The bursaries were issued to previously disadvantaged students in the following fields: electrical engineering (heavy current), mechanical engineering, mining engineering and mine surveying.

Two out of the five mine surveying bursary holders have completed their qualifications and started their practical underground training in preparation for acceptance as GCC candidates. Of the remaining bursary holders, two are expected to complete their studies at the end of 2013 and one in 2014.

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 2012, 112 mine workers were reported dead compared to 123 in 2011, a 9% improvement on the actual numbers of mine workers who died year-on-year. Also, when comparing fatality frequency rates per million hours worked between 2011 and 2012, there has been a 9% improvement from 0.11 to 0.10.

The major gold and platinum mines are the main contributors to accidents and loss of life.

There has been a 35% reduction in the total number of FOG accidents, from 40 to 26. Transport and mining fatalities decreased by about 24%, from 38 in 2011 to 29 in 2012. Requiring attention in the coming year are general accidents, which include fall of material, manual handling, falling in, inundation and drowning.

Disaster-type Accidents

Five mine workers died after being exposed to harmful smoke caused by the underground mine fire at Goldfields Driefontein Gold Mine in Gauteng.

HIV/Aids and Occupational Health

The DMR, through the MHSC, has finalised the HIV and TB reporting form, which was a commitment made during the 2011 Health and Safety Summit. It was developed to address the scourge of these diseases in the mines.

Mining companies are expected to report annually to the DMR on their HIV and TB programmes. These reports will assist the DMR, and provide an understanding of the diseases burdening the mining sector and inform the interventions in awareness, prevention and treatment. Several mining companies are participating in HIV counselling and testing (HCT) campaigns and mine workers have heeded the call to test for TB and HIV.

Health and Safety improvement measures

The MHSI will continue to implement measures to enhance health and safety in the mining sector. These include enforcing the provisions of the legislation through inspections, audits and issuing of compliance instructions where necessary.

The Department has, in collaboration with the MHSC, finalised the review of the 'Guidance note on the management of TB in South African mines'.

The 'Guidelines on minimum standards of fitness to perform work in a mine and the prevention of flammable gas and coal dust explosions in collieries' were reviewed during the reporting period and two new guidelines developed, namely 'Incapacity due to ill health and injury' and the 'Compilation of a mandatory code of practice for risk-based emergency care'.

The 'Regulations on reporting of occupational diseases' have been finalised and will be gazetted during 2013/14.

The DMR and its social partners have commissioned projects, through the MHSC, leading to best practice on preventing noise-induced hearing loss (NIHL), silicosis, TB and HIV, as these are major diseases in the mining industry.

Key Policy Developments and Legislative Changes

The MHSA (Act 29 of 1996) is being amended to improve its current construct. This will advance the efficiency and efficacy of the legislation in achieving the primary objective of creating a mining and minerals regulation environment that conforms to regulatory best practice.

The review of the MHSA seeks:

- To strengthen enforcement provisions;
- To streamline administrative processes;
- To reinforce offences and penalties;
- To remove ambiguities in certain definitions and expressions, and
- To harmonise the Act with other laws, in particular the MPRDA 2002.

The amendment Bill also seeks to re-insert sections 50(7A) and 86A, which were not proclaimed when the 2008 Amendment Act took effect, after stakeholders raised concerns regarding their constitutionality and legality.

D MSIZA
CHIEF INSPECTOR OF MINES

legislative *mandate*

The MHSI was established in terms of the MHSA, 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 mine employees and communities affected by mining operations.

mission *statement*

The MHSI strives for a safe and healthy mining industry 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 law in the mining sector.

PROGRAMME PERFORMANCE

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2.1 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 mine employees and people affected by mining activities.'

CUSTOMER AND STAKEHOLDER

TRANSFORMED MINERALS SECTOR (STAKEHOLDER)						
Contribute to Skills Development						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
Reviewed and implemented certificate of competency model to improve pass rate	1	1	0	**G**	Achieved. Verification source: cover page of certificate of competency model report.	

Promote Health and Safety						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% adherence to the enforcement guidelines	100	100	0	**G**	Achieved. There were 391 section 54 and 538 section 55 instructions issued and six administrative fines imposed. Verification source: summary of statutory instruction reports (section 54 or 55 or admin fines). Calculation: (391/538)*100=100%	
% of enquiries completed (initiated vs. completed)	70	70	0	**G**	Achieved. The average percentage achieved is 70%. There were 14 enquiries completed and 20 enquiries initiated. Calculation: (14/20)*100=70%. Verification source: summary of enquiry reports.	
% of investigations completed (initiated vs. completed)	87	80	7	**G**	Achieved. Performance was 7% above target. There were 592 investigations completed and 683 investigations initiated. Calculation: (592/683)*100=100%. Verification source: summary of investigation reports.	
% reduction in the number of dangerous occurrences	5	20	(15)	**R**	Not achieved. There were 325 dangerous occurrences in 2011/12 compared with 340 in 2012/ 13. Calculation: (325-340)/325=5%. Non-performance was due to an increase in dangerous occurrence reported by gold and coal mines. Verification source: SAMRASS report.	More investigations and audits to be conducted on the causes of these dangerous occurrences, focusing on gold and coal mines. The investigations will assist in creating strategies to reduce the number of incidents.

Measure	Actual	Target	Variance	Status	Performance Analysis	Recommendations
% reduction in the number of occupational fatalities	24	20	4	G	Achieved. There were 127 fatalities in 2011/12 compared with 97 in 2012/13. Calculation: (127-97)/127=24%. Verification source: SAMRASS report.	
% reduction in the number of occupational injuries	5	20	(15)	R	Not achieved. There were 3 173 injuries in 2011/12 compared with 3 319 in 2012/13. Non-performance was as the result of a sharp increase in the number of injuries caused by general occurrences and shortage of staff. Calculation: (3319-3173)/3173= 5%. Verification source: SAMRASS report.	More investigations and audits to be conducted on general types of injuries, which will assist in creating strategies to reduce the number of injuries.
% reduction in employee overexposure to noise occupational exposure limit (OEL) to reduce NIHL	38	10	18	G	Achieved. Total percentage improvement is = quarter 2 - quarter 1 (73337 - 101311/73337*100), which is 38%. Verification source: noise milestone indicator report.	
% reduction of employee overexposure to silica occupational exposure limit (OEL) to reduce silicosis	22	10	12	G	Achieved. Total percentage improvement in A category = quarter 2 - quarter 1 (313 - 4036/4036*100), which is 22%. Total percentage improvement in B category = quarter 2 - quarter 1 (8 566 - 10756/10756*100), which is 20%. Verification source: silica milestone indicator report.	
Legislative framework reviewed	1	1	0	G	Achieved. The MHSA Amendment Bill has been completed and certified by the state law adviser and presented to the DG cluster as part of the parliamentary process. Verification source: cover page of reviewed legislation.	

Measure	Actual	Target	Variance	Status	Performance Analysis	Recommendations
MHS annual report submitted	1	1	0	G	Achieved. Report submitted to parliament. Verification source: Cover page of annual performance report.	
Number of audits conducted (cumulative)	421	396	25	G	Achieved. Calculation: total fourth quarter of 113 plus total third quarter of 89 plus total second quarter of 108 plus total first quarter of 111 = 421. Verification source: summary of audit report.	
Number of inspections conducted (cumulative), individual audits included	8632	8000	632	G	Achieved. Calculation: total fourth quarter of 2 528 plus total third quarter of 1 939 plus total second quarter of 2 186 plus total first quarter of 1 979 = 8 632. Verification source: summary of inspections report.	
Number of tripartite workshops conducted	60	40	20	G	Achieved. Calculation: total fourth quarter of 15 plus total third quarter of 13 plus total second quarter of 16 plus total first quarter of 16 = 60. Verification source: summary of tripartite workshops conducted.	
Quarterly occupational health and safety (OHS) newsletters published	4	4	0	G	Achieved. Calculation: total fourth quarter of one plus, third quarter of one plus second quarter of one plus first quarter of one = four. Verification source: cover page of newsletter(s).	

EFFICIENT, EFFECTIVE AND DEVELOPMENT-ORIENTATED DEPARTMENT (INTERNAL PROCESSES)						
Develop and Review Internal Processes						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% of identified internal processes developed, reviewed and implemented	100	100	0	G	Achieved. Reviewed the guideline for mining within 100 metres of building etc. that may require protection. Verification source: cover page of policies, procedures, instructions or guidelines developed, reviewed, implemented.	
Implement Service Level Agreements (SLAs)						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% adherence to existing service-level agreements (SLAs)	100	100	0	G	Achieved. Monthly training progress reports of DMR trainees submitted by Gold Fields Business and Leadership Academy. Verification source: training progress reports.	

Improve Turnaround Time						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% adherence to prescribed timeframes for administrative tasks	96	100	-4	**Y**	Partially achieved. There were 413 applications received and 397 completed (397/413) = 96%. Reason for non-achievement is the shortage of staff. Verification source: summary of admin registers.	The outstanding tasks will be finalised in the next quarter of the new financial year.
% adherence to prescribed timeframes for CIOM appeals	100	100	0	**G**	Achieved. One appeal to the CIOM received and completed within prescribed timeframe. Verification source: summary of CIOM appeals.	
% adherence to prescribed timeframes for medicals appeals	100	100	0	**G**	Achieved. There were 29 appeals completed and 29 appeals received. Calculation: (29/29) = 100%. Verification source: summary of medical appeal register.	
% adherence to prescribed timeframes for MPRDA applications	100	100	0	**G**	Achieved. There were 861 applications completed versus 857 received. Calculation: (861/857) =100%. Verification source: summary of admin register.	

EFFICIENT, EFFECTIVE AND DEVELOPMENT-ORIENTATED DEPARTMENT (LEARNING AND GROWTH)						
Attract , develop and retain skills						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% reduction in staff turnover	1	2	(1)	Y	Partially achieved. The difference in the number of people employed versus people who left employment was 15 in the first quarter of 2012. The difference was four in the second quarter, six in the third quarter and five in the fourth quarter. Reason for non-achievement is inability to recruit suitable candidates to fill vacancies, due to government salary packages compared to those of the private sector. Verification source: human resources (HR) quarterly performance report.	Continue with adverts and interviews to improve staff turnover.
Improved numbers identified employment equity (EE) categories	108	115	(7)	Y	Partially achieved. The target for the first quarter was 102, the performance for the second quarter was 106, the performance for the third quarter was 100 and the performance for the fourth quarter was 108. Calculation: 108/115 = 94%. Constraint: several submissions for filling of vacancies are still outstanding. Verification source: HR quarterly performance report.	Continue with recruitment of relevant categories.
Number of human resources and development (HRD) initiatives implemented	6	6	0	G	Achieved. The following initiatives were implemented: workplace learning = 2, internships = 12, external bursaries = 20, career planning and talent management = 4. Verification source: attendance register or training reports.	

Facilitate Management and Leadership development						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
Number of management programmes implemented	3	3	0	**G**	Achieved. Courses attended: Project Khaedu, EMPD, and AMDP. Verification source: attendance register or training reports.	
Number of managers completed management courses	10	10	0	**G**	Achieved. Verification source: list of completed courses by officials.	
Filling of funded vacancies						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% reduction in vacancies	2	4	-2	**Y**	Partially achieved. There were 66 vacancies at the beginning of the financial year. Vacancies numbered 67 in the first quarter, 64 in the second quarter; 75 in the third quarter and 60 in the fourth quarter. Calculation: (21%-19%) = 2%. Constraint: several submissions for filling of vacancies are still outstanding and there is a moratorium on filling vacancies. Verification source: HR quarterly performance report.	Adverts and interviews have been conducted and posts will be filled in due course.

EFFICIENT, EFFECTIVE AND DEVELOPMENT-ORIENTED DEPARTMENT (FINANCIAL STEWARDSHIP)						
Align Budget to Strategy						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% changes made to the original allocated budget	0	20	(20)	G	Achieved. Four shiftings totalling R49 000 between economic classifications were effected until the end of March 2013. Verification source: shifting report.	
Manage Costs effectively						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% variance on allocated budget	6,77	5	1,77	R	Not achieved. Only R140 million of budget spent against R150, 6 million projected, an underspending of 6, 77%. The actual expenditure was R129 million, the projected expenditure R81 million. Calculation: (140 million/150 million) - 100% = 6, 77%. Constraint: number of vacancies within the branch resulted in underspending. Verification source: expenditure control report.	Ensure that vacancies are filled to minimise underspending. Interviews have already been conducted for vacant posts.
% reduction in irregular expenditure cases	0	100	(100)	R	Not achieved. Two cases reported in this quarter. Constraint: there was a change of service provider and the Department was not informed by the appointed provider. Verification source: register for irregular expenditure.	A contract between the Department and the service provider should stipulate that should the business be sold to another service provider; the Department must be informed in writing within a reasonable time.

Maximise use of resources						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% reduction in the number of branch assets disposed of prior to the end-of-lifespan	100	10	90	**G**	Achieved. No assets were disposed of prior to the end-of-lifespan. Verification source: disposal report from supply chain management (SCM).	
Promote corporate governance						
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% adherence to compliance framework	100	100	0	G	Achieved. The branch has complied with all seven compliance checklists. Verification source: compliance checklist.	
Measure	**Actual**	**Target**	**Variance**	**Status**	**Performance Analysis**	**Recommendations**
% implementation of risk management plans	100	100	0	**G**	Achieved. Verification source: annual monitoring report.	
% of fully implemented agreed-on management action plans (external audit)	100	100	0	**G**	No follow-up audit done during the fourth quarter.	
% of fully implemented agreed-on management action plans (internal audit)	100	100	0	**G**	No follow-up audit done during the fourth quarter.	

2.2 SERVICE DELIVERY IMPROVEMENT PLAN

KEY SERVICE	SERVICE BENEFICIARY	CURRENT STANDARD (2011/12)		DESIRED STANDARD (2011/12)		PROGRESS AT 31 MARCH 2013
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 **inspections** as per capacity 80% of planned **investigations** as per capacity 70 % 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	106% of planned **audits** as per capacity 108% of planned **inspections** as per capacity 87% of planned **investigations** as per capacity 70% of planned **inquiries** as per capacity
		Quality	Implementation of and compliance to standardised policies and procedures	Quality	Implementation of and compliance to standardised policies and procedures	Achieved
		Consultation	Quarterly consultation with mining operations	Consultation	Monthly consultation with mining operations	Achieved
		Open and transparency	Policies and procedures are public documents	Open and transparency	Policies and procedures are public documents	Achieved
		Information	Information is shared monthly with mines	Information	Information is shared monthly with mines and an electronic management system would improve the availability of information	Achieved
		Value for money	Ensure optimum use of voted funds	Value for money	Ensure optimum use of voted funds	Achieved

STATE OF SAFETY AND HEALTH AT MINES

C

STATE OF SAFETY AND HEALTH AT MINES

3.1 OCCUPATIONAL SAFETY

As required by the MHSA, employers must report certain accidents (fatalities and injuries) and dangerous occurrences at a mine to the regional principal inspector. The data are then captured onto SAMRASS for analysis.

To calculate the rates data are linked to the labour statistics as per the table below.

TABLE 3.1: Labour statistics per region

	2011	2012	% CHANGE
All mines	499 783	506 435	1,33
Western Cape	6 397	6 410	0,20
Northern Cape	35 930	37 672	4,85
Free State	36 106	36 444	0,94
Eastern Cape	1 925	2 050	6,49
KwaZulu-Natal	10 965	14 364	31,00
Mpumalanga	81 695	86 452	5,82
Limpopo	49 580	54 353	9,63
Gauteng	92 295	90 898	1,51
Klerksdorp	77 654	74 673	3,8
Rustenburg	107 236	103 119	3,84

The apparent marked increase in labour in Kwazulu-Natal can be attributed mainly to better reporting of figures to the DMR. In contrast, the labour force in the Klerksdorp and Rustenburg regions both decreased by 3.8%.

3.1.1 Accident Statistics

3.1.1.1 Actual fatalities and rates per million hours worked per region

The fatality rate per million hours worked, for all mines, dipped by 9, 09% in 2012, a change in rates from 0, 11 in 2011 to 0, 10 in 2012. Actual fatalities declined from 123 in 2011 to 112 in 2012, the lowest ever recorded.

Various regions showed a dip in fatality rates: Free State from 0, 21 in 2011 to 0, 15 in 2012 (28, 5%), and Rustenburg from 0, 14 in 2011 to 0, 11 in 2012 (21, 43%). Unfortunately the fatality rate for Limpopo increased from 0, 08 in 2011 to a high of 0, 13 in 2012, an increase of 62, 5%.

The North West:Klerksdorp region managed to work fatality free for seven months, and the Gauteng and Mpumalanga regions for three months each.

TABLE 3.1.1.1: Actual fatalities and rates per million hours worked per region

	2011	FATALITY RATE	2012*	FATALITY RATE	% CHANGE IN RATES
All mines	123	0,11	112	0,10	9,09
Western Cape	0	0,00	2	0,14	100
Northern Cape	3	0,04	3	0,04	0
Free State	17	0,21	12	0,15	28,57
Eastern Cape	0	0,00	0	0,00	0
KwaZulu-Natal	2	0,08	1	0,03	62,5
Mpumalanga	18	0,10	14	0,07	30
Limpopo	9	0,08	15	0,13	62,5
Gauteng	29	0,14	31	0,16	14,28
Klerksdorp	11	0,07	9	0,08	1,28
Rustenburg	34	0,14	25	0,11	21,43

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

3.1.1.2 Actual injuries and rates per million hours worked per region

Injury rates decreased in most regions in 2012, except for Gauteng and Rustenburg, with increases of 11, 2% and 11, 53% respectively.

TABLE 3.1.1.2: Actual injuries and rates per million hours worked per region

	2011	INJURY RATE	2012*	INJURY RATE	% CHANGE IN RATES
All mines	3 299	3,00	3 377	3,03	1,01
Western Cape	21	1,49	14	0,99	33,56
Northern Cape	61	0,77	60	0,72	6,49
Free State	374	4,68	323	4,03	13,88
Eastern Cape	5	1,09	2	0,44	59,63
KwaZulu-Natal	36	1,49	35	1,11	25,5
Mpumalanga	297	1,59	314	1,65	3,77
Limpopo	226	2,05	202	1,69	17,56
Gauteng	722	3,57	794	3.97	11,2
Klerksdorp	431	3,93	378	3,44	12,46
Rustenburg	1 126	4,77	1 255	5,32	11,53

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

3.1.1.3 Actual fatalities and rates per million hours worked per commodity

Although the actual fatalities in the gold mining sector stayed the same as in 2011 (51), as a result of a drop in labour figures, the fatality rate increased by 5, 88%. Gold mines, however, worked fatality free during April. The platinum sector performed better and registered a drop in the fatality rate of 22, 22% - from 37 fatalities in 2011 to 28 in 2012. Platinum mines worked fatality free July and September.

TABLE 3.1.1.3: Actual fatalities and rates per million hours worked per commodity

	2011	FATALITY RATE	2012*	FATALITY RATE	% CHANGE IN RATES
All mines	123	0,11	112	0,10	9,09
Gold	51	0,17	51	0,18	5,88
Platinum	37	0,09	28	0,07	22,22
Coal	12	0,07	11	0,06	14,29
Diamonds	3	0,11	2	0,07	36,36
Copper	1	0,14	1	0,15	7,14
Chrome	5	0,14	4	0,10	28,57
Iron ore	0	0,00	2	0,04	100,
Manganese	2	0,13	0	0,00	100,
Other	12	0,12	13	0,12	0,00

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

3.1.1.4 Actual injuries and rates per million hours worked per commodity

The injury rates in both the gold and platinum sectors increased in 2012, by 1, 18% and 7, 18% respectively. Although actual injuries in chrome mines increased from 71 in 2012 to 77 in 2012, the injury rate still dropped (1,5%), as a result of an increase of 10% in labour numbers for the sector. Manganese mines, similarly, reported more injuries, but the injury rate was lower as a result of an increase of 19% in labour numbers.

TABLE 3.1.1.4: Actual injuries and rates per million hours worked per commodity

	2011	INJURY RATE	2012*	INJURY RATE	% CHANGE IN RATES
All mines	3 299	3,00	3 377	3,03	1
Gold	1 498	5,07	1 478	5,13	1,18
Platinum	1 283	3,20	1 360	3,43	7,18
Coal	241	1,44	267	1,51	4,86
Diamonds	42	1,58	48	1,78	12,7
Copper	19	2,66	13	1,90	28,6
Chrome	71	1,99	77	1,96	1,5
Iron ore	20	0,39	20	0,39	0,
Manganese	13	0,82	15	0,80	2,44
Other	112	1,12	99	0,90	20

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

3.1.1.5 Actual fatalities by casualty classification

The classification of fatal accidents is shown in the table below. FOG accidents decreased by 35%, from 40 in 2011 to 26 in 2012, reflecting a drop in gravity-induced FOG accidents attributable to initiatives such as the increase in enforcement against poor support and the use of netting in the stopes.

Transport and mining fatalities dropped 23, 68% from 38 in 2011 to 29 in 2012. This is attributed to a reduction of 39% in rail bound equipment accidents, from 18 in 2011 to 11 in 2012.

TABLE 3.1.1.5: Actual fatalities by casualty classification

ALL MINES	2011 FATALITIES	2012 FATALITIES	% CHANGE IN ACTUAL FATALITIES
Fall of ground	40	26	35
Machinery	5	8	60
Transportation and mining	38	29	23,68
General	25	35	40
Conveyance accidents	3	1	66,67
Electricity	3	5	66,67
Fires	0	0	0,
Explosives	4	4	0,
Subsidence/caving	0	1	100
Heat sickness	2	2	0,
Miscellaneous	3	3	0,
TOTAL	123	112	8,94

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

3.1.1.6 Actual injuries classification by casualty classification

There was a 0, 6% increase in injuries, from 3 356 to 3 377. The classifications that have shown an increase are machinery - 6% - and subsidence/caving - 100%. All others have decreased.

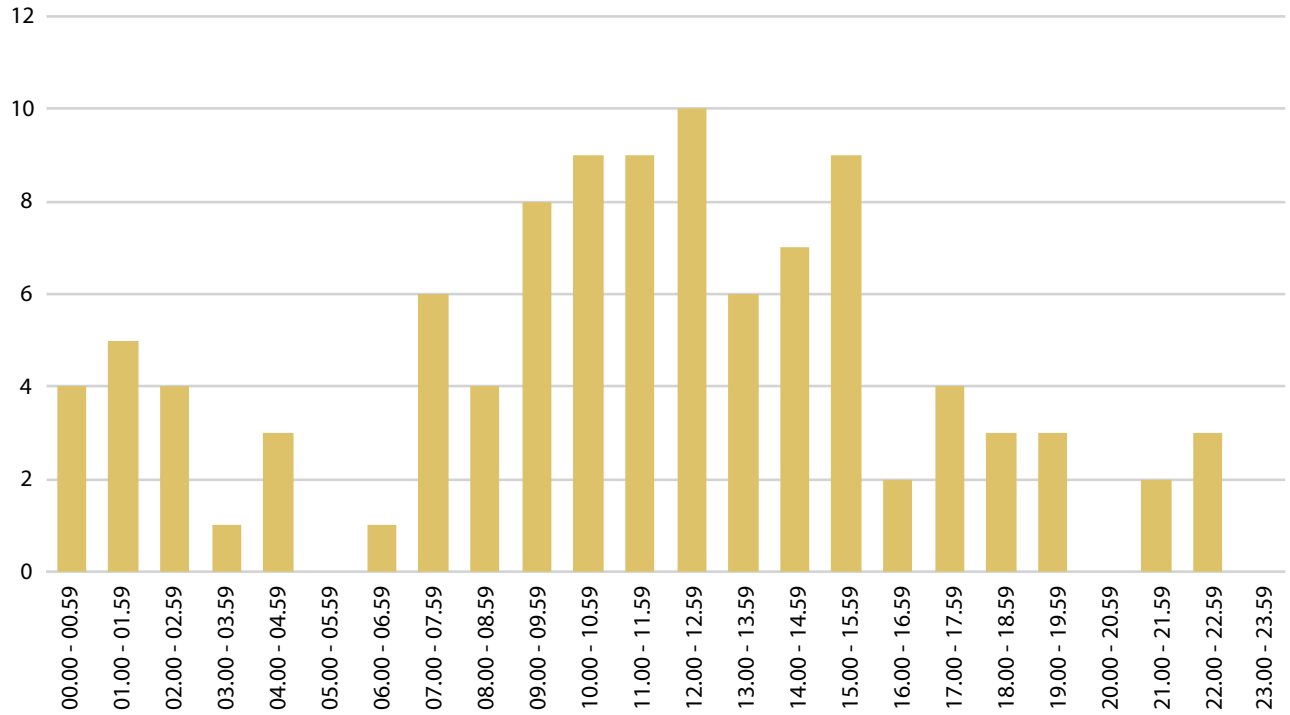
TABLE 3.1.1.6: Actual injuries by casualty classification

	2011 INJURIES	2012 INJURIES	% CHANGE IN ACTUAL INJURIES
Fall of ground	664	627	5,57
Machinery	216	229	6,02
Transportation and mining	644	582	9,63
General	1 639	1 786	8,97
Conveyance accidents	29	24	17,24
Electricity	23	18	21,7
Fires	26	8	69,23
Explosives	20	16	20,00
Subsidence/caving	0	3	100
Heat sickness	7	4	43
Miscellaneous	88	80	9
TOTAL	3 356	3 377	0,6

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

3.1.1.7 Fatalities by time of occurrences

GRAPH 3.1.1.1: Fatality by time of occurrence - 2012

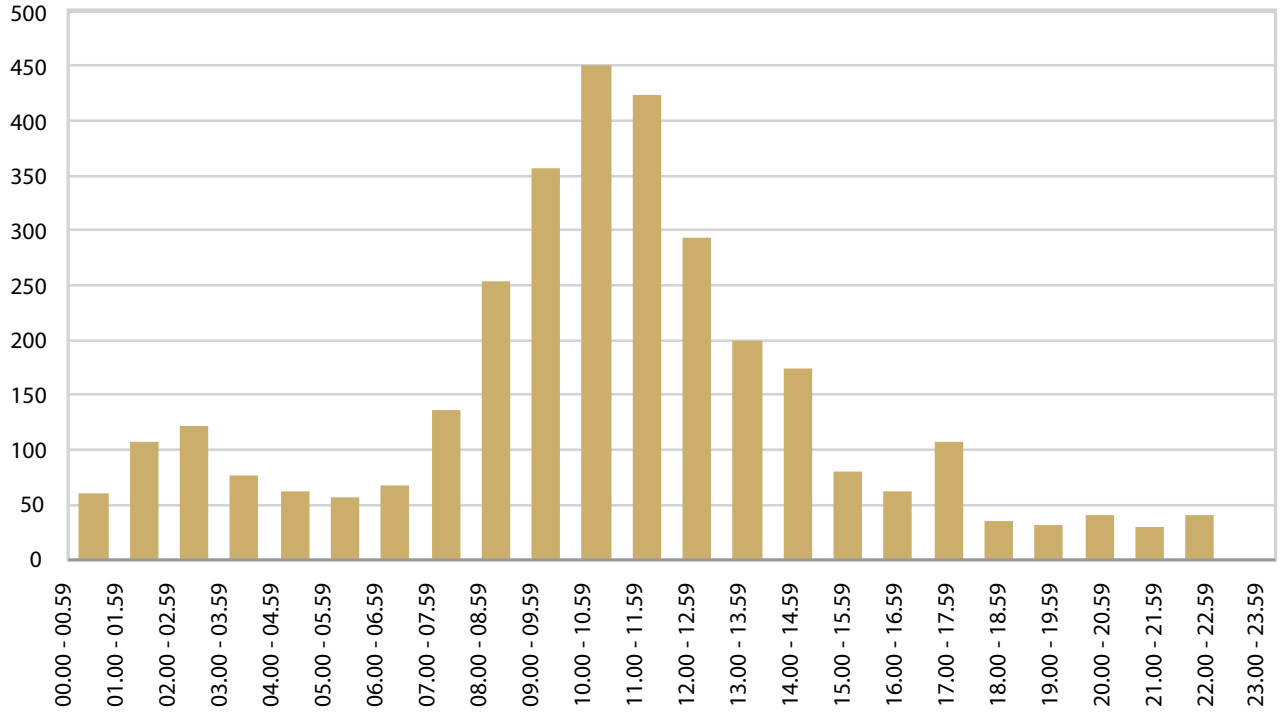


** Provisional figures because statistics may change due to late reporting and subsequent deaths*

As can be seen, the majority of the fatalities occur between 07:00 and 16:00, when the majority of employees are at work.

3.1.1.8 Injuries by time of occurrence

GRAPH 3.1.1.2: Injuries by time of occurrence – 2012



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

Between 01:00 and 03:00, there is a higher than normal number of injuries. During day shift, most incidents occur between 07:00 and 15:00, then peaking between 17:00 to 18:00. The early morning and late afternoon peaks can be attributed to the lack of supervision during these times.

3.1.2 Analysis of accident rate trends

Actual fatality trends by casualty classification

TABLE 3.1.2.1: Platinum – fatality trends by casualty classification

	FATALITIES		
	1 January - 31 December 2011	1 January - 31 December 2012	% improvement
Fall of ground	10	10	0
Machinery	2	0	100
Transportation and mining	13	9	31
General	6	8	33
Conveyance accidents (s/w)	2	0	100
Electricity (not causing fires)	0	0	0
Fires	0	0	0
Explosives	2	0	100
Subsidence/caving	0	0	0
Heat sickness	0	1	100
Miscellaneous	2	0	100
TOTAL	37	28	24

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

For the first time in two years there was a drop in the number of actual fatalities in the platinum sector (24%). Fatalities as a result of transportation and mining accidents also dropped - by 31%.

TABLE 3.1.2.2: Coal – fatality trends by casualty classification

	FATALITIES		
	1 January - 31 December 2011	1 January - 31 December 2012	% improvement
Fall of ground	5	1	80
Machinery	0	2	100
Transportation and mining	5	6	20
General	2	1	50
Conveyance accidents (s/w)	0	0	0
Electricity (not causing fires)	0	0	0
Fires	0	0	0
Explosives	0	0	0
Subsidence/caving	0	1	100
Heat sickness	0	0	0
Miscellaneous	0	0	0
TOTAL	12	11	8

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

There was an 80% reduction in FOG fatalities in the coal sector, but an increase in the transport and mining classification of 20%

TABLE 3.1.2.3: Gold – fatality trends by casualty classification

	FATALITIES		
	1 January - 31 December 2011	1 January - 31 December 2012	% improvement
Fall of ground	23	13	43
Machinery	0	0	0
Transportation and mining	10	8	20
General	12	20	67
Conveyance accidents (s/w)	1	1	0
Electricity (not causing fires)	0	5	100
Fires	0	0	0
Explosives	2	4	100
Subsidence/caving	0	0	0
Heat sickness	2	1	50
Miscellaneous	1	1	0
TOTAL	51	53	4

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

There was a marked decrease in fall of ground fatalities, but unfortunately a 67% increase in the general category, mainly as a result of increased inundation and drownings, as well as increased exposures to dust, gas and fumes. There was also a significant regression on electricity fatal electrocutions.

TABLE 3.1.2.4: Other mines – fatality trends by casualty classification

	FATALITIES		
	1 January - 31 December 2011	1 January - 31 December 2012	% improvement
Fall of ground	2	2	0
Machinery	3	6	100
Transportation and mining	10	6	40
General	5	6	20
Conveyance accidents (s/w)	0	0	0
Electricity (not causing fires)	3	0	100
Fires	0	0	0
Explosives	0	0	0
Subsidence/caving	0	0	0
Heat sickness	0	0	0
Miscellaneous	0	0	0
TOTAL	23	20	13

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

Transportation and electricity fatalities showed a significant improvement.

TABLE 3.1.2.5: Platinum – injury trends by casualty classification

	INJURIES		
	1 January - 31 December 2011	1 January - 31 December 2012	% improvement
Fall of ground	222	234	5
Machinery	67	79	18
Transportation and mining	232	240	3
General	700	741	6
Conveyance accidents (s/w)	18	15	17
Electricity (Not causing fires)	4	1	75
Fires	23	2	91
Explosives	11	7	36
Subsidence/caving	0	1	100
Heat sickness	0	1	100
Miscellaneous	56	39	30
TOTAL	1 333	1 360	2

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

There was a significant drop in the number of injuries as a result of fires (91%). The increase of 18% in injuries involving machines, however, needs to be addressed.

TABLE 3.1.2.6: Coal – injury trends by casualty classification

	INJURIES		
	1 January - 31 December 2011	1 January - 31 December 2012	% improvement
Fall of ground	23	20	13
Machinery	23	17	26
Transportation and mining	70	53	24
General	103	155	50
Conveyance accidents (s/w)	2	0	100
Electricity (not causing fires)	9	7	22
Fires	1	2	100
Explosives	3	0	100
Subsidence/caving	0	2	100
Heat sickness	0	0	0
Miscellaneous	10	11	10
TOTAL	244	267	9

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

The 50% increase in injuries for accidents classified as general is a worrying trend. It can be attributed mainly to more accidents relating to fall of material and rolling rock, slipping and falling and handling of material.

TABLE 3.1.2.7: Gold – injury trends by casualty classification

	INJURIES		
	1 January - 31 December 2011	1 January - 31 December 2012	% improvement
Fall of ground	403	350	-13
Machinery	79	90	14
Transportation and mining	270	237	12
General	701	763	9
Conveyance accidents (s/w)	9	7	22
Electricity (not causing fires)	6	7	17
Fires	1	1	0
Explosives	4	7	75
Subsidence/caving	0	0	0
Heat sickness	7	3	57
Miscellaneous	19	13	32
TOTAL	1 499	1 478	1

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

Injuries relating to machinery increased by 14%, and those resulting from general accidents by 9%. This happened mainly because of exposure to dust, gas and fumes, as well as slipping and falling accidents.

TABLE 3.1.2.8: Other mines – injury trends by casualty classification

	INJURIES		
	1 January - 31 December 2011	1 January - 31 December 2012	% improvement
Fall of ground	17	23	35
Machinery	51	43	16
Transportation and mining	67	52	22
General	135	127	6
Conveyance accidents (s/w)	0	2	100
Electricity (not causing fires)	4	3	25
Fires	1	3	200
Explosives	2	2	0
Subsidence/caving	0	0	0
Heat sickness	0	0	0
Miscellaneous	3	17	467
TOTAL	280	272	3

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

Injuries as a result of FOGs increased by 35%. Miscellaneous accidents - those not elsewhere classified - also increased. This was attributed to poor classification of accidents. The Inspectorate plans training sessions to assist mines with the classification process.

3.2 OCCUPATIONAL HEALTH OVERVIEW

There has been an improvement on the number of reporting mines for both occupational hygiene exposures and occupational diseases, though there is a difference in the actual number of mines that submitted Occupational Hygiene Statutory Returns and Annual Medical Reports (AMRs). The analysis of data is based on received occupational hygiene statutory returns and AMRs.

The accuracy of data used to compile the report remains a challenge for the sector since some of the mines did not submit their reports as per the requirement of the Mine Health and Safety Act, 1996.

The mining industry has to realize that the improvement of Occupational Health (OH) performance requires a more focused approach, a significant commitment and a multidisciplinary effort to address OH and working conditions.

The occupational hygiene stressors remain a challenge although an improvement has been recorded in terms of compliance from 2011 to 2012. The overexposures to occupational hygiene stressors in A and B classification bands remain a challenge.

In 2012 the number of initial medical surveillance examinations conducted decreased, whilst the figure of both periodic and exit medical examinations conducted increased compared to the previous year.

In the gold mines, the total amount of occupational diseases reported decreased. The quantity of reported pulmonary tuberculosis (PTB), Silico-tuberculosis (Sil+TB), Noise Induced Hearing Loss (NIHL) decreased whilst the number of silicosis and other diseases slightly increased.

In the platinum sector, the total number of occupational diseases reported decreased. However there was an increase of number of silicosis and other diseases reported. There was only one case of Silico-tuberculosis (Sil+TB) reported, Noise Induced Hearing Loss (NIHL) increased by one case and Coal Workers Pneumoconiosis (CWP) cases increased by four. The number of PTB cases slightly decreased and there was no Asbestosis case reported during the year under review.

In the coal mines, the total figure of occupational diseases reported decreased. However, the quantity of silicosis other diseases reported increased. The figure of Noise Induced Hearing Loss (NIHL) cases appreciably decreased, whilst the number of pulmonary tuberculosis (PTB) and Coal Workers Pneumoconiosis (CWP) slightly decreased.

In diamond mines the total figure of occupational diseases reported showed an insignificant increase from 20 to 29 cases.

In other mines the total number of occupational diseases reported increased, however, silicosis cases reported decreased significantly. The quantity of pulmonary tuberculosis (PTB), Noise Induced Hearing Loss (NIHL), Coal Workers Pneumoconiosis (CWP), Asbestosis and other diseases reported showed a slight increase, whilst the number of Silico-tuberculosis (Sil+TB) cases reported decreased by one case.

Section 20 of the Mine Health and Safety Act (MHSA), Act 29 of 1996, as amended provides for the employees to appeal a decision in relation to unfitness to perform any particular category of work, or any findings of the occupational medical practitioner (OMP) contained in an exit certificate prepared in terms of section 17 of the MHSA.

During the period under review, most of the appeals received were lodged as a result of tuberculosis (TB), Injury complications, hearing loss, vision related problems and other diseases. Other diseases in this case are related but not limited to lung and heart diseases, diabetes and psychiatric illnesses. Some appeals were based on compensation complaints, which are not dealt with under the MHSA. . In terms of appeal findings, 75% of appellants were found to be unfit to perform work in a mine, while 25% were found to be fit.

In conclusion, improved compliance to the provisions of MHSA, especially in relation to accurate statutory reporting within the prescribed timeframes, adherence to the hierarchy of controls in the management of occupational hygiene stressors, management implementation of risk-based medical surveillance system, as well as linkage of occupational hygiene measurements to each employee's records of medical surveillance is essential to achieve the occupational health milestones set in 2003.

3.2.1 Occupational Hygiene

One of the integral provisions of the Mine Health and Safety Act (MHSA), Act 29 of 1996, as amended, is to protect the workers in the mining industry from the adverse health effects of overexposure to occupational health hazards such as dusts, fibres, chemicals, noise, thermal stress (heat and cold) and radiation.

Regulation 9.2(2) of the MHSA, read in conjunction with Section 12 of the MHSA, requires the employer to establish, maintain, and record occupational hygiene measurements.

The Department collates and analyze data to assist in assessing the magnitude of the occupational hygiene problems, so that corrective actions can be taken . The analysis gives an indication on the effectiveness of the mine interventions for preventing over exposures. The information is further utilized as lead indicators on the industry set milestones on silicosis and noise.

3.2.1.1 Occupational Hygiene Measurements

(* Provisional figures)

a. Airborne Pollutants Exposures

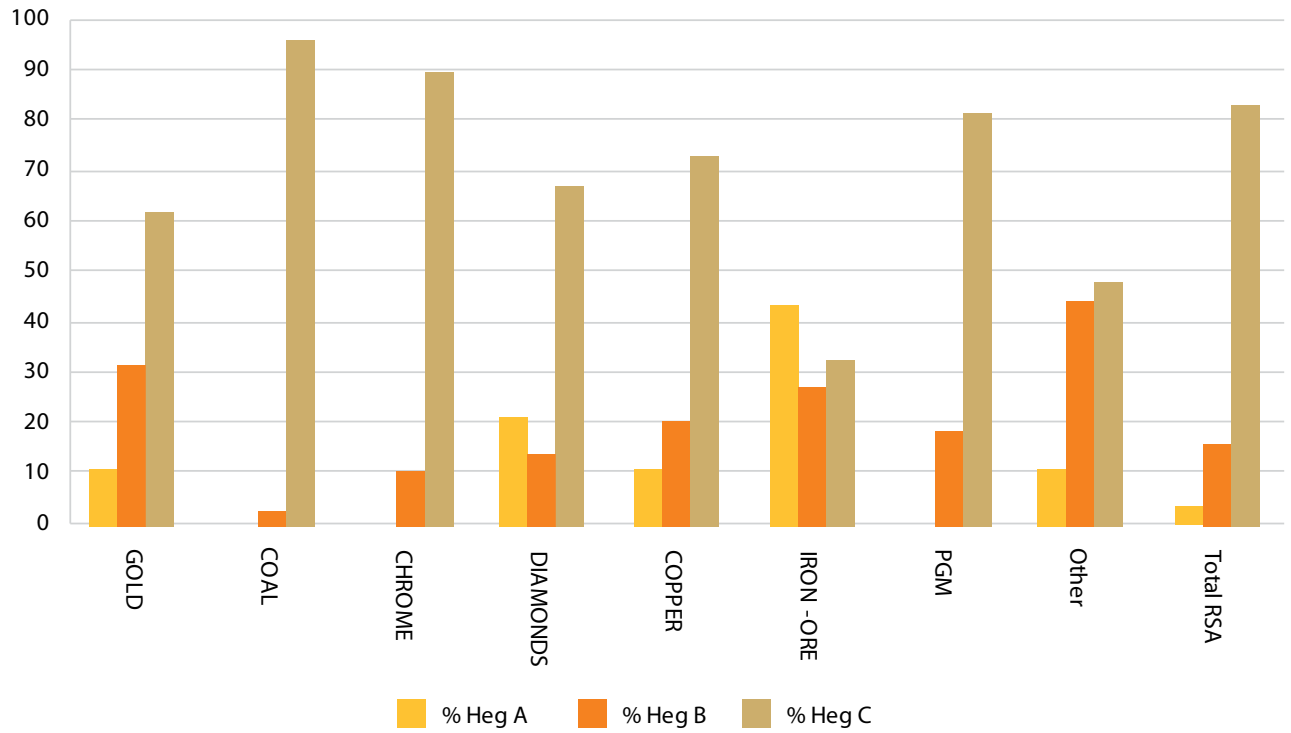
Note:

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. The sum should not be greater than a Unit.

iii) The percentage of exposures depicted on the graph below represents the percentage of samples collected and does not reflect the actual pecentage of people employed in the mining industry.

Graph 3.2.1.1(a) % Exposure to Airborne Pollutants per Classification Band per Commodity - 2012



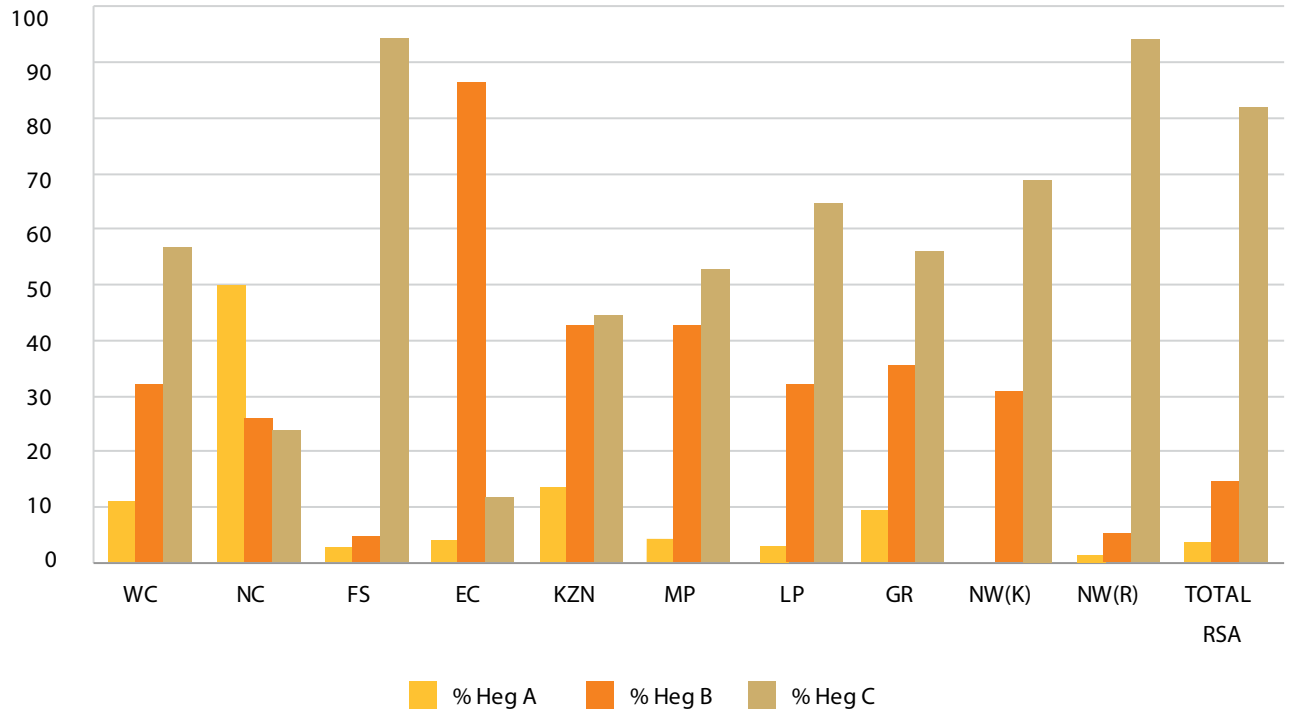
Exposure Classification Bands

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 3.2.1.1(b): % Exposure to Airborne Pollutants per Classification Band per Region - 2012



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

Both per regional and per commodity over exposures to airborne pollutants for the year 2012 in the A and B classification bands are 6% and 27.4 % respectively, as compared to the previous year exposures of 5.8% and 21.6% .

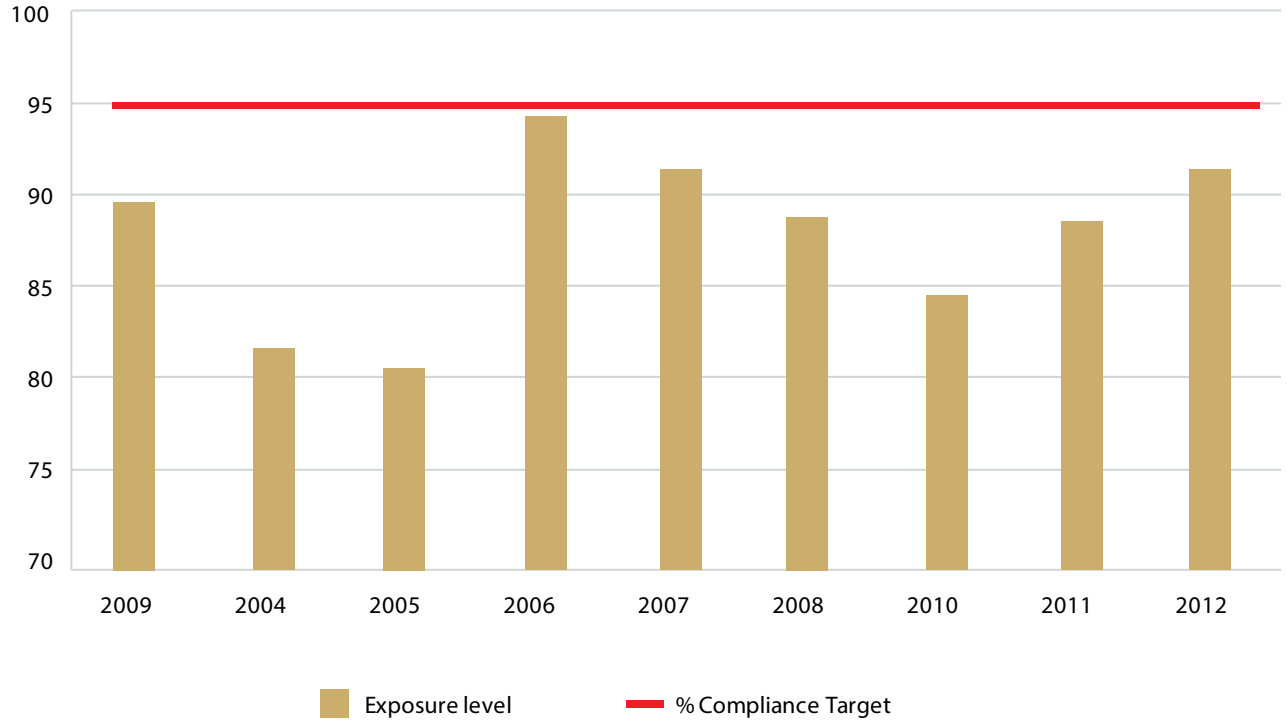
More focus is still required on the controls, thus mines must still address the risks in these bands as recommended in the Chief Inspector of Mines Guideline for the compilation of a mandatory code of practice for an Occupational Health Programme on personal exposure to Airborne Pollutants, Reference Number 16/3/2/4-A1. A concerted multidisciplinary effort is required as well as sharing of best practices to control and reduce dust at source.

Industry targets and milestones on Silicosis:

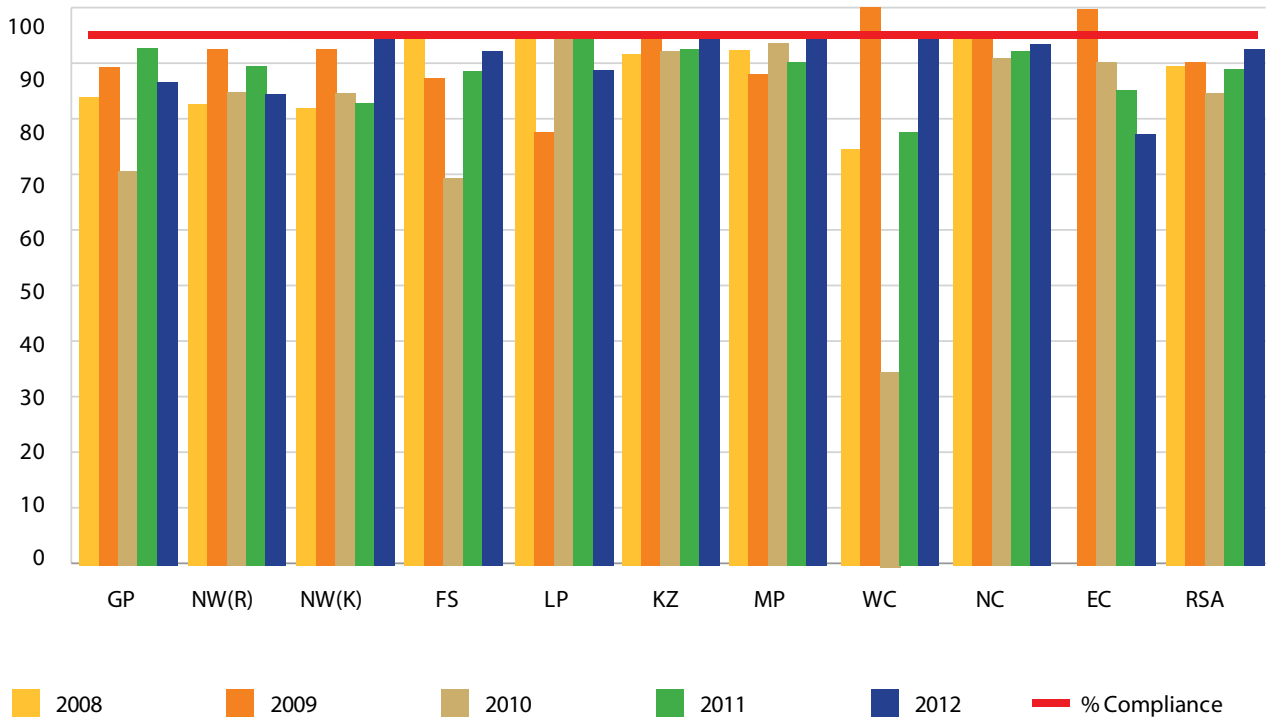
At the 2003 Mine Health and Safety Summit, the South African mining sectors tripartite stakeholders set the following milestones and targets on occupational health:

- By December 2008, 95% of all exposure measurement results will be below the occupational exposure limit for respirable crystalline silica of 0.1mg/m^3 (these results are individual readings and not average results).
- After December 2013, using present diagnostic techniques, no new cases of silicosis will occur among previously unexposed individuals. Previously unexposed individuals are individuals unexposed prior to 2008, that is, equivalent to a new person entering the industry in 2008.

Graph 3.2.1.1 (c): % Compliance to Respirable Cristaline Silica (<0.10mg/m³)



Graph 3.2.1.1(d): % Compliance to Respirable Cristaline Silica (<0.10mg/m³)



The analysis of data is based on 343 mines that submitted statutory returns suggests that the industry achieved 92% for the 2012 reporting period, compared to 89% in 2011 towards the achievement of the 95% compliance target set in 2003. The samples that were below the 0.1 mg/m³ in 2012 were 3535 and in 2011 were 1717 giving the improvement of 105.9%. There is still more to be done in order to achieve the 2013 milestones as set out in 2003.

b. Noise Exposures

Note:

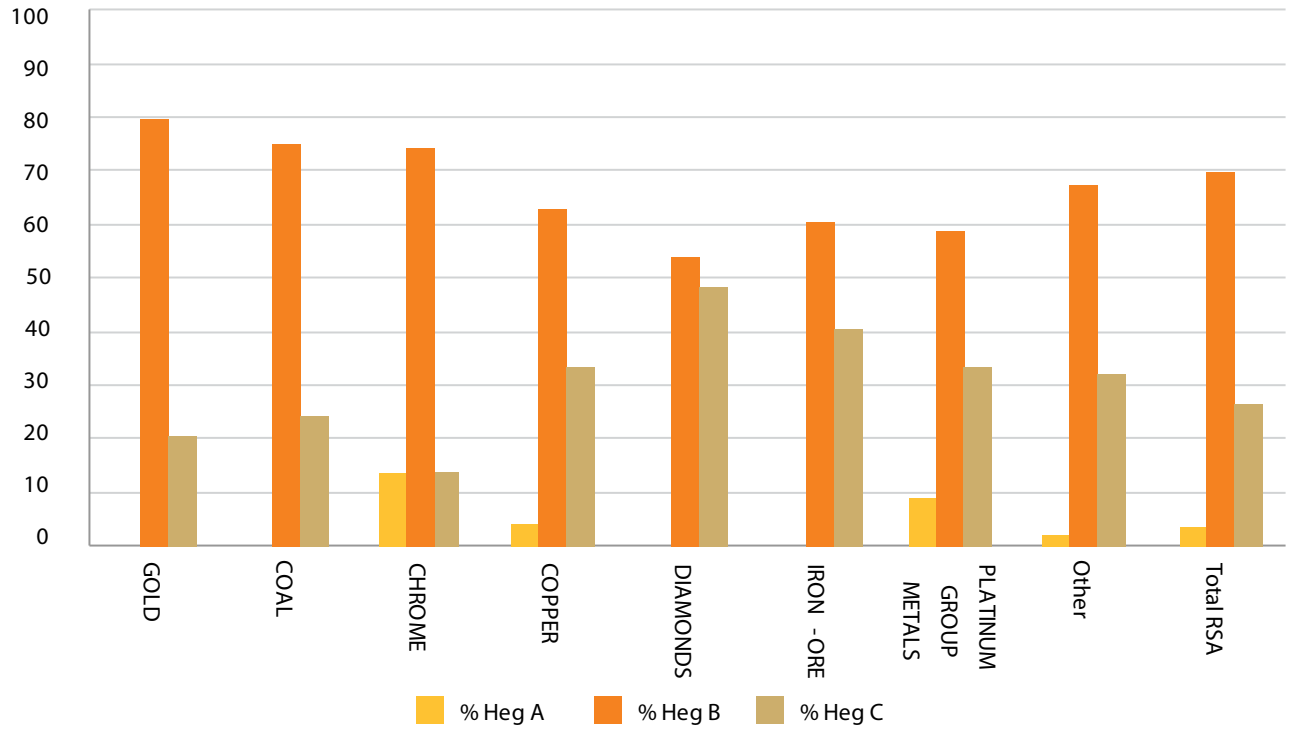
- The Occupational Exposure Limit for Noise is 85 dB (A) based on an 8 hour exposure shift.
- No special precautions are required except monitoring is required for the C classification Band.
- The Implementation of the Hearing conservation programme is required for A and B classification Band.
- Persons in A and B classification Bands are over-exposed.

Industry targets and milestones on Noise-Induced Hearing Loss:

At the 2003 Mine Health and Safety Summit, the South African mining sectors tripartite stakeholders set milestones and targets on occupational health. The present noise exposure limit stated in the MHSA Regulations is equal or less than 85dB.

- After December 2008, the hearing conservation programme implemented by the industry must ensure that there is no deterioration in hearing greater than 10% amongst occupationally exposed individuals.
- By December 2013, the total noise emitted by all equipment installed in any workplace must not exceed a sound pressure level of 110 dB (A) at any location in that workplace (including individual pieces of equipment).

Graph 3.2.1.2(a): % Exposure to Noise per Exposure Classification band per Commodity – 2012



Exposure classification band:

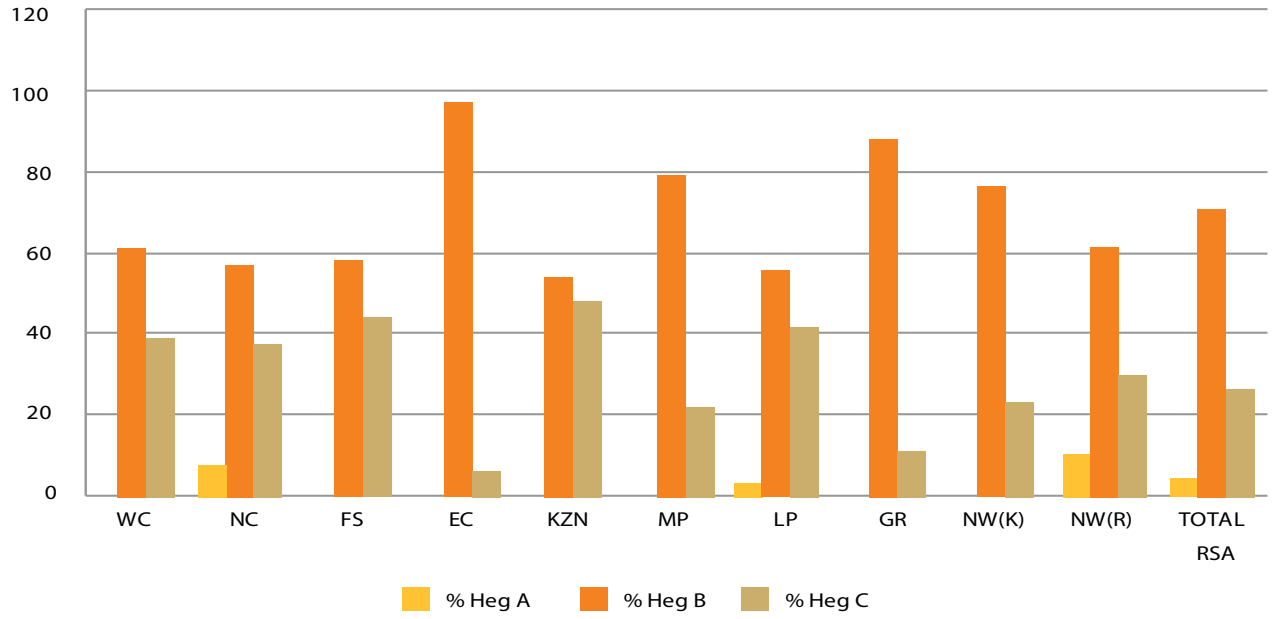
A = Exposures ≥ 105 $L_{Aeq,\ 8h}$

B = Exposures ≥85 ≤ 105 dB $L_{Aeq,\ 8h}$

C = Exposures ≥ 82 LAeq $_{,\ 8h\ and\ <\ 85}$ *dB* $L_{Aeq,\ 8h}$

The Chrome, Platinum and Copper commodities have exposures ranging from 4% to 13% in the A classification band, with Gold, Coal and Chrome having exposures ranging from 75 to 80% in noise levels in the B classification band.

Graph: 3.2.1.2(b): % Exposure to Noise per Exposure Classification band per Region - 2012



Exposure classification band:

A = Exposures ≥ 105 $L_{Aeq, 8h}$

B = Exposures ≥85 ≤ 105 dB $L_{Aeq, 8h}$

C = Exposures ≥ 82 LAeq $_{, 8h \text{ and } < 85}$ *dB* $L_{Aeq, 8h}$

The regional exposures for the year 2012 in the A and B classification bands are 3.8% and 69.7% respectively compared to the previous year exposures of 5% and 79%. The mines must still strive to reduce and eventually eliminate the risk of workers exposure in the A and B classification bands as prescribed in the Chief Inspector of Mines Guideline for the Compilation of a Mandatory Code of Practice for an Occupational Health Programme for Noise, Reference Number DME 16/3/2/4-A3.

c. *Thermal Stress Exposure*

Employees should not be exposed to the A classification band as a matter of routine unless on the basis of expert risk assessment, supervision and protocols. The HEG concept, as applicable to other bands, does not strictly apply, however, where selected employees, including brigade's men, undertake such work, systems should be in place to ensure adequate recovery and that exposures are linked to the medical surveillance records.

Because of the acute consequences of heat exposure, such areas must be clearly designated as 'No entry 'or 'No go 'areas. The code of practice must make reference to the mine standard(s) relevant to these contingencies.

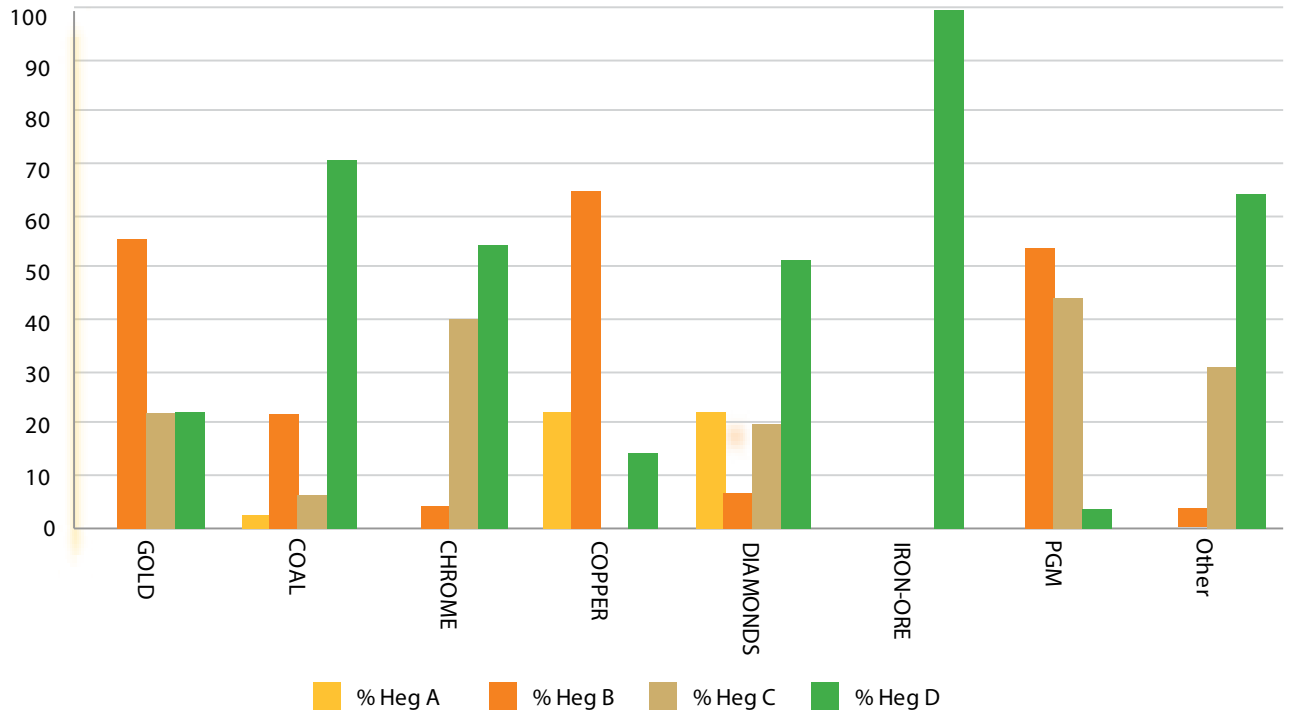
Although certain indices conveniently use globe temperature as an alternative to dry-bulb, especially where GT – DB > 2°C , care should be exercised when high dry-bulb temperatures are recorded in combination with high solar heat loads because of a possible summation of heat loads.

In order to create a more sensitive data base for both environmental management and the monitoring of health and safety statistics, the subdivisions B and C classification bands should be used for record purposes. Mines are nevertheless at liberty to also use any other procedure to enhance the sensitivity of data. Heat Stress Management (HSM) practices remains identical for B and C classification bands.

The need for close monitoring of even 'cool 'environments is that 'no special precautions, i.e. in terms of a formal HSM programme, are required. In view of the acute consequences of critical escalations in the environmental heat load, ongoing monitoring is of fundamental importance.

d. Heat Stress

Graph: 3.2.1.3(a): % Exposure to Thermal Stress /Heat per Classification band per Commodity – 2012



Heat stress Exposure Classification Band:

A = WB > 32.5 ^{O}C or DB > 37 ^{O}C or Globe Temperature > 37 ^{O}C

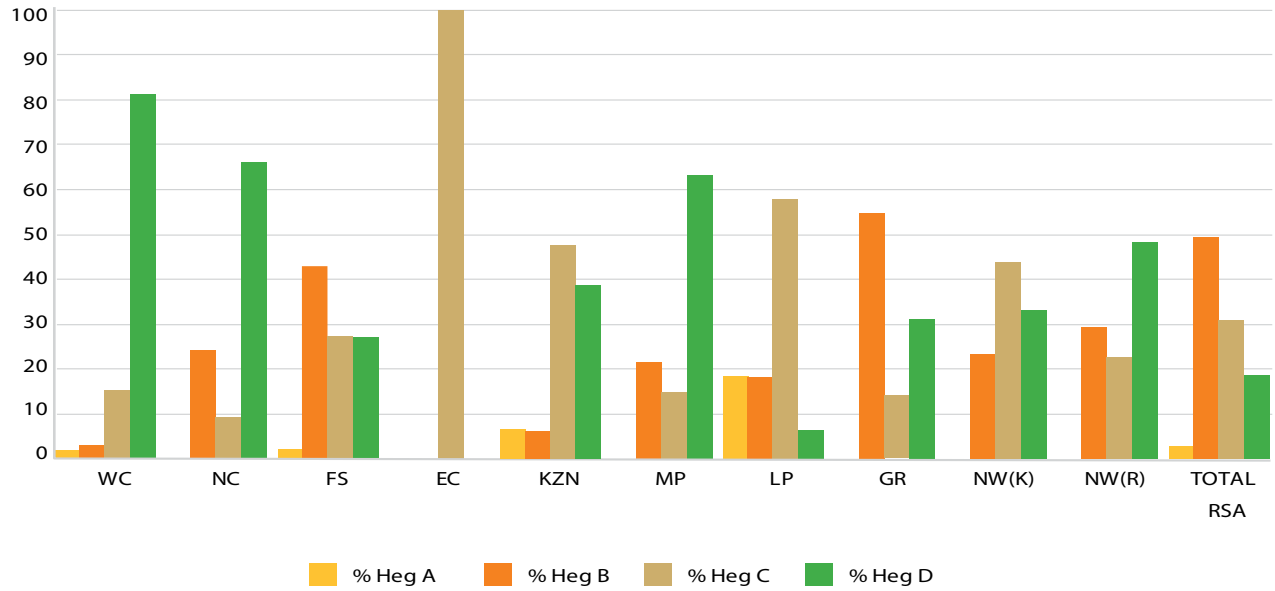
B = 29.0 >WB ≤ 32.5 ^{O}C and DB ≤ 37 ^{O}C Globe Temperature as for DB

C = 27.5 >WB ≤ 29.0 ^{O}C and DB ≤ 37 ^{O}C Globe Temperature as for DB

D =WB ≤27.5 ^{O}C and DB ≤32.5 ^{O}C Globe Temperature: as for DB

The Coal, Copper and Diamonds mines have exposures ranging from 3% to 22% in the A classification band and all commodities excluding Iron Ore show exposures in the B classification band.

Graph: 3.2.1.3(b): % Exposure to Thermal Stress/ Heat per Classification band per Region - 2012



Heat stress Exposure Classification Band:

A = WB > 32.5 ^{O}C or DB > 37 ^{O}C or Globe Temperature > 37 ^{O}C

B = 29.0 >WB ≤ 32.5 ^{O}C and DB ≤ 37 ^{O}C Globe Temperature as for DB

C = 27.5 >WB ≤ 29.0 ^{O}C and DB ≤ 37 ^{O}C Globe Temperature as for DB

D = WB ≤27.5 ^{O}C and DB ≤32.5 ^{O}C Globe Temperature: as for DB

The regional exposures for the year 2012 in the A and B classification bands are 1.4% and 49 % respectively compared to the previous year exposures of 0% and 22.69%.

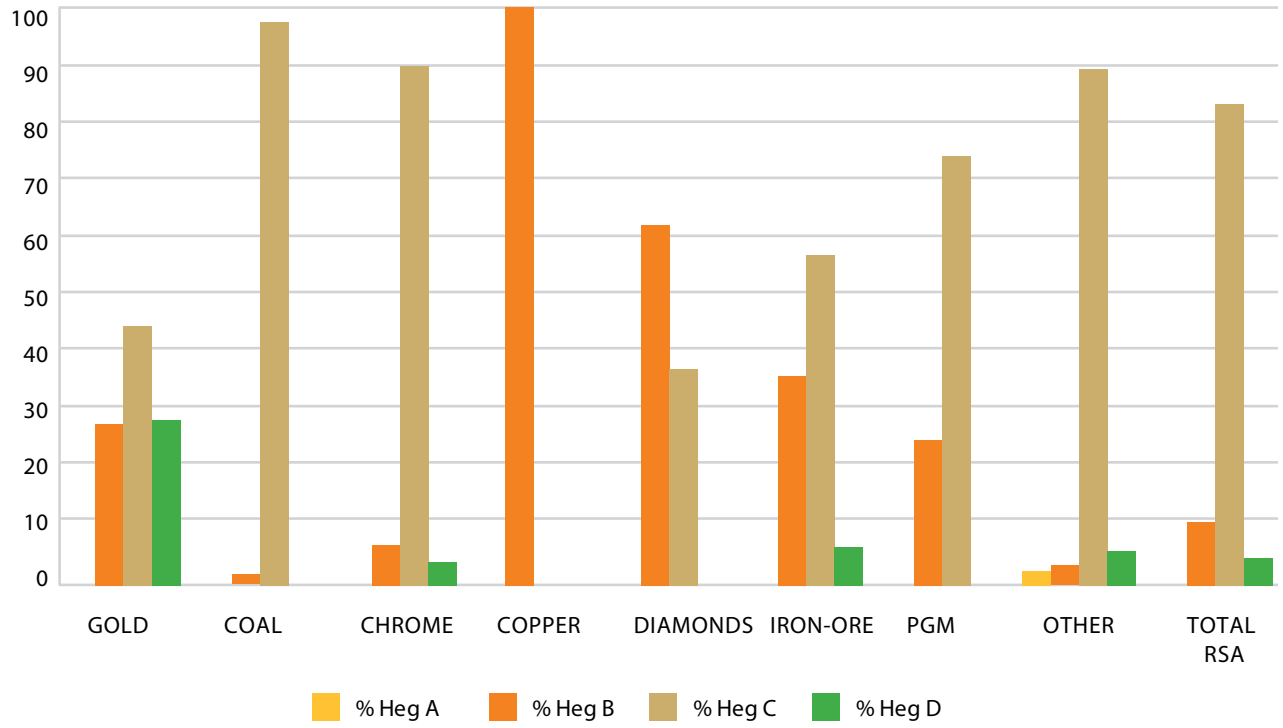
The mines need to review their thermal stress risk assessments in order improve, reduce and eventually eliminate the risk of workers exposure in the A and B classification bands as prescribed in the Chief Inspector of Mines Guideline for The Compilation Of a Mandatory Code of Practice for an Occupational Health Programme (Occupational Hygiene and Medical Surveillance) on Thermal Stress, Reference Number DMR 16/3/2/4-A2.

e. Cold Stress

Note:

- Temperature ranges are given in terms of equivalent chill temperature (ACGH).
- Cold Stress Management (CSM).
- Thermal monitoring for cold stress is to be conducted during the coldest quarter (June to August) as determined during risk assessment.

Graph: 3.2.1.3 (c): % Exposure to Thermal Stress/ Cold per Exposure Classification band per Commodity - 2012



Cold Stress Exposure Classification Band:

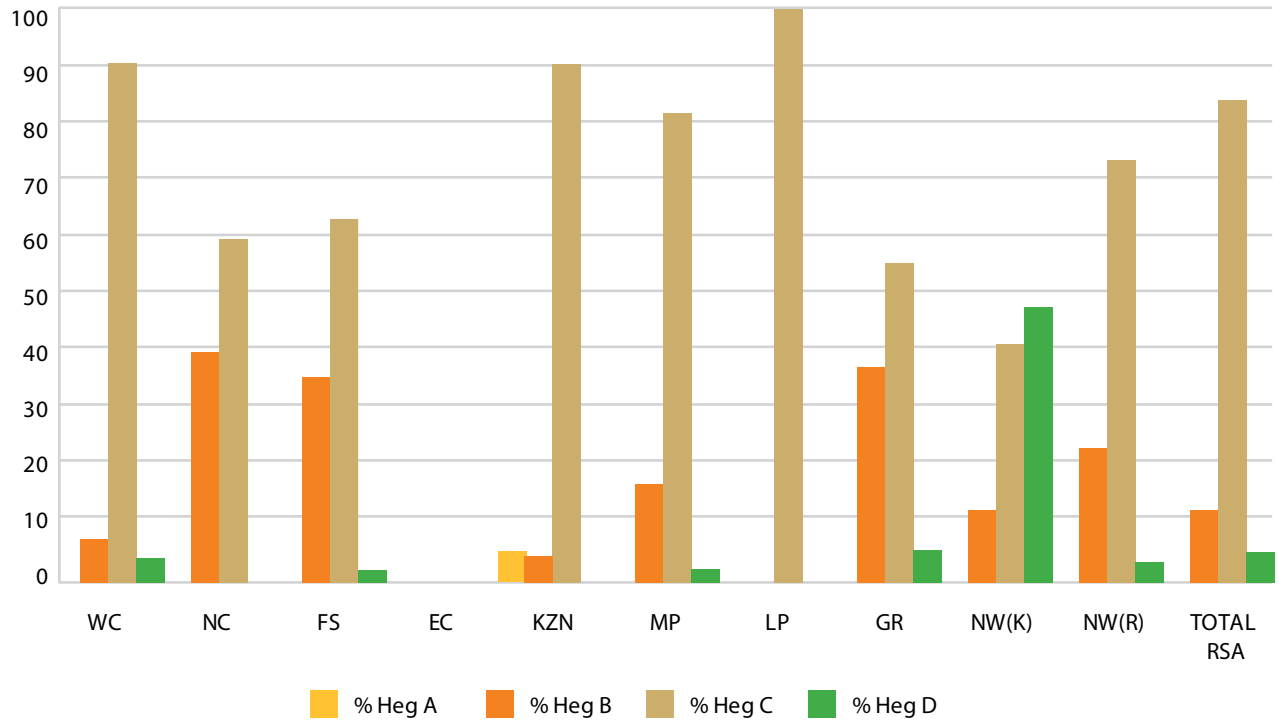
A = Temperature ≤ -30.0^{O}C

B = Temperature ≤ 5.0^{O}C, but not ≤ -30.0 ^{O}C

C = Temperature >5.0^{O}C

Other mines have exposures of 1.44% to excessive cold, with Copper and Diamonds having exposures of more than 100% and 62.4 % respectively in the B classification bands.

Graph: 3.2.1.3(d): % Exposure to Thermal Stress/ Cold per Exposure Classification band per Region -2012



Cold Stress Exposure Classification Band:

A = Temperature ≤ -30.0^{O}C

B = Temperature ≤ 5.0^{O}C, but not ≤ -30.0^{O}C

C = Temperature >5.0^{O}C

The regional exposures for the year 2012 in the B and C classification bands are 10.7% and 83.9% respectively compared to the previous year exposures of 23.95% and 76.05%.

There is still a need for mines to lower the exposures even further as prescribed in the Chief Inspector of Mines Guideline for the Compilation of a Mandatory Code of Practice for an Occupational Health Programme (Occupational Hygiene and Medical Surveillance) Thermal Stress, Reference Number 16/3/2/4-A2.

General

Compliance remains a major challenge. Based on the statutory reports received from some of the mines that are submitting the information required is either inadequate or inaccurate to provide meaningful analysis of the status quo in the mines. The analysis of data that has been received suggests a general improvement in some of the exposures to occupational hygiene stressors. Zero harm to health is possible and achievable; all that is required is strict adherence to control measures to eliminate exposures at source as per the legislative requirements.

3.2.2 Occupational Medicine

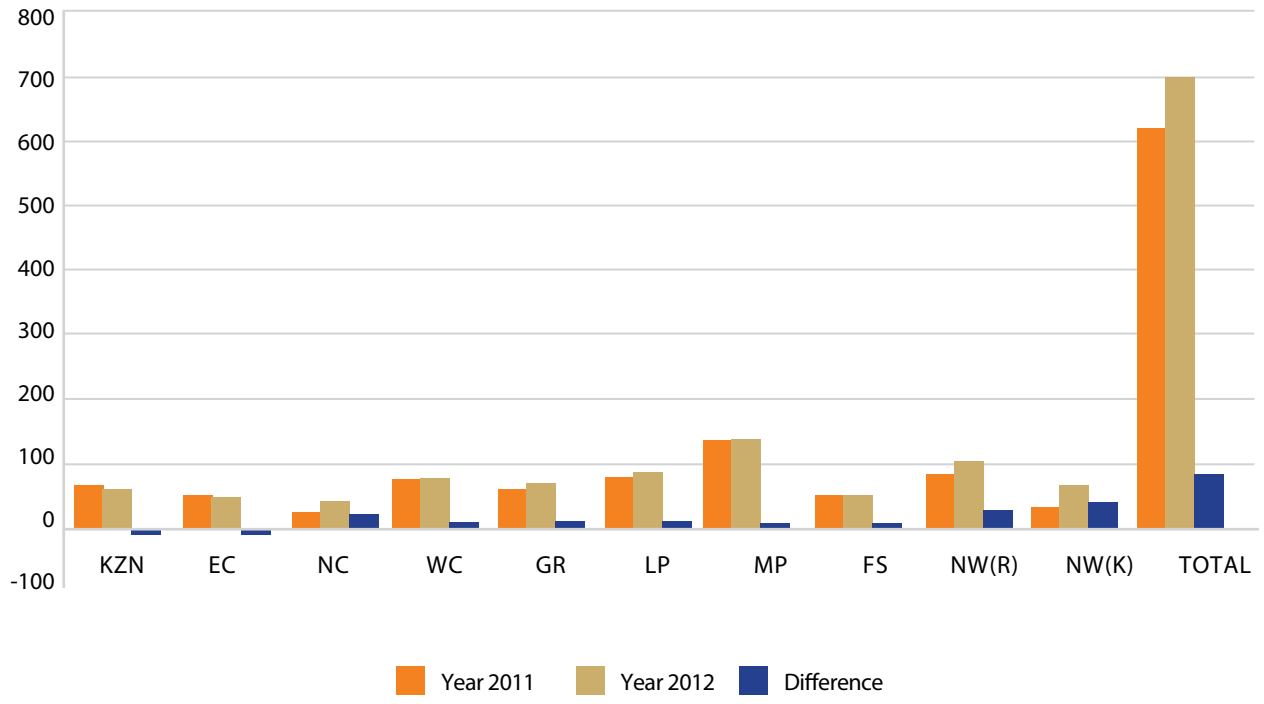
Section 16 of the Mine Health and Safety Act (MHSA), Act No. 29 of 1996, as amended, requires that every occupational medical practitioner at a mine must compile an annual report covering employees at that mine, giving an analysis of the employees' health based on the employees' records of medical surveillance, without disclosing the names of the employees. The annual medical report must be given to the employer, who must deliver one copy of the report to each of the health and safety committees, or if there is no health and safety committee, the health and safety representatives; and the Medical Inspector.

The Chief Inspector of Mines has issued an instruction that every employer must submit a copy of the annual medical report to the Medical Inspector through the relevant regional office on/or before the end of February each year.

3.2.2.1 Annual Medical Reports

A total of 708 annual medical reports (AMRs) have been received for the year 2012. The table and the graph below show an improvement in the number of AMRs submitted per region. Although there has been a significant increase in the number of AMRs received during the period under review, there has been a decrease of 6 AMRs received from both KwaZulu-Natal and Eastern Cape regions compared to the previous year.

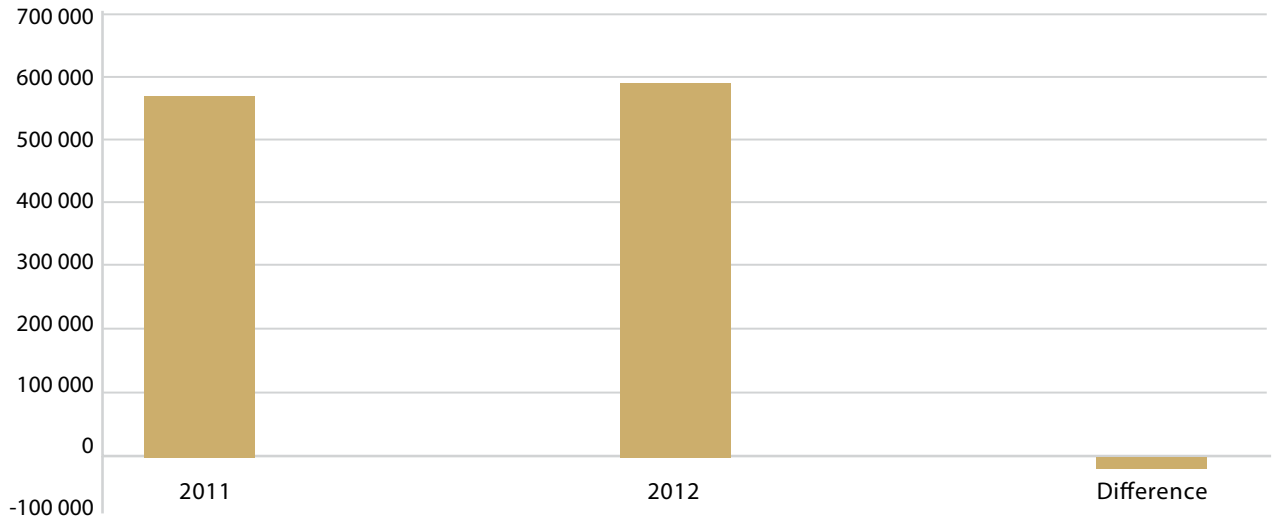
Graph 3.2.2.1 (a): Annual Medical Reports received per region: 2011 and 2012



a. Medical examinations conducted

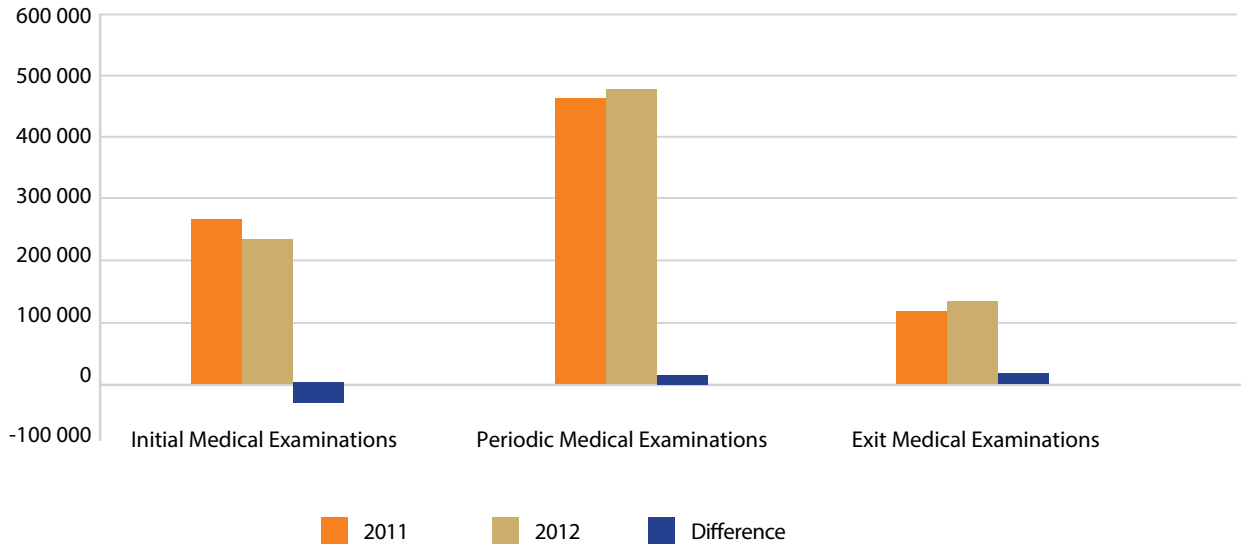
In terms of Section 13(1) of the MHSA, the employer must establish and maintain a system of medical surveillance of employees exposed to health hazards. The table and graph below show an increase of 9 768 in the total number of employees reported in the annual medical reports compared to the previous year.

Graph 3.2.2.1 (b): Total Employees covered in Annual Medical Reports: 2011 and 2012



In terms of Section 13(1) of the MHSA, every system of medical surveillance must consist of an initial examination, periodic medical examinations at appropriate intervals and exit medical examinations. The figures in the graph and table below show a decrease of 34 219 in the total number of employees who have been subjected to initial medical examinations whilst the number of periodic and exit medical examinations have increased compared to the previous year.

Graph 3.2.2.1 (c): Medical Surveillance conducted: 2011 and 2012



b. Occupational diseases detected from the Annual Medical Reports (AMRs): 2011 and 2012

A total number of 6 002 occupational diseases were reported in the AMRs during 2012 compared to 6 444 reported in the previous year. This downward trend in the number of occupational diseases by a total of 442 cases indicates an improvement considering that 79 more mines submitted AMRs for the 2012 reporting period compared to the previous year.

Table 3.2.2.1 (a): Occupational Diseases reported from the AMRs by region: 2011 and 2012

	OCCUPATIONAL DISEASES REPORTED IN AMRS: 2011 AND 2012															
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Region	Sil	Sil	PTB	PTB	Sil+TB	Sil+TB	NIHL	NIHL	CWP	CWP	Asb	Asb	Other	Other	Total	Total
KZN	1	4	73	65	0	0	16	22	0	9	0	0	2	58	92	158
EC	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
NC	0	4	19	43	2	2	28	44	0	0	0	0	5	9	54	102
WC	0	0	14	9	0	0	28	4	1	0	0	0	6	1	49	14
GR	182	321	556	455	86	38	302	193	0	0	0	0	75	42	1 201	1 049
LP	60	10	19	58	0	0	90	84	7	4	3	11	7	7	186	174
MP	36	79	342	318	31	2	212	140	83	71	6	3	51	58	761	671
FS	804	583	717	635	413	65	182	203	0	0	1	0	40	52	2 157	1 538
NW (R)	127	278	1005	901	0	1	334	366	0	2	1	5	8	28	1 475	1 581
NW (K)	76	141	325	353	23	18	37	19	0	0	0	0	8	183	469	714
TOTAL	1 286	1 420	3 070	2 838	555	126	1 229	1 075	91	86	11	19	202	438	6 444	6 002

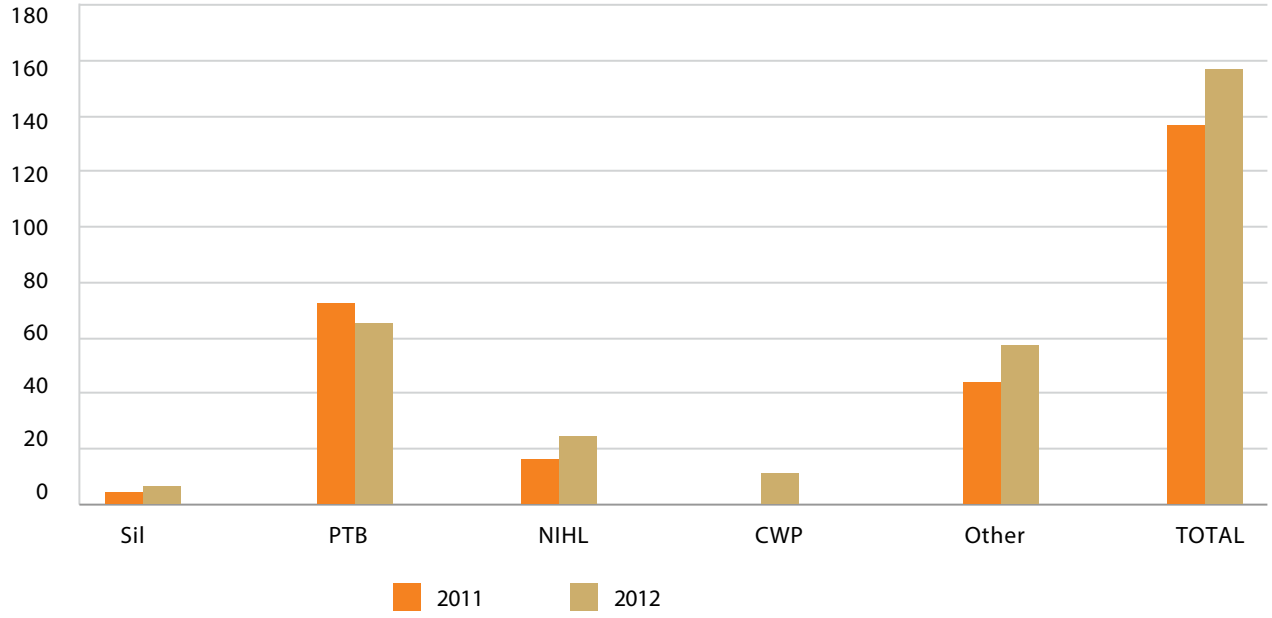
3.2.2.2 Analysis of Medical Surveillance Trends

a. Occupational Disease Trends by Region

KwaZulu-Natal region

Whilst the total number of Annul Medical Reports (AMRs) submitted by mines in the region decreased by 6 during the year 2012, the overall total number of occupational diseases reported increased by 66 cases compared to the previous year. There has been an increase in the number of Silicosis and Noise Induced Hearing Loss (NIHL) cases, although the number of Pulmonary Tuberculosis (PTB) cases reported show a slight decrease. There have also been 9 new cases of Coal Workers Pneumoconiosis (CWP) and an upward trend in the number of other diseases reported compared to the previous year.

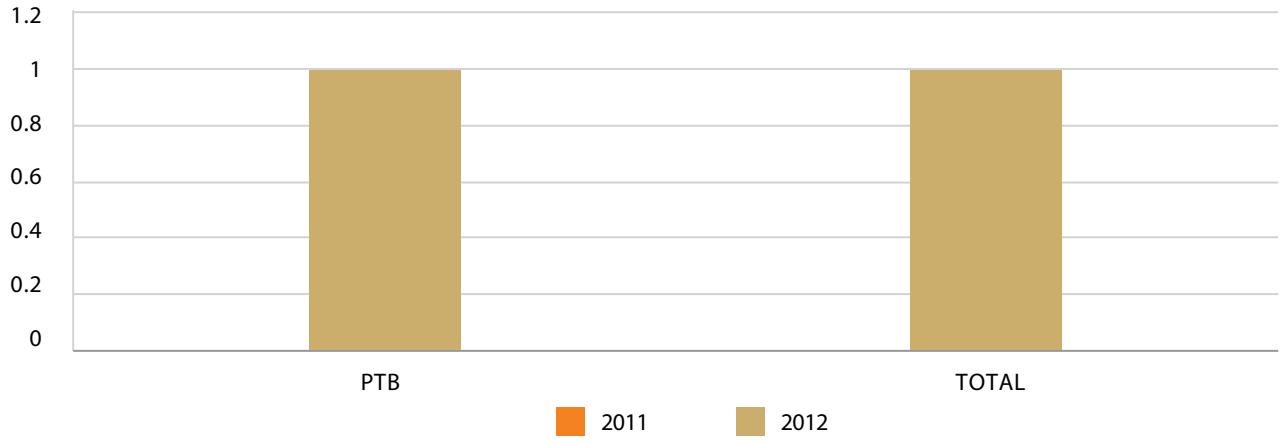
Graph 3.2.2.2 (1): Occupational Diseases reported in KwaZulu-Natal region Annual Medical Reports: 2011 and 2012 AMRs



Eastern Cape region

This region has reported one (1) occupational disease during the year 2012 whilst there were no occupational diseases reported during the previous year. There has also been a decrease of 6 annual medical reports submitted by the region compared to 2011.

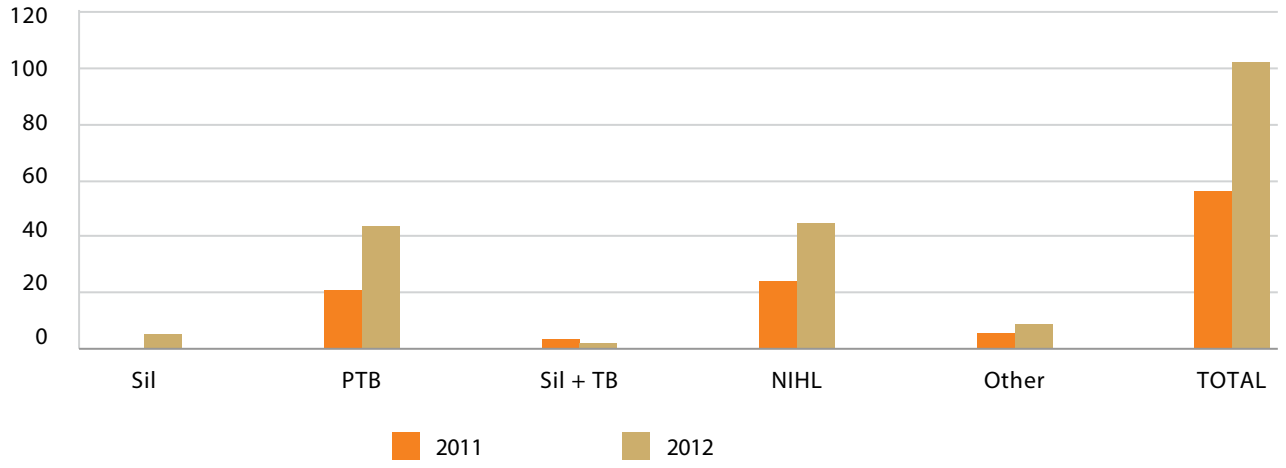
Graph 3.2.2.2 (2): Occupational Diseases reported in Eastern Cape region Annual Medical Reports: 2011 and 2012



Northern Cape region

A total of 4 Silicosis cases have been reported in the AMRs whilst there were none reported during the previous year. The upward trend in the number of PTB, NIHL cases and other diseases reported compared to the year 2011 could be linked to improved reporting by 17 more mines that submitted AMRs compared to the year 2011.

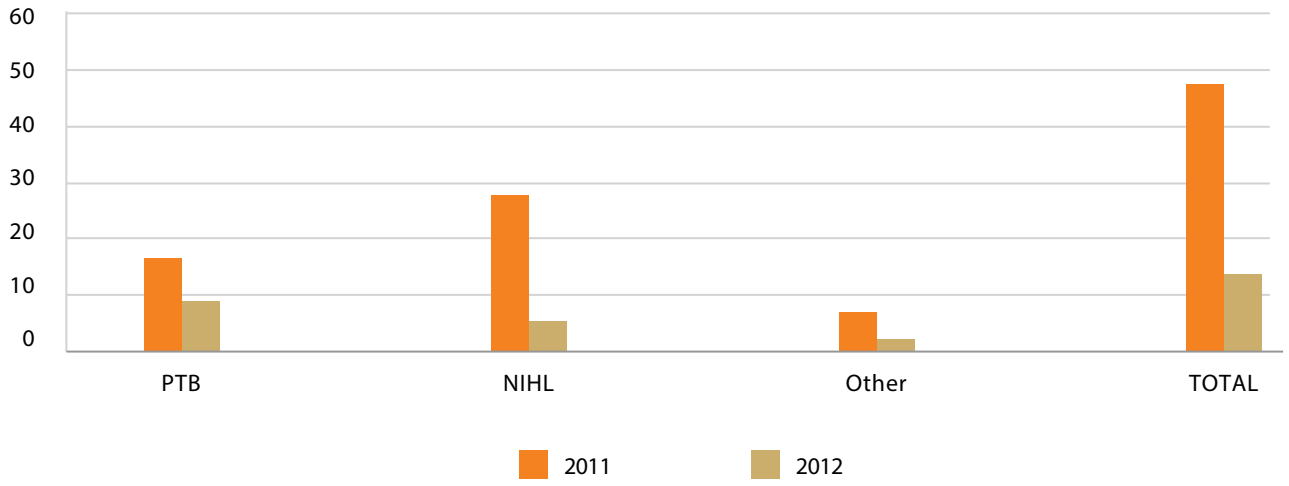
Graph 3.2.2.2 (3): Occupational Diseases reported in Northern Cape region Annual Medical Reports: 2011 and 2012



Western Cape region

There has been a significant decrease in the number of NIHL cases as well as a slight decrease in the number of PTB and other diseases reported compared to the previous year.

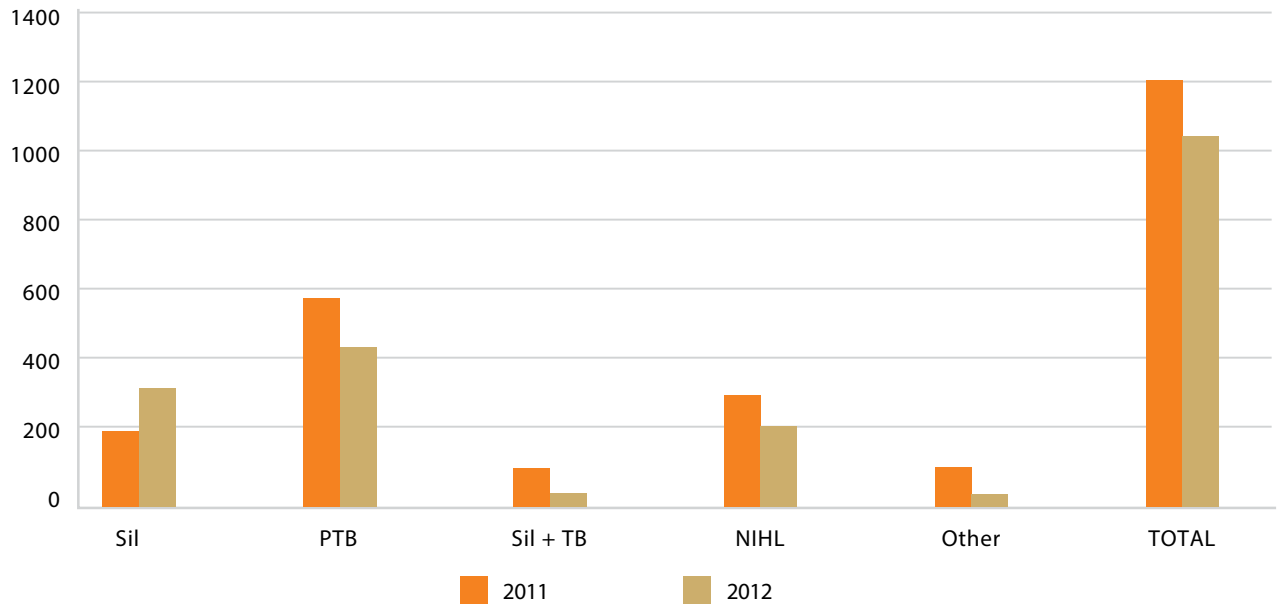
Graph 3.2.2.2 (4): Occupational Diseases reported in Western Cape region Annual Medical Reports: 2011 and 2012



Gauteng region

There has been an overall decrease in the total number of occupational diseases reported compared to the previous year. Whilst there has been a significant increase in the number of Silicosis cases, the number of PTB, Silico-tuberculosis (Sil+TB), NIHL cases and other diseases decreased slightly. The current status of Silicosis and NIHL cases reported remains a concern in view of the health milestone targets that must be achieved by December 2013.

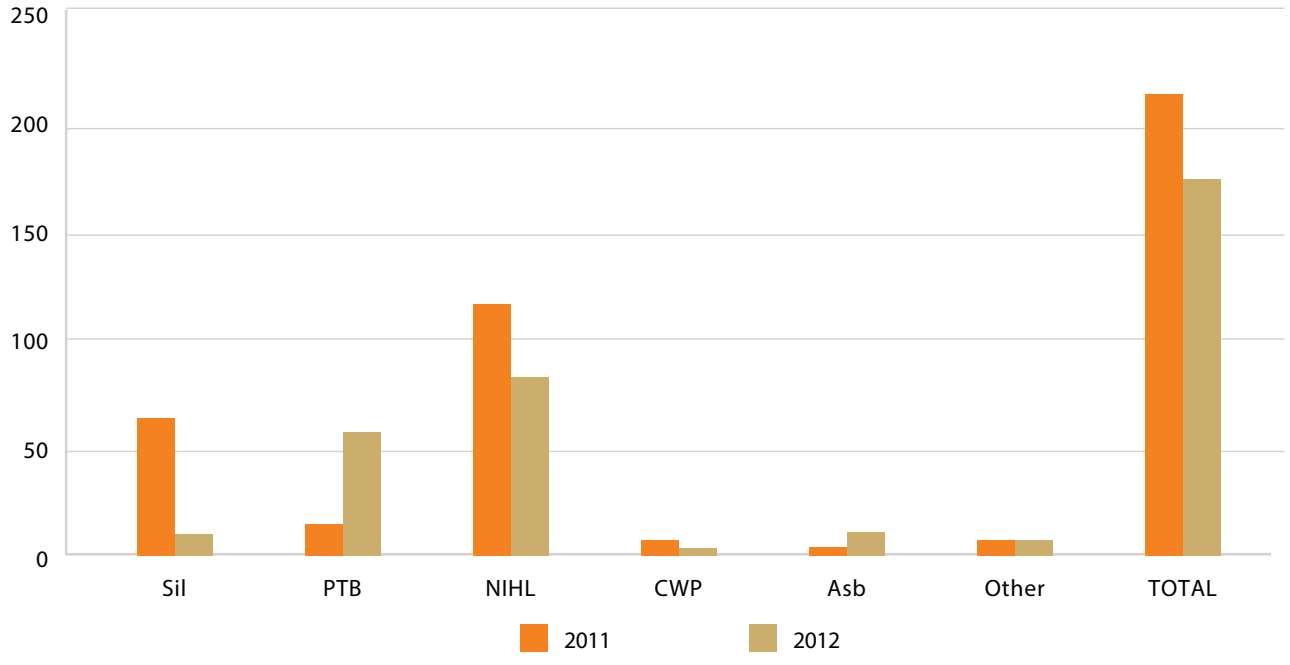
Graph 3.2.2.2 (5): Occupational Diseases reported in Gauteng region Annual Medical Reports: 2011 and 2012



Limpopo region

There has been an overall increase in the total number of occupational diseases reported compared to the previous year. Whilst the number of Silicosis, NIHL and CWP cases show a downward trend, the number of PTB and Asbestosis cases shows an upward trend.

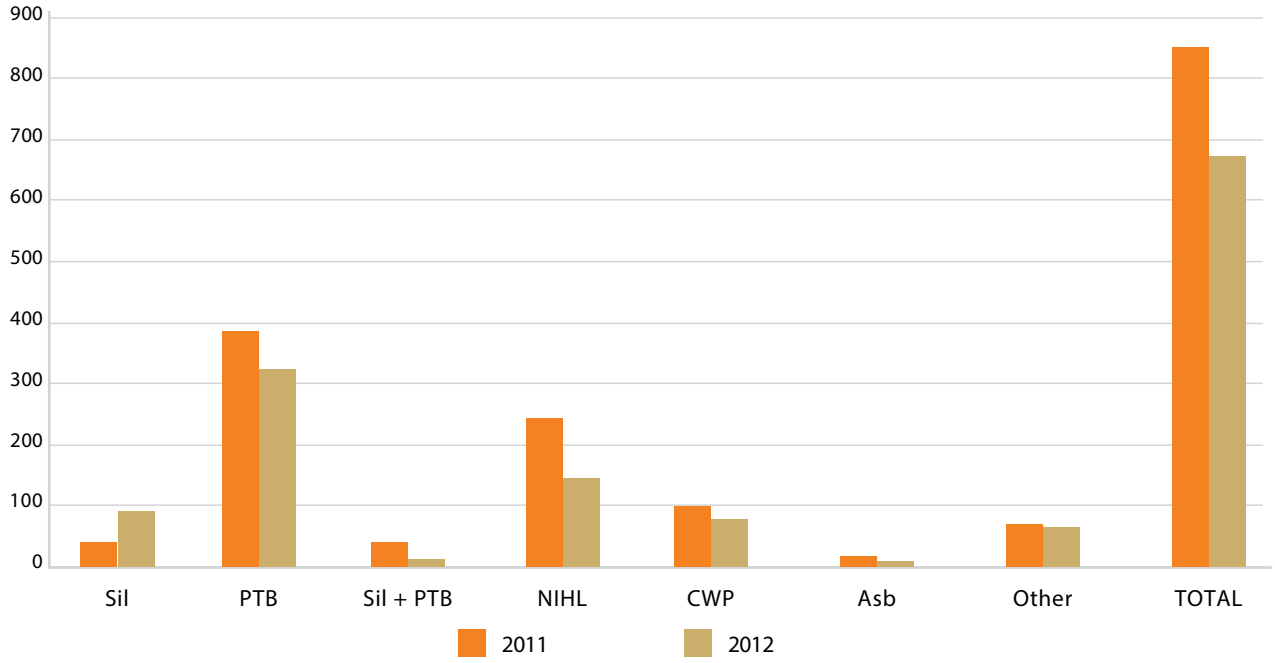
Graph 3.2.2.2 (6): Occupational Diseases reported in Limpopo region Annual Medical Reports: 2011 and 2012



Mpumalanga region

There has been an overall increase in the total number of occupational diseases reported compared to the previous year. There has been a notable decline in the numbers of Sil+TB, NIHL, PTB, CWP cases and other diseases. The number of Silicosis cases significantly increased.

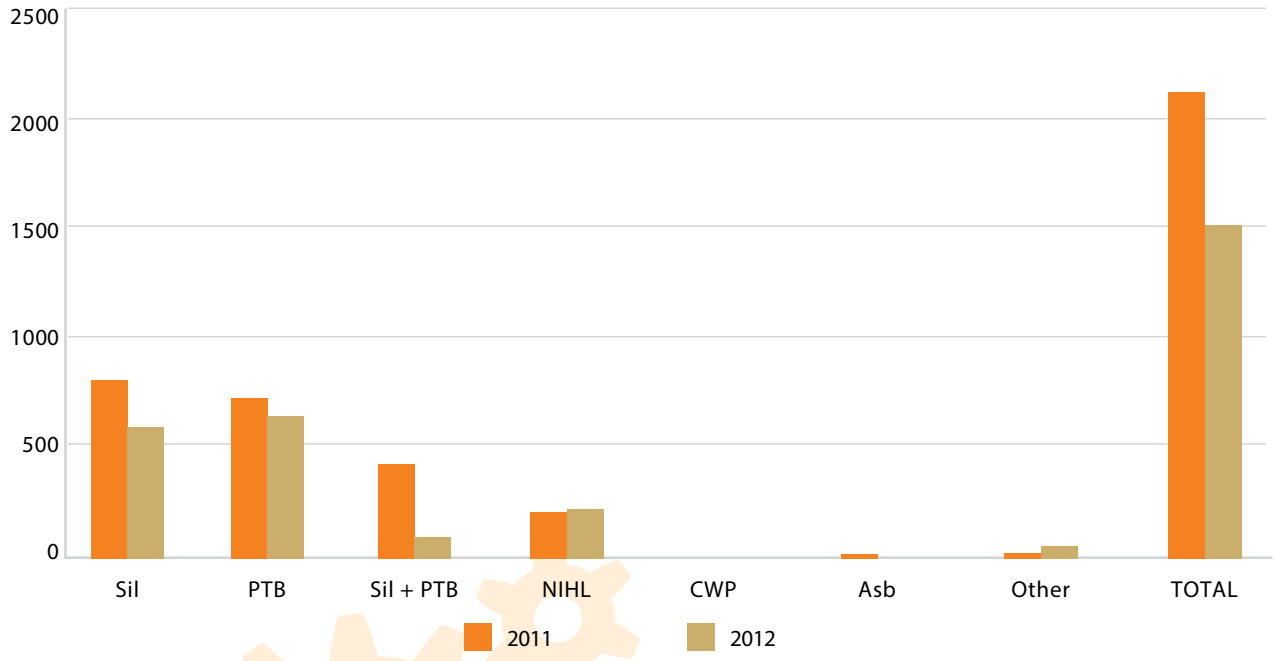
Graph: 3.2.2.2 (7): Occupational Diseases reported in Mpumalanga region Annual Medical Reports: 2011 and 2012



Free State region

There has been an overall decrease in the total number of occupational disease reported compared to the previous year. Whilst the number of Silicosis cases decreased, the NIHL cases reported increased. The number of Sil+TB cases reported significantly decreased and an upward trend in the number of PTB cases as well as other diseases.

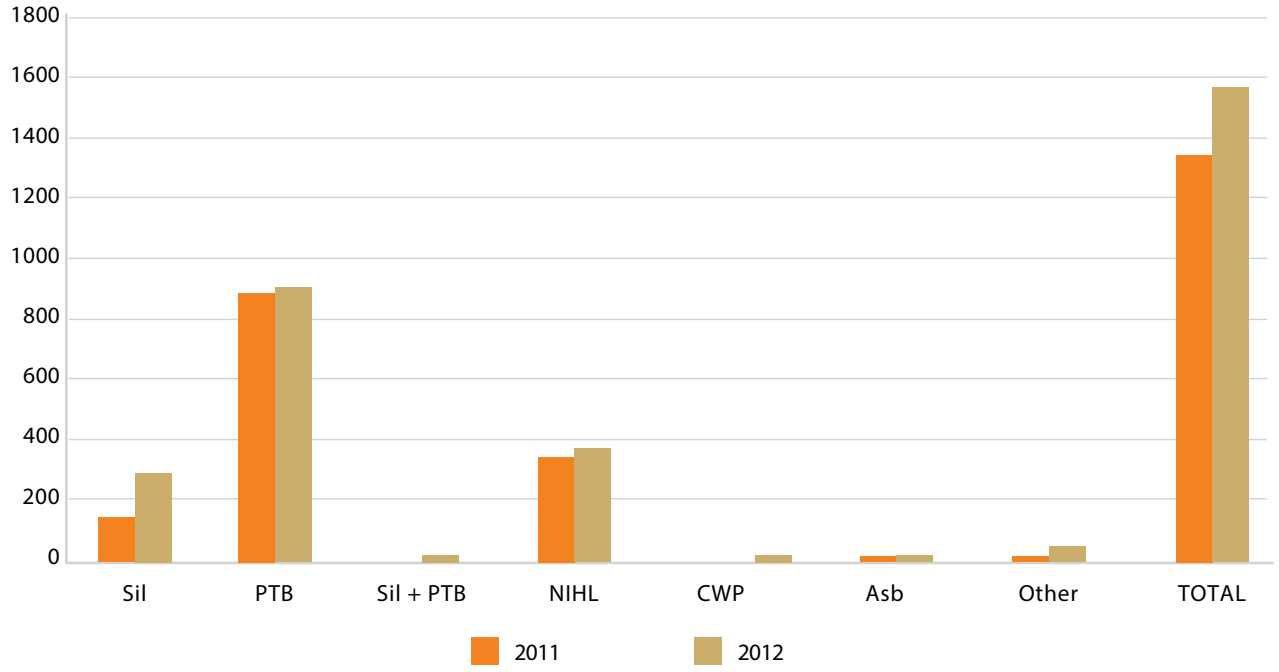
Graph 3.2.2.2 (8): Occupational Diseases reported in Free State region Annual Medical Reports: 2011 and 2012



North West Rustenburg region

There has been an overall increase in total number of occupational diseases reported and this could be linked to an increase in reporting as 19 more mines submitted the AMRs compared to the year 2011. The number of NIHL, PTB, CWP, Asbestosis cases and other diseases shows a slight increase, whilst Silicosis cases increased significantly.

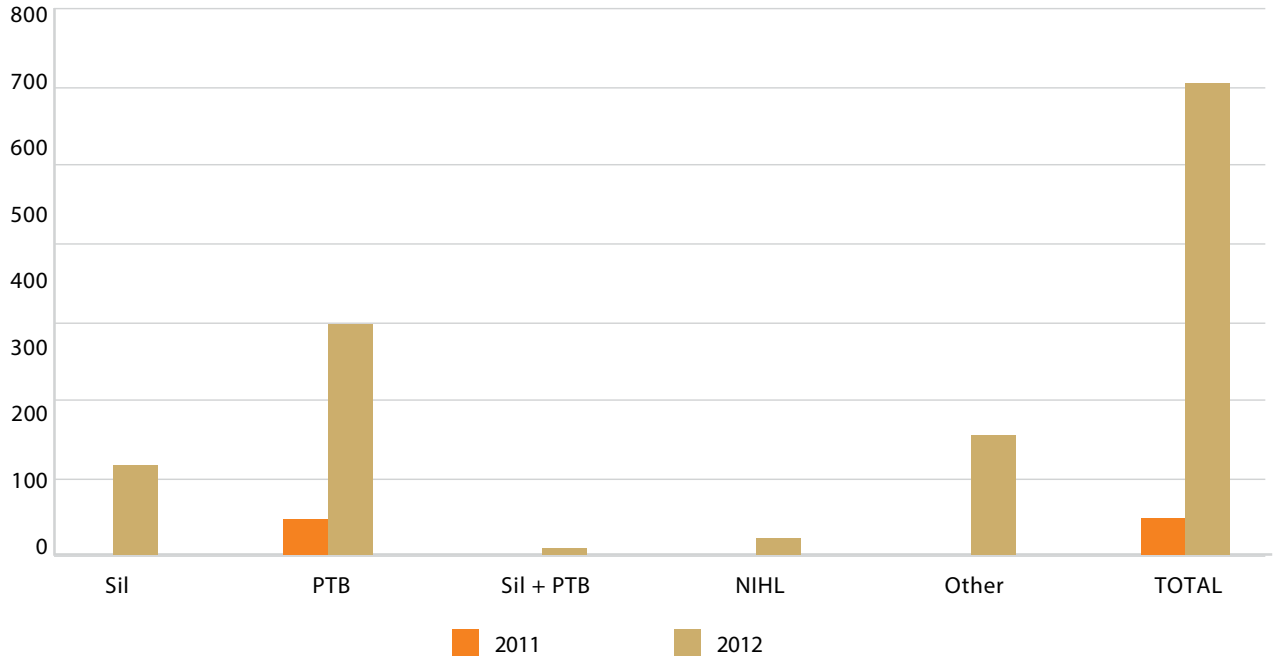
Graph 3.2.2.2 (9): Occupational Diseases reported in North West Rustenburg region Annual Medical Reports: 2011 and 2012



North West Klerksdorp region

A significant overall increase in the total number of occupational diseases reported in 2012 compared to the previous year could be linked to improved reporting in the current year under review as 36 more mines submitted AMRs compared to the previous year. The number of PTB cases shows a notable increase. Silicosis, Sil+TB, NIHL and other diseases were not reported in 2011, but only reported some of the above mentioned cases in 2012, which are significant numbers and of concern if none were not diagnosed the previous year. Four gold mines have reported 134 baro-trauma cases for the first time, these will be followed and trends observed at the respective mines so as to determine the root cause, other contributing causes, as well as research through the MHSC to inform relevant and evidence based interventions.

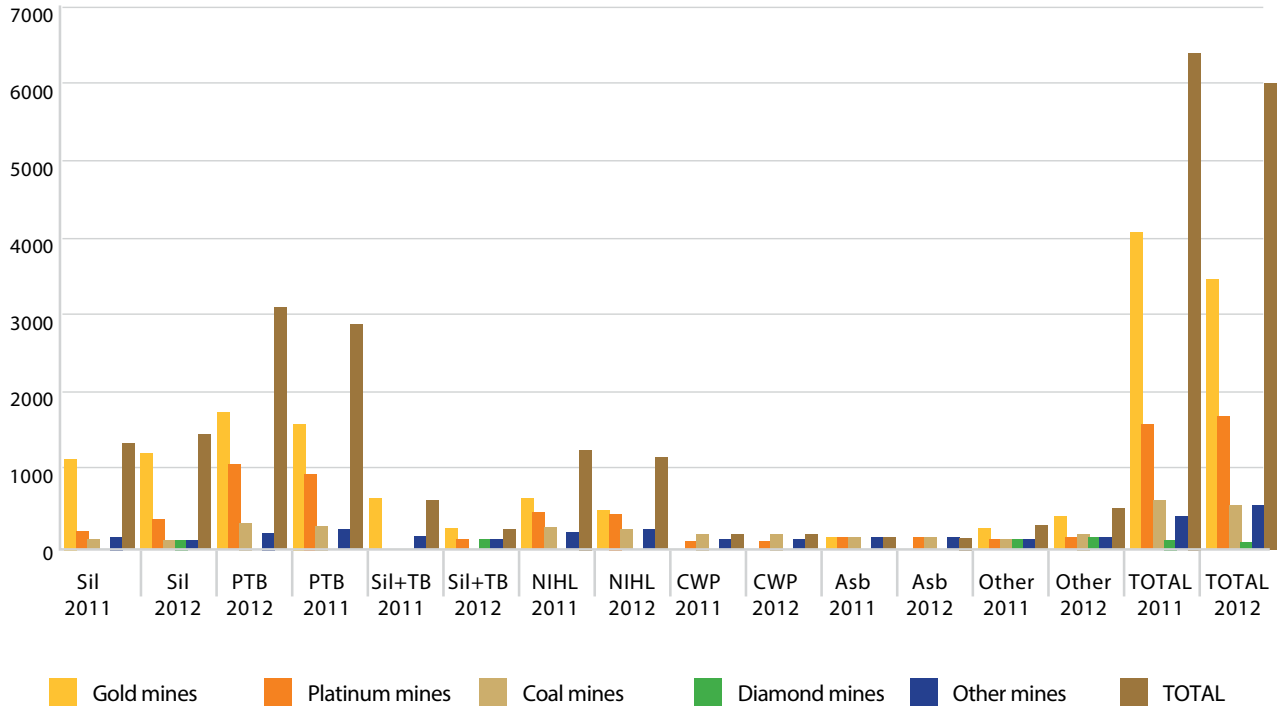
Graph 3.2.2.2 (10): Occupational Diseases reported in North West Klerksdorp region Annual Medical Reports: 2011 and 2012



b. Occupational Diseases by Commodity

The overall total number of occupational diseases reported has decreased by 385 cases as shown in the table and graph below. The downward trend in the number of occupational diseases reported indicates an improvement considering that 79 more mines submitted annual medical reports for the 2012 reporting year compared to the previous year.

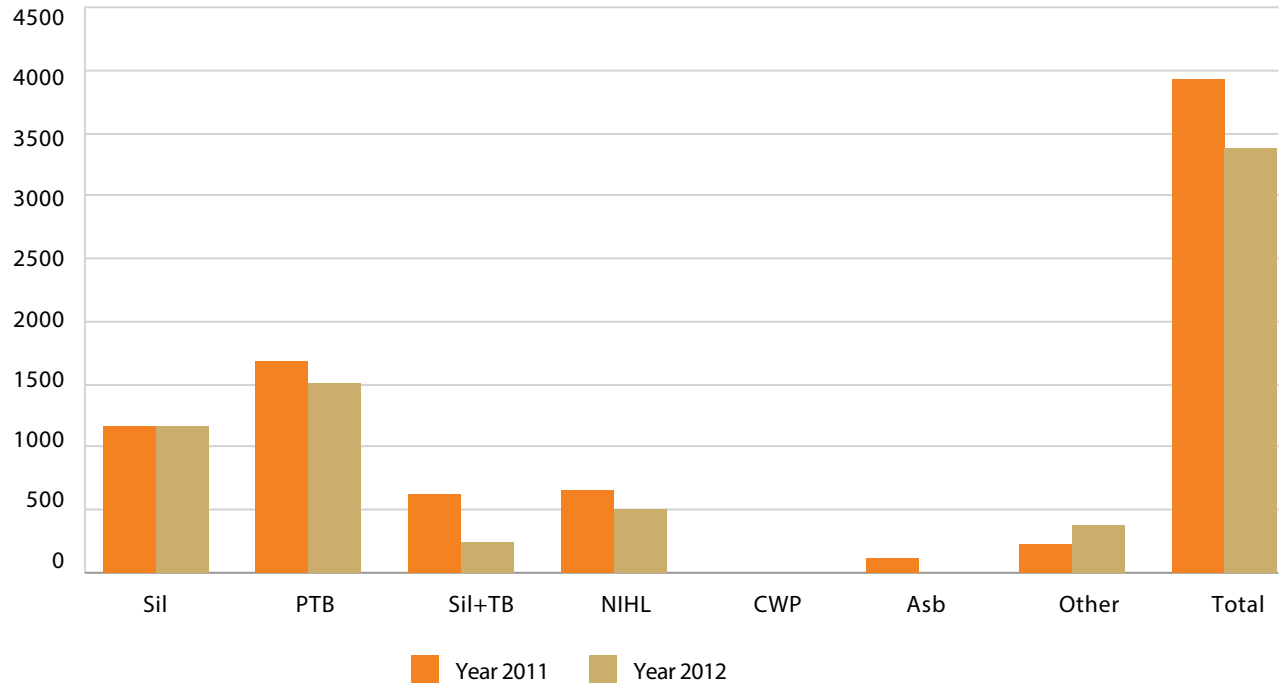
Graph: 3.2.2.2 (1): Occupational Diseases as reported on Annual Medical Reports per commodity: 2011 and 2012



Gold mines

There has been an overall decrease by 565 cases in the total number of occupational diseases reported from five regions (Gauteng, Free State, Limpopo, North West Klerksdorp and Mpumalanga regions) there has been improved reporting from the gold mines, compared to the previous year from the same regions. Silicosis and NIHL cases increased as compared to the previous year.

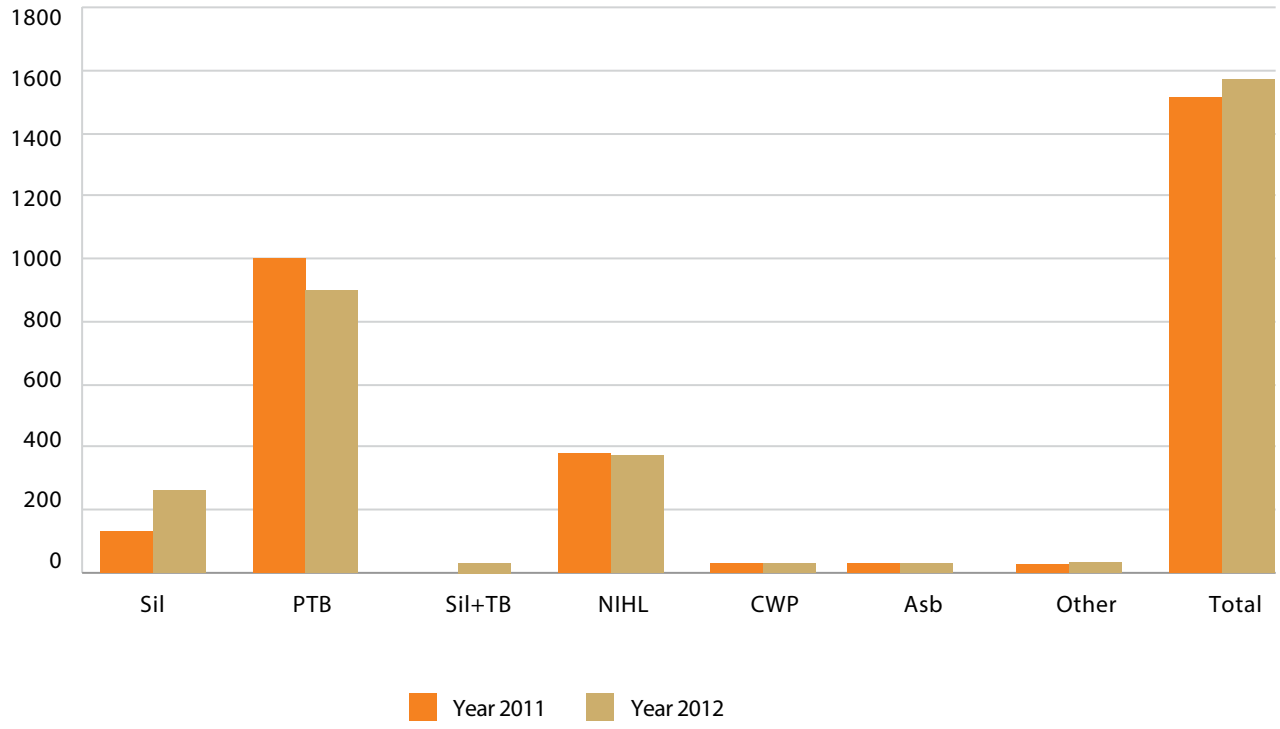
Graph: 3.2.2.2 (1.1): Occupational Diseases as reported on Gold mines' Annual Medical Reports for 2011 and 2012



Platinum mines

There has been an overall increase by 48 cases in the total number of occupational diseases captured from 3 regions (Limpopo, North West Rustenburg and Mpumalanga regions) compared to 4 regions (Limpopo, North West Rustenburg, Mpumalanga and Gauteng regions) during the previous year. The number of Silicosis cases is higher than the number of NIHL cases.

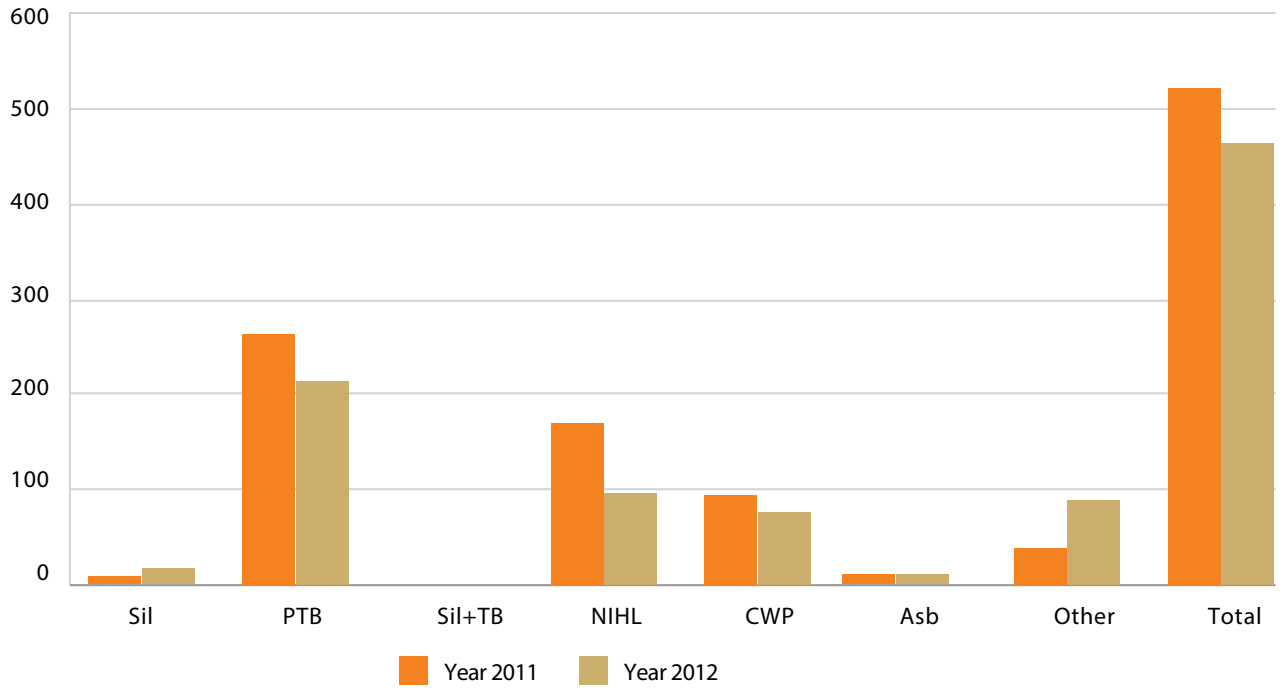
Graph: 3.2.2.2. (1.2): Occupational Diseases as reported on Platinum mines' Annual Medical Reports: 2011 and 2012



Coal mines

There has been an overall decline in the quantity by 65 cases in the total number of occupational diseases reported from 4 regions (Free State, Limpopo, KwaZulu-Natal and Mpumalanga regions) in 2012, compared to the total quantity of occupational diseases in the same regions during the previous year. The figure of Silicosis cases and other diseases show increased in the current year, the number of Pulmonary tuberculosis (PTB), Noise Induced Hearing Loss (NIHL) and Coal Workers Pneumoconiosis (CWP) cases declined..

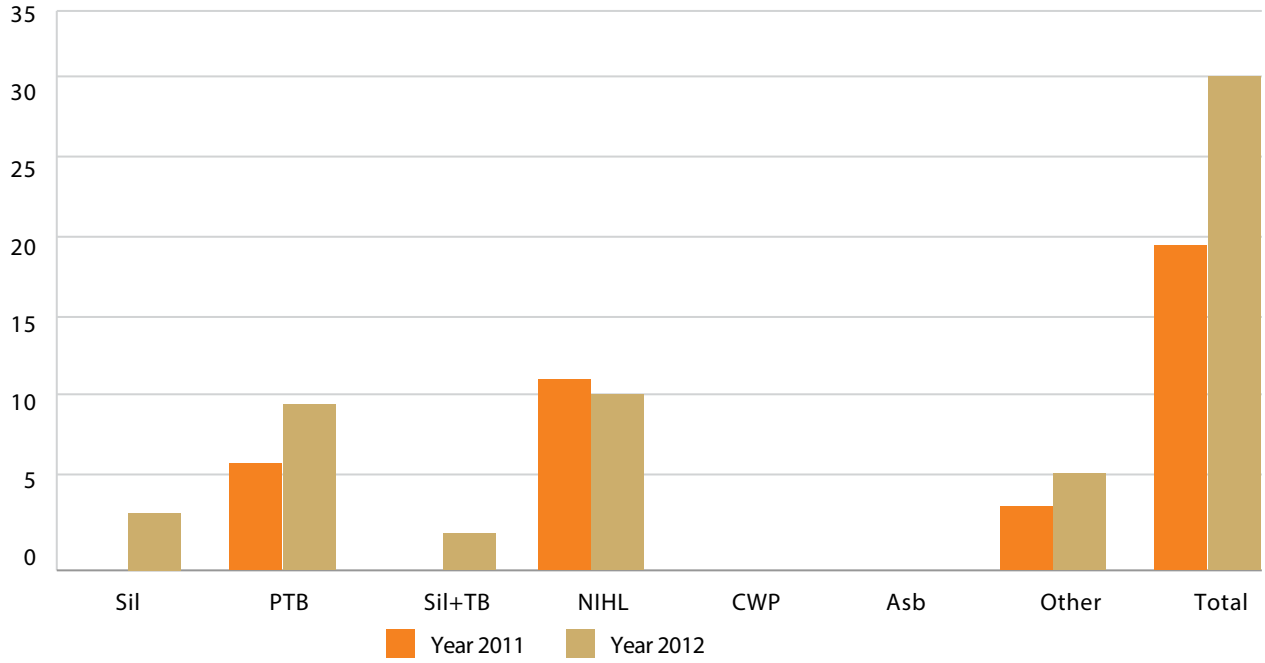
Graph: 3.2.2.2. (1.3): Occupational Diseases as reported on Coal mines' Annual Medical Reports: 2011 and 2012



Diamond mines

There has been a slight overall increase by 9 cases in the total number of occupational diseases reported by 2 regions (Gauteng and Free State) compared to same regions during the previous year. There slight increase in the number of PTB cases and other diseases as well new cases of Silicosis and Silico-tuberculosis (Sil+TB) cases in 2012 compared to the previous year.

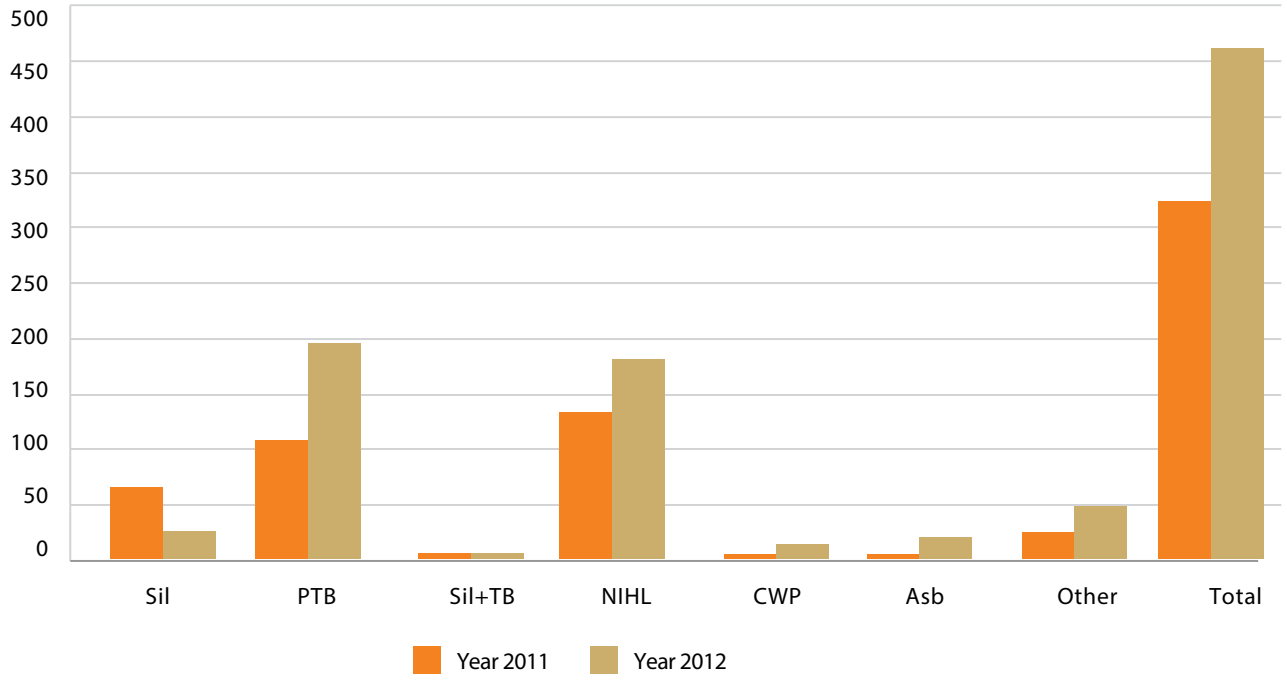
Graph: 3.2.2.2. (1.4) Occupational Diseases as reported on Diamond mines' Annual Medical Reports: 2011 and 2012



Other mines

There has been an overall increase by 140 cases in the number of occupational diseases reported from all 10 regions compared to the previous year. Whilst the rate of Silicosis and Sil+TB and NIHL cases have declined, the number of PTB, CWP, Asbestosis and Other diseases increased. More focus is needed on the category of mines falling under the description of Other Mines to evaluate their level of compliance in adhering to the provisions of MHSA..

Graph: 3.2.2.2. (1.5) Occupational Diseases as reported on Other Mines' Annual Medical Reports: 2011 and 2012



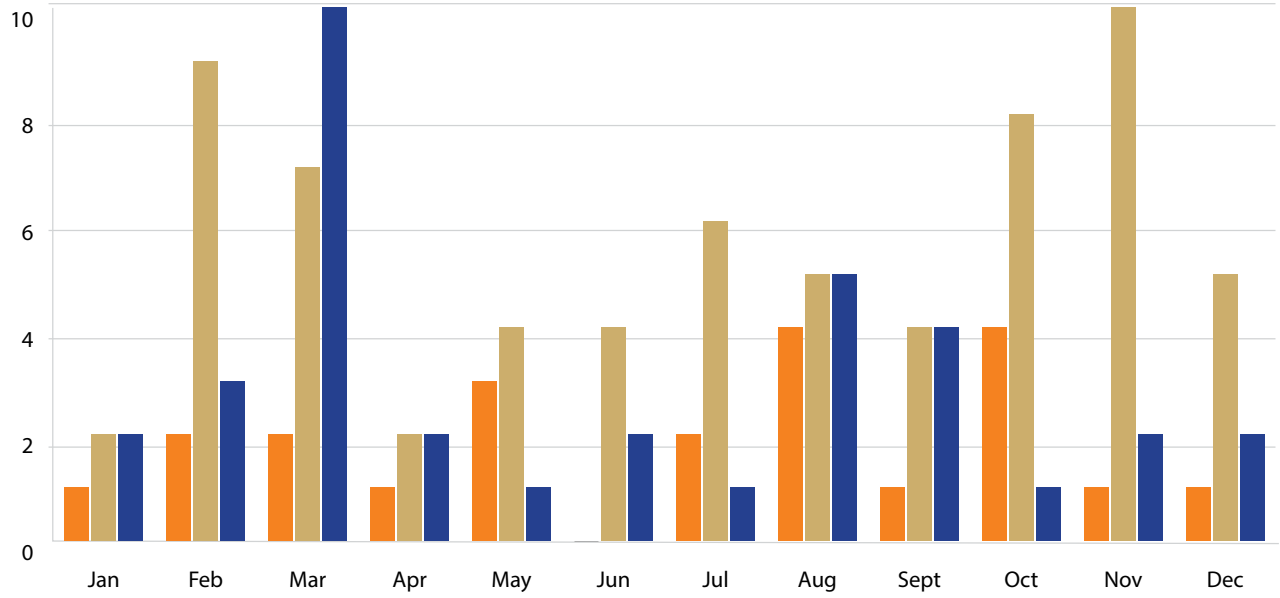
3.2.3 Medical Inspector Report

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 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 for a further period, with valid grounds for late appealing, acceptable to the Medical Inspector.

A total of 102 appeals were received for the 2012 reporting period, and 123 appeals were completed There were 22 cases (18%) found to be fit, 66 (54%) were unfit, whilst 35 others (28%) were related to Compensation matters.

Graph: 3.2.3.1: Appeal findings: January- December 2012



Fit	1	2	2	1	3	0	2	4	1	4	1	1
Unfit	2	9	7	2	4	4	6	5	4	8	10	5
Other	2	3	10	2	1	2	1	5	4	1	2	2

The turnaround time for completion of appeals has improved; however stakeholders have a different understanding of section 20 of MHSA. Employees and their representatives believe that appeals have to be lodged, when they have not been compensated or when there is a labour dispute that needs to be taken to CCMA. These create problems as the Department of Mineral Resources (DMR) does not have jurisdiction over compensation and labour related matters. The DMR however assists by referring such employees to the relevant authorities, and also by ensuring that the employers have followed the right procedures to assist. Some complaints received through the appeal process require further investigations, and are referred to the regional inspectors.

Challenges experienced are divided into 3 bands, as follows;

Employee challenges

- Incomplete forms (e.g. no name or contact details of OMP or employee representative given).
- Not stating the reason for appeal.
- Not sending relevant supporting documents.
- Not honouring appointments made with specialists.
- Late submission of appeals

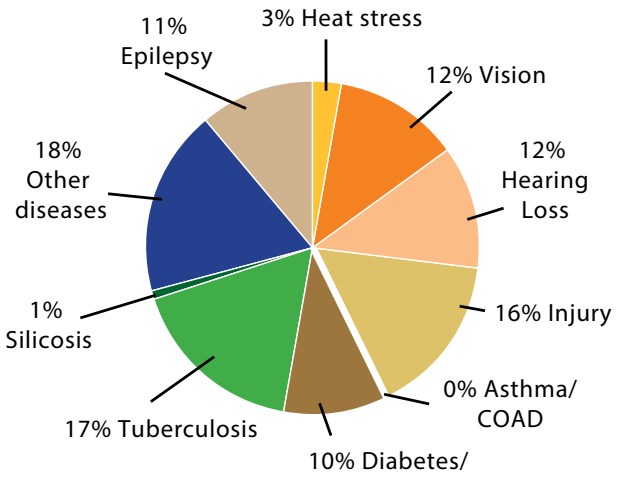
Employer challenges

- Medical incapacity procedure abuse, as employees get boarded based on HR related issues which have nothing to do with the medical conditions of the employees.
- Delay in sending relevant medical records when requested by the Medical Inspector.
- Not informing employees of their rights to appeal in terms of Section 20 of MHSA.
- Reasons for medical incapacitating employees not provided or clear.

Service Provider Challenges

- Unavailability of specialists for second opinion in certain regions.
- Inability to provide early appointments for the employee (appellant).
- Delay in getting reports after assessments are done.

Graph: 3.2.3.2: Diseases reported in 2012 for appeals



In 2012, appeals were commonly lodged against the following diseases: tuberculosis, vision, hearing loss, injuries and other diseases. Tuberculosis is highly disputed by employees as most of them do not accept the fact they could be medically incapacitated due to a curable disease. Some employees respond well to TB treatment, while others don't, but end up with complications which lead to disability and ultimately medical boarding due to ill health.

Other diseases that employees appeal against are the following but not limited to:

Cardiovascular diseases (heart related diseases), Psychiatric disorders (mental illness) HIV related illnesses and Substance abuse.

There were fewer appeals based on Asthma and Chronic Obstructive Airways Disease. This might be due to under-diagnosis or the two diseases are not regarded as occupational diseases

ACTIVITIES OF THE INSPECTORATE

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ACTIVITIES OF THE INSPECTORATE

4.1 CENTRAL AND COASTAL REGIONS

General

The Central and Coastal Regions consist of the Eastern Cape, the Northern Cape, KwaZulu-Natal and Gauteng regions. Wide varieties of minerals are being mined in these regions, with diamond, gold, manganese and iron ore the main commodities. Mining operations occur on surface, underground and offshore.

Achievements

Inspections, audits, investigations and inquiries

During the review year, the Chief Directorate: Central and Coastal Regions - through the regional offices - conducted 3 191 inspections, 175 audits, 377 investigations and 30 inquiries against targets of 3 432 inspections, 181 audits, 613 investigations and 31 inquiries. This translates into achievements of 93% on inspections, 97% on audits, 62% on investigations and 97% on inquiries. The underachievement relates to staff and resource shortages in the regional offices.

Occupational health

The average for Eastern Cape, Gauteng, KwaZulu-Natal and Northern Cape regions' occupational % exposure to airborne pollutants per exposure classification band was 22%, 54% and 24% for HEG A, B and C, while the national average for the various HEGs was 10%, 42% and 48%.

The average for Eastern Cape, Gauteng, KwaZulu-Natal and Northern Cape regions' % compliance to respirable crystalline silica for 2012 was 88%, 7% below the compliance of 95%. Eastern Cape, Gauteng, KwaZulu-Natal and Northern Cape achieved 77%, 86%, 95% and 93% respectively.

A total of 1 310 cases of occupational diseases were reported in Eastern Cape, Gauteng, KwaZulu-Natal and Northern Cape, namely 329 silicosis, 564 PTB, 40 silicosis+ PTB, 259 NIHL, 9 CWP and 109 other diseases.

Mining companies are encouraged to procure mine equipment that comply with noise levels. PTB is a serious concern in the mining industry due to the confined space working environment. Mining companies should continuously devise strategies to combat occupational diseases.

Occupational safety

a. Fatalities

The number of fatalities for 2012 was unchanged from the previous year, at 34. The Chief Directorate: Central and Coastal Regions recorded a total of 34 fatalities for the period under review (2012) against 34 fatalities during the previous reporting period (2011) which translates to no improvement.

The Eastern Cape recorded no fatalities for the fourth successive year. The Northern Cape region recorded three fatalities for 2012, unchanged from against three fatalities during 2011. There was one fatality in KwaZulu-Natal, compared to two in 2011. Gauteng recorded 31 fatalities for 2012 against 29 in the previous year, a 7% regression.

b. Injuries

The Chief Directorate: Central and Coastal Regions recorded 891 injuries for 2012 against 824 in 2011, a 7% regression.

The Eastern Cape region recorded two injuries in 2012 compared to five during 2011, a 60% improvement. The Northern Cape experienced 60 injuries against 61 in 2011 - a 1.7% improvement. In KwaZulu-Natal, there were 35 injuries compared to 36 during 2011 - a 3% improvement. Gauteng recorded 794 injuries against 722 in 2011 which was a 10% regression.

Strategies for improving status quo

A total of 286 Section 54(1) and 695 Section 55 notices were issued during the period under review. Nine administrative fines were recommended, five fines totalling R155 000 imposed and four fines disregarded. Only one of the five administration fine – R75 000 - was paid.

Regional staff continued to:

- Conduct and participate in tripartite structures established to deal with challenges relating to OHS and to training and capacity building in the mining industry;
- Conduct and participate in OHS meetings with CEOs of mining companies to highlight OHS challenges in their mining operations;
- Employ OHS strategies to combat health and safety incidents, including occupational diseases, and
- Participate in OHS summits, seminars and conferences.

Ministerial audits of mandatory codes of practice in terms of Section 9 of the MHSA (Act No. 29 of 1996), as amended, were completed in June 2012. Thereafter, many mines were issued with Section 55 and Section 54 instructions (included in the figures above).

Challenges

Staff, financial and equipment resources remain a challenge. Regions battle to attract personnel with the requisite mining skills due mainly to uncompetitive salaries. Eastern Cape, Northern Cape and KwaZulu-Natal cover, by far, the largest geographical area in South Africa, which requires inspectors to be away from their permanent work stations for lengthy periods. Lack of portable equipment hampers communication and access to information.

Topical issues and matters of interest

- **Illegal mining**

Illegal mining activities in defunct mines have, in the past two years, become a major challenge in Gauteng. To address the situation, the Illegal Mining Forum was established chaired by the DMR and comprising representatives from the South African Police Service (SAPS), National Prosecuting Authority (NPA), mining companies, municipalities and mines' organised labour.

The forum report to the National Coordination Strategic Management Team (NCSMT), which was established by the Justice, Crime Prevention and Security (JCPS) Cabinet Committee. The NCSMT coordinates the government's efforts to fight illegal mining and the trafficking of precious metals.

Illegal mining operations have increased in the Eastern Cape, Northern Cape and KwaZulu-Natal regions. The staff of the Inspectorate met with district municipalities and the NPA to strategise methods of addressing this. It has been recommended that cases be reported to the local SAPS as criminal offences.

- **Coal mining in the Eastern Cape and Gauteng regions**

Underground coal mining and open cast coal mining began in the Eastern Cape and Gauteng regions respectively, during the period under review.

- **Acid mine drainage**

Pumping of water from the mine voids in the central basin of Gauteng ceased in October 2008. A pumping and water treatment facility is currently in construction, but will not be operational by the time the rising water reaches the environmental critical level (ECL).

The water treatment plant in the western basin is currently treating approximately 21 million litres of mine water a day. The plant is being upgraded to increase its capacity to more than 30 millon litres a day.

The water level in the eastern basin continues to rise at approximately 0.33m a day and is currently 447 metres below surface. A pumping facility and water treatment plant, similar to the plant under construction at the central basin is being planned for the eastern basin.

- **Disaster type accidents**

Five mine employees died and 15 other employees were injured in a fire at Goldfields Driefontein Gold Mine. The accident occurred during a Saturday night overtime shift and it appeared that the victims inhaled smoke.

Ten illegal miners died and 12 others were seriously injured when the hanging wall of the underground excavations of Bontekoe Diamond Mining Company collapsed as a result of insufficient support and the use of pneumatic rock drills.

- **Labour unrest**

The gold mines in the Chief Directorate: Central and Coastal Regions were adversely affected by labour unrest towards the end of 2012, mainly as a result of union

activities. One of the mines closed down for an extended period, but production resumed. Some employees staged sit-ins underground, dangerous situations to contravene the MHSA 1996 and that must be reported to the DMR. .

4.1.1 Regional Report: Eastern Cape

4.1.1.1 Overview of the region

The Eastern Cape Region is situated in the south eastern part of South Africa, surrounded by the Western Cape, the Northern Cape, the Free State and KwaZulu-Natal. The region is the second largest of South Africa's nine provinces in area (approximately 169 580 square kilometres) and third largest in population. The province includes the former homelands of Transkei and Ciskei and is inhabited by almost 7 million people who speak mainly IsiXhosa, Afrikaans and English.

According to the Branch: Mineral Regulation, there are approximately 422 registered mining operations in the Eastern Cape employing more than 3 000 people in medium- and high-risk operations. Operational mining takes place in some 57 hard rock quarries and many gravel and clay quarries to provide the necessary materials for the construction industry. There continues to be much activity throughout the region to repair and upgrade roads from materials mined from many borrow pits. An underground coal mining operation started up during the reporting period. Production levels at many operations remained below expectations as a consequence of the depressed global economy.

4.1.1.2 Inspections and audits

Inspections were performed in accordance with annual planning.

CATEGORY	INSPECTIONS	AUDITS
Planned	344	44
Actual	408	56
% compliance	119	127

4.1.1.3 Total accidents reported

No fatal accidents occurred in the Eastern Cape in 2012.

Fatal accidents	0
> 14 day reportable	2
1 to 13 day reportable	18

** Period 1January 2012 to 31 December 2012*

4.1.1.4 Investigations and inquiries

Investigations were completed for the >14 day accidents.

	INVESTIGATIONS	INQUIRIES (INCLUDING INVESTIGATION)	TOTAL
Initiated	2	2	2
Completed	2	2	2
% compliance	100	100	100

4.1.1.5 Disaster-type accidents

No disaster-type accidents were reported.

4.1.1.6 Statutory notices

A total of 48 Section 55 notices were given to mines, due mainly to the following non-compliances:

- Occupational hygiene: statistics, dust control, personal protective equipment (PPE) and lack of mandatory codes of practice;
- Occupational medicine: medical surveillance, training on appeals, AMRs;
- Mine equipment: lack of compliance with the machinery regulations on conveyor belts and general machinery, lack of mandatory codes of practices and risk assessment;
- Legal appointments; and
- Mining: lack of mandatory codes of practice and updating of mine plans.

A total of 11 Section 54 notices were issued mainly for guarding of moving machinery.

SECTION 54 NOTICES	SECTION 55 NOTICES
11	48

4.1.1.7 Administrative fines

No of fines recommended by inspector	1
No set aside by the PI	0
No imposed by the PI	1
Value of fines imposed	R5 000
Appeals	Pending
Value of fines paid	Pending

4.1.1.8 Examinations

CERTIFICATES	EXAM BOARDS	NO OF CANDIDATES	CERTIFICATES ISSUED
Mine overseers	0	0	0
Blasting	0	0	0
Onsetter	0	0	0
Lampsman	0	0	0

4.1.1.9 Land use applications and complaints

	RECEIVED	COMPLETED	PERCENTAGE %
Township developments	43	42	98
Mining and prospecting rights and mining Permits	245	234	96
Mine closures	18	15	83
Environmental management	71	69	97
Complaints	5	5	100

4.1.1.10 Matters of interest

Elitheni Underground Coal Mine

The mine began underground production with one CM section in December 2012. A Sandvik AM10 is being used with roof bolters, shuttle cars and LHDs to clear coal from underground. Current production levels of 20 000t a month are being achieved, but this is being challenged by difficult floor conditions. The floor is a mudstone/shale floor and tends to disintegrate with water and activity.

This is being dealt with through the use of gophers for roof bolting (dry versus wet process) and the use of LHDs to clear the broken floor.

An additional CM and shuttle car and related equipment are expected to be brought into commission in April/May 2013, which will more than double production targets. An additional drill and blast section is planned for June/July 2013, which will increase capacity to 70 000t a month.

A further low seam drill and blast section will be implemented before the end of 2013 to increase production to 100 000 a month.

Illegal mining operations

It is noted with concern that the incidence of illegal mining continues to spread in the region and that inspectors face the threat of violence from perpetrators. Municipal authorities and properly licensed operators have requested the DMR's assistance. However, it does not have the capacity to police these activities and has requested licensed operators to report illegal operations to their nearest SAPS.

4.1.1.11 Strategies to improve the status quo

Audits conducted through the year continue to identify where employers need to focus attention; and inspections are geared to follow up on problems identified during group audits. To improve the health and safety performance at mines the following aspects received more focused attention:

- Codes of practice;
- Statutory appointments;
- Safety berms at quarry crests;
- Closure of old roadways;
- Medical surveillance;
- Discouraging illegal swimming at quarries by ensuring tighter security levels, engaging with communities, and erecting mandatory warning notices and fencing;

- Updating of mine plans, and
- Holding of tripartite stakeholder meetings.

4.1.2 Regional Report: Gauteng

4.1.2.1 Overview of the region

The Gauteng region is situated in the north western part of South Africa, surrounded by Limpopo, North West, Mpumalanga and Free State. The region is the smallest of South Africa's nine provinces in area (approximately 18 178 square kilometres), has the largest population and by far the highest population density (more than 550 people per square kilometre).

According to mineral regulations there are approximately 165 registered mining operations in Gauteng employing more than 91 000 people. Minerals excavated are gold, diamonds, dolomite, dolerite, quartzite, clay, sand, fluorspar etc. Operational mining takes place underground, on the surface (blasting and non-blasting) and in brickworks.

Gold is the main commodity and is mined in the large, deep mines of the West Rand and Far West Rand. Apart from the Modder East operation of Gold One, gold mining in the East Rand has virtually come to an end. Central Rand Gold to the west of Johannesburg has begun small-scale underground mining.

Gold One is evaluating the old mining areas of the Far East Rand with the intention of restarting mining in selected areas by the newly established Goliath Gold. Diamond mining is carried out at the underground Petra Mine in Cullinan as well as numerous, small-surface operations.

The chrome and platinum mines in the Brits district have reverted to the North West Rustenburg region. Open cast coal mining began in the Nigel district during the period under review. In addition, there are a large number of hard rock quarries, clay quarries and sand mines.

4.1.2.2 Inspections and audits

CATEGORY	INSPECTIONS	AUDITS
Planned	2 032	50
Actual	1 759	54
% compliance	87	108

4.1.2.3 Total accidents reported

Fatalities	31
> 14 day accidents	794
1 to 13 day reportable accidents	613

During the period under review, 31 persons died in 25 accidents in the mines in the region, compared to 29 deaths in 2011 - a 10% regression. In addition, 794 persons were injured compared to 722 in 2011 - a 10% regression.

4.1.2.4 Investigations and inquiries

	INVESTIGATIONS	INQUIRIES	TOTAL
Initiated	482	24	506
Completed	255	24	279
% completed	53	100	55

4.1.2.5 Disaster-type accidents

Five employees died and 15 others were injured in a fire at Goldfields Driefontein Gold Mine. The accident occurred during the Saturday overtime night shift and the victims inhaled noxious gases.

4.1.2.6 Statutory notices

SECTION 54 NOTICES	SECTION 55 NOTICES
93	389

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

- Occupational hygiene: employees working where the wet bulb temperature reading exceeds 32,5°C; excessive dust emanating from a slimes dam being worked; escape route not demarcated and not cleared of rubble; temperature measuring instrument defective; employees working in dusty conditions without being provided with PPE (i.e. dust marks), and lack of dust suppression.
- Occupational medicine: employee with a communicable disease working underground without a treatment programme; health risk assessments not done; codes of practice not revised; TB programme not in place, and occupational diseases not investigated

- Mine equipment: moving parts of conveyor belts not safeguarded or fenced; conveyor belt guards loose and not bolted, pull wires not installed and alarm not audible; trackless mobile machine operator operating the machine without an operator's permit, and excessive water coming out of a box front.

- Mining: non-compliance with explosives procedure in terms of Chapter 4 of Explosives Regulations of the MHSA; excessive leads and lags measured underground; employees working in areas where the temporary and permanent support spacings are not in accordance with the mine standard procedure; poor explosives control; travelling way not supported as per mine standard procedure; mine plan without a legend; geological features not indicated on the mine plan; explosive boxes not shown on the mine plan; mine plan showing excessive lead/lags, and face shape not straight on the mine plan

4.1.2.7 Administrative fines

No of fines recommended by inspector	1
No set aside by PI	0
No imposed by PI	1
Value of fines imposed	R75 000
Appeals	Nil
Value of fines paid	R75 000

4.1.2.8 Examinations

CERTIFICATE	EXAMINATION BOARDS	NO OF CANDIDATES	CERTIFICATES ISSUED
Mine overseers	56	743	56
Blasting	0	0	0
Onsetter	12	81	40
Lampsman	4	6	4

As can be seen from the table above, the success rate for candidates, especially for the mine overseers examination, is very poor. Candidates are generally poorly prepared for the examinations, which takes up much of the inspectors' time. Absent candidates during the examination remains a problem.

4.1.2.9 Land use applications and complaints

	RECEIVED	COMPLETED	PERCENTAGE
Township developments	93	85	91
Mining and Prospecting Rights	45	52	115
Closure Certificates	20	24	120
Environmental Management	124	141	114
Complaints	17	16	94

An increasing number of complaints emanated from townships encroaching on established mining activities.

4.1.2.10 Matters of interest

a. Labour unrest

The gold mines in the region were adversely affected by labour unrest towards the end of 2012, mainly as a result of union activities. One of the mines, Harmony Kusasalethu Gold Mine, closed down for an extended period and although production work restarted, the mine is expected to reach full production levels only by June 2013.

b. Rising water in the Witwatersrand compartments

As reported last year, the pumping of water from mine voids in the Central Basin of Gauteng, which extends from Roodepoort to Boksburg, ceased in October 2008. The water has been rising steadily since then and is now some 235 metres below surface at the SWV Shaft of the defunct ERPM Gold Mine, where pumping was last carried out. The water in the basin is currently rising at approximately 0,34 metres a day. At this rate, the ECL of 179 metres below surface at SWV Shaft will be breached in September 2013.

A pumping and water treatment facility is being constructed at SWV Shaft, but will not be operational by the time the rising water reaches the ECL.

Central Rand Gold has a mining right over much of the Central Rand and is planning mining to a depth of 300 metres below surface.

The water treatment plant on the old Randfontein Estates Gold Mine is currently treating approximately 21 Ml a day of mine water from the Western Basin. Further upgrades to the plant are due for commissioning in May 2013 and will increase the capacity to more than 30 Ml a day. Since the commissioning of the plant, there has been no decanting of water on surface.

The water level in the Eastern Basin continues to rise at approximately 0,33m per day and is currently 447 metres below surface at Sub Nigel No 1 Shaft. A pumping facility and water treatment plant, similar to the plant under construction at SWV shaft. is being planned for the Eastern Basin.

c. Illegal mining

Illegal mining activities experienced in the old defunct mines in the East Rand and West Rand of Gauteng have, in the past two years, become a major challenge for the DMR, mining companies and local authorities.

Consequently, the East Rand Illegal Mining Forum and West Rand Illegal Mining Forum were established on 17 and 23 April 2012 respectively. The forums merged on 12 September 2012 to form the Gauteng Illegal Mining Forum .The forum is chaired by DMR and includes representatives from the APS, NPA, mining companies, municipalities and mines' organised labour. It meets monthly and reports its activities to the NCSMT, which was established on 24 June 2010 to curb illicit mining. The initial focus of the forum was on the East Rand/ Ekurhuleni, where illegal mining was most prevalent. Illegal mining subsequently increased on the West Rand, hence the focus is balanced between the East Rand and the West Rand.

With the cessation of mining at the Pamodzi and Gravelotte gold mines, illegal mining activities have become a major problem for the region. A number of illegal miners were killed during the year. In each case the body recovery presented the DMR with logistical problems and required the assistance of the MRS and/ or Ekurhuleni Emergency Services and Johannesburg Emergency Services. The latter organisations are, however, not equipped or trained to effect underground mine rescue operations. A forum has been established with the major role-players to develop a strategy to control illegal mining.

4.1.2.11 Strategies to improve the status quo

The region will maintain zero tolerance towards non-compliance through the implementation of the OHS strategy to combat incidents in the region.Strategies to improve health and safety include:

FOG: in-stope bolting and netting must be implemented at all places being mined; preconditioning of solid rock walls must be implemented in the reef horizon; all geological structures must be deemed violent and treated as such; no- go-zone areas must be enforced; mining of remnants and pillars left as stability pillars must be avoided; stope face length shall be limited to 30m and the escape way must be within 4m from the face, in the direction of mining, and lead and lags must be kept to a minimum (i.e. not more than 10m).

Rock-pass and mud-rush: Grizzlys must be installed in all rock passes; mines must put reasonable measures in place to prevent water from entering the rock pass; under no circumstances must a person enter or be permitted to enter the rock pass at the discharge end, to unblock the blocked rock pass; fail safe rock pass controlling devices (i.e. box fronts) must be installed on all rock passes; all box fronts must be remotely operated and the box front operator must be located on the elevated position at a minimum distance of 10m on the haulage side and all platforms must be separated from the box front structure.

Rail-bound equipment (RBE) and trackless mobile machinery (TMM): proximity devices [(RBE to RBE), (RBE to persons), (TMM to TMM) and (TMM to persons)] must be implemented; auto coupling must be used by mines in all rolling stock; all mines must inspect and audit the conditions of rail tracks, compile the findings and undertake remedial action; lock-out procedure and proper locomotive key control must be implemented and the mines must ensure that clearance between the highest point of the highest trackless mobile equipment and the hanging wall of a decline is not less than 500mm.

Fires and gassing: The mines must conduct regular inspections of the beacon heads and the findings of the inspections must be recorded; if the beacon head fails, all persons must be withdrawn from the affected to the safe area; mines must ensure that the fire alarm is audible and visual; the telemetric system must be designed so that control room operators are not able to override it; the telemetric system must be able to warn all relevant person(s) if fire or gas has been detected; the fire and

gas detection early warning system (i.e. red light) must be installed in strategic areas underground to warn employees if fire or harmful gas has been detected.

The region will continue to implement the following strategies:

- Conduct and participate in health and safety meetings with the CEOs of mining companies to highlight challenges faced by their mines;
- Involvement of CEOs in Section 11.5 accident investigation presentations;
- Conduct bimonthly tripartite meetings per mining group and quarterly tripartite meetings for the whole region;
- Conduct and participate in occupational hygiene milestone meetings with mining companies;
- Monitoring of non-communicable diseases, TB and HIV/Aids programmes;
- Conduct and participate in Illegal Mining Forum meetings;
- Participate in Mining Charter scorecard inspections, and
- Employ OHS strategy to minimise health and safety incidents, including occupational diseases.

4.1.3 Regional Report: KwaZulu-Natal

4.1.3.1 Overview of the region

The year saw much improved results, with the region recording only one fatality compared to two fatalities in 2011. There was no significant improvement in reportable injuries, with 35 injuries recorded during the year compared to 36 in 2011. The region, through the successful implementation of the OHS improvement strategy action plan, maintains health and safety attitude and mind-sets strategy to enforce compliance with health and safety measures.

The strategy addresses unacceptable loss of life and injuries at KwaZulu-Natal mines by putting more emphasis on roof fall accidents, and transportation- and mining-related accidents, investigations and inquiries. The engagement and cooperation of the Inspectorate, employers and unions on mine health and safety issues are continuously encouraged and promoted.

Two tripartite forums have been established and meet quarterly to discuss issues and share leading practices.

Most mine owners and managers show a strong willingness to comply with the requirements of the MHSA, although more work still needs to be done.

4.1.3.2 Inspections and audits

CATEGORY	INSPECTIONS	AUDITS
Planned	480	39
Actual	509	25
% compliance	106	64

4.1.3.3 Total accidents reported

CATEGORY	TOTAL ACCIDENTS REPORTED
Fatal accidents	1
>14 day accidents	35
1 to 13 day reportable accidents	48

The reporting of accidents is slowly improving following numerous requests for mines to submit SAMRASS forms whenever there is an accident, and a 'nil' return on the forms when there was no injury during that period. The reporting of the'1 to 13 days' accidents has also improved. A fatal accident occurred during November 2012 when a general worker was run over by a cement mixer truck, which had been stationary but then pulled away at a batching plant.

4.1.3.4 Investigations and inquiries

	INVESTIGATIONS	INQUIRIES	TOTAL
Initiated	31	2	31
Completed	27	2	29
% completed	87	100	94

4.1.3.5 Disaster-type accidents

No disaster-type accidents were experienced during the reporting period.

4.1.3.6 Statutory notices

SECTION 54 NOTICES	SECTION 55 NOTICES
128	170

Section 54 and 55 instructions were issued on:

- Occupational hygiene: gas monitoring instruments inadequate/not used underground; availability of PPE; dust suppression measures not in place; provision of latrines and change-house facilities; no stone-dust barriers in place; legal appointments not in place; poor housekeeping and codes of practices not revised.
- Occupational medicine: TB programme not in place; occupational diseases not investigated; HIRAs and health risk assessments not done and codes of practices not revised.
- Mine equipment: installation of personnel detection systems; erection of sufficient berm-walls/safety berms; provision and use of checklists; conveyor belt without guards/guards worn out/ guards not replaced after maintenance; pre-start sirens not audible/not installed; use of unsafe lifting equipment and unlicensed operators operating TMM.
- Mining: making safe of overhangs; early entry examinations poorly conducted; failure to use safety declaration books/registers; blasting procedure not in place/not implemented/ not adhered to; codes of practices not revised; training not provided for contractors/contractor management not in place.

4.1.3.7 Administrative fines

No of fines recommended by inspector	7
Value recommended	R1 850 000
No set aside by PI	4
Value set aside	R1 200 000
No imposed by PI	3
Value of fines imposed	R75 000
Appeals	0
Value of fines paid	R0

Seven administrative fines were issued for failure to submit AMRs, six of which were to a value of R300 000 each. The seventh fine was issued - R50 000 – was for failure to report an accident on the prescribed form. Four fines were disregarded and the remaining three were reduced to R25 000 each.

4.1.3.8 Examinations

CERTIFICATE/ QUALIFICATION	EXAMINATION BOARDS	NUMBER OF CANDIDATES	CERTIFICATES ISSUED
Mine overseers	0	0	0
Blasting	0	0	0
Onsetter	0	0	0
Lampsman	0	0	0

4.1.3.9 Land use applications and complaints

	RECEIVED	COMPLETED	PERCENTAGE
Township development	20	13	65
Mining and prospecting rights	27	39	144
Closure certificates	2	2	100
Environmental management	35	52	149
Complaints	3	3	100

The increase in demand for both residential land and mining rights has a tremendous effect on the workload

of the Inspectorate. A backlog was addressed during the reporting period.

4.1.3.10 Matters of interest

The use of conveyor belts, TMM and the general condition of mining equipment remain causes for concern. The appointment of engineers to be in charge of machinery and equipment is pertinent at some operations and is negatively impacting on the health and safety of mine employees in the region.

Challenges:

The region continues to experience difficulties attracting and retaining qualified rock engineers and certificated engineers. Availability of certificated mine equipment inspectors is also concerning given the high number of transportation and mining-related accidents.

Most of the operators have inadequate technical expertise and insufficient financial resources allocated for health and safety issues, which negatively impacts on the health and safety of mine employees. Significant effort is still needed to achieve the Mine Health and Safety Summit milestones.

The Inspectorate's achievement of operational targets and focusing in priority areas are limited by the current staff complement and availability.

4.1.3.11 Strategies to improve the status quo

The region will maintain zero tolerance towards non-compliance through the implementation of the OHS improvement strategy action plan. Administrative fines and recommendations to withdraw certificates of competency will be part of the enforcement strategy.

Cooperation from mine employers, mine employees, communities affected by mining operations and the Inspectorate will continue to be encouraged to ensure that there are effective and efficient ways and strategies dealing with health and safety.

The Inspectorate will continue to convene meetings with company CEOs and other stakeholder leadership to ensure that appropriate measures are put in place to enhance health and safety. It will continue to encourage mines to use personnel detection systems, erect sufficient safety berms in open-cast mines and quarries, and declare workplaces safe before work begins.

The Inspectorate's commits to being proactive in identifying weaknesses in management systems and implementing programmes and strategies that will improve work conditions and eliminate risks. Although there is minimal improvement in dealing with occupational diseases, the effort and level of success by some mines are commendable and the rest of the mines are encouraged to develop and implement similar strategies.

4.1.4 Regional Report: Northern Cape

4.1.4.1 Overview of the region

The Northern Cape region is in the central part of the country, its boundaries formed by areas of North West Province situated to the northeast; the Free State region to the east; the Eastern Cape in the south east and the Western Cape forming the south boundary as well as Namibia to the northwest and Botswana.

The Northern Cape is a very large region with vast distances between mines. Mining operations are diversified; ranging from small-scale diggings to very large open-cast mines and underground operations. Mining methods range from simple to complex. The majority of the diggers are ignorant of the correct mining methods as they come from farming backgrounds. Most accidents in the region are machinery related.

Wide varieties of minerals are mined in this region, with manganese, iron ore and diamonds the main commodities. Base metals, kieselghur, rose quartz, limestone, gypsum, tiger's eye, granite, feldspar and salt minerals are also mined. The region includes a number of brick works, quarries and sea operations e.g. diving and offshore mining. Roads are being repaired and upgraded from materials mined from borrow pits. Production levels at many operations have remained below expectation as a consequence of the depressed global economy.

4.1.4.2 Inspections and audits

Inspections were performed in accordance with the annual planning.

CATEGORY	INSPECTIONS	AUDITS
Planned	576	48
Actual	515	40
% compliance	89	83

4.1.4.3 Total accidents reported

Three fatal accidents occurred in the Northern Cape for the 2012 calendar year.

Fatal accidents	3
> 14 day reportable	60
1 to 13 day reportable	48

4.1.4.4 Investigations and inquiries

Investigations have been completed for the >14 day accidents.

	INVESTIGATIONS	INQUIRIES (INCLUDING INVESTIGATION)	TOTAL
Initiated	3	98	111
Completed	2	93	95
% compliance	90	95	185

4.1.4.5 Disaster-type accidents

Bontekoe disaster

Trespassers gained illegal and unauthorised access to the Bontekoe mining area, where they excavated small tunnels in the soft sandy soil to gain access to the diamond-bearing ore. The hanging wall of underground excavations collapsed on 23 May 2012, as it was not effectively supported and pneumatic rock drills were being used.

Of the 22 persons involved in this disaster, 11 escaped during the rock fall and one was trapped and rescued. Ten bodies were retrieved.

At the start of the rescue operations, five persons of the search and rescue team of the Department of Health attempted to remove the bodies from an exposed tunnel. The mine rescue brigade team of Black Mountain Mine (underground mine) and other rescue brigade teams from Carletonville and Welkom were called in. The brigadesmen used trapped persons locating devices (TPLDs) to probe for acoustics (sounds) and seismic activity (movement) during the rescue operation.

The SAPS was present and continuously monitored the rescue operation.

4.1.4.6 Statutory notices

A total of 54 Section 54 and 88 Section 55 notices were issued to mines. These were mainly due to the following non-compliances:

- Occupational hygiene: statistics, dust control, PPE and lack of mandatory codes of practice;
- Occupational medicine: medical surveillance and no codes of practice on Minimum standard of fitness for appeals;
- Mine equipment: lack of compliance with machinery regulations on TMM and general machinery, lack of mandatory codes of practice, risk assessment and legal appointments, and
- Mining: lack of mandatory codes of practice and updating of mine plans.

SECTION 54 NOTICES	SECTION 55 NOTICES
54	88

4.1.4.7 Administrative fines

No of fines recommended by Inspector	0
No set aside by PI	0
No imposed by PI	0
Value of fines imposed	0
Appeals	0
Value of fines paid	0

4.1.4.8 Examinations

CERTIFICATES	EXAM BOARDS	NO OF CANDIDATES	CERTIFICATES ISSUED
Mine overseers	5	24	2
Blasting	0	0	0
Onsetter	0	0	0
Lampsman	0	0	0

4.1.4.9 Land use applications and complaints

	RECEIVED	COMPLETED	PERCENTAGE %
Township developments	0	0	0
Mining and prospecting rights and mining permits	243	185	76
Mine closures	42	32	76
Environmental management	52	51	98
Complaints	10	12	120

4.1.4.10 Matters of interest

- Illegal diamond diggers are a widespread problem in Namaqualand, around the Kimberley area and in sand winning operations across the region.
- Several meetings were held with small-scale miners and communities on mining issues.
- Most underwater mining took place along the west coast of the Northern Cape.

Illegal mining operations

Illegal mining continues to spread in the region and that inspectors face the threat of violence from perpetrators. Appropriate licensed operators have requested the DMR's assistance. At this time, the DMR does not have the capacity to police these activities and has requested licensed operators to report illegal operations to their nearest SAPS.

4.1.4.11 Strategies to improve the status quo

Audits conducted throughout the year continued to identify where employers need to focus their attention, and inspectors follow up on problems identified during group audits. To improve health and safety performance the following aspects received more focused attention:

- Codes of practice;
- Statutory appointments;
- Safety berms at quarry crests;
- Closure of old roadways;
- Medical surveillance;
- Discouraging illegal swimming at quarries by ensuring tighter security levels, engaging with communities, and erecting mandatory warning notices and fencing;
- Updating of mine plans;
- Holding of tripartite stakeholder meetings;
- TMM codes or practice, and
- Tyre management.

4.2 CENTRAL AND EASTERN NORTHERN REGIONS

The Chief Directorate consists of Free State, Limpopo and Mpumalanga regions. The major commodities mined are coal, platinum, gold, copper and industrial minerals. Numerous base minerals are also mined and there are large number of crushers, quarries and borrow pits. The Chief Directorate has been changed to include Free State and exclude KwaZulu-Natal.

The total number of employees in Free State, Limpopo and Mpumalanga during the review year was 177 249, which is an increase of 9 868 employees or 6% over 2011. The regions accounted for 35% of total employees in the mining sector. These figures bode well for an increase of employment and partly address the challenge of unemployment. The number of mines decreased marginally, from 418 in 2011 to 413 in 2012.

Two major power stations are being built by Eskom, Medupi in Limpopo and Kusile in Mpumalanga. The unit at Medupi is expected to supply electricity into the national grid. This will ameliorate electricity supply shortage and further enhance economic growth in South Africa.

Occupational health performance

Free State, Limpopo and Mpumalanga had an average exposure to airborne pollutants of 2%, 8% and 91% for HEG A, B and C, respectively, compared to the national averages of 2%, 7% and 91%, respectively.

The average compliance of Free State, Limpopo and Mpumalanga to respirable crystalline silica in 2011 and 2012 was 93% and 95% respectively. Limpopo and Mpumalanga achieved 95% and Free State 94%.

The total number of occupational diseases reported in Free Sate, Limpopo and Mpumalanga was 2 848 in 2012 compared to 3 104 in 2011, a decrease of 8%. In 2012, 895 cases were reported of silicosis (900 in 2011), 1 221 of PTB (1 078 in 2011) and 435 of NIHL (484 in 2011). Free State had 2 003 cases of occupational diseases, which accounted for 31% of mining-related diseases nationally.

Occupational diseases in the coal industry decreased by 12%, from 521 in 2011 to 426 in 2012. The main diseases were PTB (212 cases), NIHL (95) and CWP (68).

Mining companies must improve their case findings, ensure that employees complete their medication courses, and procure mine equipment that generates noise and dust levels that comply with the requirements of the Act.

Safety performance

There were 41 fatalities in 2012 compared to 44 in 2011 - a 7% reduction year-on-year against a target of 20% a year. Free State and Mpumalanga had decreases of 29% and 22% respectively, whilst Limpopo had an increase of 67%.

FOG fatalities dropped 30%. Transportation and mining incidents decreased by 21%., but accounted for 37% of the fatalities. Fatalities were due to general accidents, which decreased by 10%.

The number of persons injured was 897 in 2011 and 839 in 2012, a reduction of 7%. There was a 21% reduction in injuries due to FOGs, whilst transportation and mining injuries went down by 15%. There was, however, a 10% increase in general accidents, from 428 to 470 injuries. These accidents accounted for 56% of all injuries. General accidents include manual handling of material, slipping and falling.

Safety achievements

A number of mines in Free State, Limpopo and Mpumalanga achieved a million and more fatality-free shifts and 1 000 fatality-free production shifts, proof that mining can be done safely. The mines that received awards were Bokoni; Vele; Twickenham; Dwarsrivier; Venetia; Tshikondeni; Forzando Colliery (South and North); Kriel Colliery (Northwest Shaft, Surface Operations and Opencast Division); Zibulo Colliery; Halfgewonnen Colliery; Weltevreden Colliery; Isibonelo Colliery; Eastside Coal; Ferreira Opencast; Goedehoop Colliery; Woestalleen Colliery; Vuna Colliery and New Denmark Colliery.

Illegal mining

The Mpumalanga Illicit Mining Stakeholder Forum consists of DMR, Department of Home Affairs and Immigration, Directorate: Priority Crime Investigation (Hawks), SAPS Barberton, Crime Intelligence, State Security Agency, National Prosecuting: Assets Forfeiture Unit, Department of Justice, local municipalities, mining companies: Galaxy Gold Reefs Mining, Barberton Mines,

Evander Gold Mines, Transvaal Gold Mines Estates and Vantage Goldfields, and the Community Policing Forum.

The level of illegal mining has been significantly reduced in the Barberton area through the effort and action of all provincial and national stakeholders.

Strategies to improve health and safety

The central and eastern northern regions will take the following actions to improve health and safety:

- Convene meetings with company CEOs and various union leaderships to improve health and safety.
- Ensure consistent implementation of the enforcement guideline.
- Promote the use of personnel detection systems and the declaration of the workplace as safe.
- Focus on strategies to reduce noise levels and exposure levels to respirable crystalline silica.
- Improve the quality of audits, inspections, investigations and inquiries.
- Encourage mining companies to improve case finding and treatment of PTBs and prevent of HIV/Aids.

4.2.1 Regional Report: Free State

4.2.1.1 Overview of the region

Free State is largely a gold mining province, with two coal mines, 15 diamond mines and many small-scale mines such as brickworks, sand operations and aggregate quarries. The two major gold mining companies are Harmony Gold and Sibanye Gold. Nineteen shafts are active and old shafts are being demolished.

Challenges – major problem areas

Mining

- FOG accidents have been reduced drastically in the past year, although there are still notable near misses.
- Non-reporting of accidents by some mines.
- Poor risk assessments and accident investigation techniques.
- Poor explosives control by miners in some mines.
- Poor ground control and support of workplaces
- Non-adherence to the guidelines issued by the CIOM in drafting the different codes of practice.
- Mud and poor housekeeping in haulages and crosscuts.

Occupational hygiene

- Non-adherence to emergency preparedness and response COP and non-issue of self-contained self-rescuers to employees.
- Ventilation and heat challenges.
- Poor training of lamp room personnel in some mines.

Machinery

- Derailments.
- Substandard underground track conditions as mines get older.
- Poor maintenance of TMM.

Internal challenges

- Capacity challenges due to ageing of inspectors.
- Filling of vacancies.
- Standardisation of reporting templates across regions: month-end, quarterly and annual reports.

4.2.1.2 Inspections and audits

CATEGORY	INSPECTIONS	AUDITS
Planned	877	46
Actual	744	48
% compliance	85	104

Due to capacity challenges, there was a reduction towards the end of the year in the number of audits and inspections.

4.2.1.3 Total accidents reported

Fatal accidents year to date	12
> 14 day reportable accidents	323
1 to 13 day reportable accidents	114

Twelve people were killed in 2012 compared to 17 in 2011 - an improvement of 29%.

4.2.1.4 Investigations and inquiries

	INVESTIGATIONS	INQUIRIES	TOTAL
Initiated	104	15	119
Completed	94	9	103
% completed	90	60	87

Progress is being made with turnaround times and the backlog from the 2011 financial year has been addressed.

4.2.1.5 Disaster-type accidents

There were no disaster-type accidents for the year under review.

4.2.1.6 Statutory notices

SECTION 54 NOTICES	SECTION 55 NOTICES
155	201

The following are concerns in issuing of poor active measures and instructions:

- Non-adherence to the guidelines issued by the CIOM in drafting the different codes of practice.
- Poor training of lamp room personnel in some mines.
- Non-adherence to support standards recommended by the rock engineer in the procedures.
- Mud and poor housekeeping in haulages and crosscuts.
- Poor water management in box holes and drains.
- Poor rigging practices.
- Poor explosive control by miners in some mines.
- Poor ground control and support of workplaces.
- Poor mine design and risk assessment procedures when there is change in mining method.
- Ventilation and heat challenges.
- Non-reporting of accidents by some mines.

4.2.1.7 Administrative fines

No administrative penalties were imposed during 2012/13

No of fines recommended by inspector	0
Value recommended	0
No set aside by PI	0
Value set aside	0
No imposed by PI	0
Values of fines imposed	0
Appeals	0
Value of fines paid	0

4.2.1.8 Examinations

Due to high failure rates, the number of examinations was reduced to two a month to give the candidates a better opportunity to prepare.

CERTIFICATE	EXAM BOARDS	NO OF CANDIDATES CALLED	NO. OF CANDIDATES ATTENDED	CERTIFICATES ISSUED
Mine overseers	22	402	311	33
Blasting	0	0	0	0
Onsetter	7	18	18	6
Lampsman	3	5	5	5

4.2.1.9 Land use applications and complaints

CATEGORY	RECEIVED	COMPLETED	PERCENTAGE
Township developments	72	51	71
Mining and prospecting rights	180	175	97
Closure certificates	74	82	111
Environmental management	103	123	119
Complaints	41	37	90

Nineteen administrative work pieces were received and completed, ranging from Sunday labour permissions to other permissions and approvals.

4.2.1.10 Matters of interest

Illegal mining

This region has experienced a serious challenge in dealing with the bodies of deceased illegal miners, which are normally found in old gold plants on surface or are left at stations underground. These types of accidents are normally very difficult and/or dangerous to investigate as it is not easy to identify the accident scenes.

The region is involved in the NCSMT structure that convenes monthly. Regional Illegal Mining Forum meetings are also held monthly. Stakeholders such as SAPS, mining houses, SSA and NPA draft and implement protocol and procedures on decisions taken at these meetings.

Medical

During the reporting year, the region experienced several fatal incidents in which employees collapsed while at work. An additional medical inspector was required to deal with the workload.

The region conducted a medical workshop, which covered:

i) Mine health and safety performance.

ii) HIV management in the workplace.

iii) MHSA 1996, Section 11.5 investigations for health-related incidents.

iv) Rehabilitation on functional assessment test battery.

v) Occupational Diseases in Mines and Works Act (ODMWA)/Compensation for Occupational Injuries and Diseases Act (COIDA).

vi) Medico-legal issues and protocols.

vii) Post mortems.

viii) Reporting of accidents.

4.2.1.11 Strategies to improve the status quo

This region launched the following initiatives during the year:

- A well-designed strategy to prevent recurring accidents
- (proper risk assessment, management to assume lead role in accident investigation and inquiries, to take final accountability)
- All mines stopped must make a presentation to the PIOM on why accidents or non-compliances have occurred. Remedial action is presented in writing for easy follow-up
- Improved communication through tripartite forums and working groups
  - FOG
  - RBE
  - Silicosis
  - Noise
  - Explosives
- Other ongoing initiatives include:
  - Continuation of in-stope roof bolting.
  - Continuation of preconditioning for identified areas.
  - Participating in working groups to monitor and mitigate occupational diseases.

- Developing close partnerships with other government departments, trade unions and other key stakeholders.
- Audit/inspections of safety management systems and the implementation thereof.
- Emergency preparedness and response.
- Quarterly workshops on health and safety with key stakeholders. Review current status and find a way forward.
- Stoppages of unsafe practices and workplaces.
- Enforcing requirements for rock engineers.

4.2.2 Regional Report: Limpopo

4.2.2.1 Overview of the region

The Limpopo region is situated between the Gauteng region in the south, Zimbabwe in the north, the Mozambique border in the east, Mpumalanga region in the south east, Botswana border in the west and the North West region in the south west.

Platinum, coal and copper are the main commodities. Numerous base minerals are mined and there are several crusher quarries, salt pans, sand works and borrow pits.

4.2.2.2 Inspections and audits

During the period under review, the following were conducted:

CATEGORY	INSPECTIONS	AUDITS
3.1 Planned	598	42
Actual	713	48
% compliance	119	114

4.2.2.3 Total accidents reported

Fatal accidents	15
> 14 day reportable accidents	202
1 to 13 day reportable accidents	152

4.2.2.4 Investigations and inquiries

	INVESTIGATIONS	INQUIRIES
Initiated	122	11
Completed	132	11
Total	254	22
% completed	108	100

4.2.2.5 Disaster-type accidents

No disaster type accidents occurred during this reporting period.

4.2.2.6 Statutory notices

SECTION 54 NOTICES	SECTION 55 NOTICES
89	146

Section 54/55 instructions were issued for the following non-compliances:

- Failure to conduct baseline medical surveillance within 30 days of employment.
- Persons transported on the back of light delivery vehicles (LDVs) with material or equipment.
- Unguarded nip -points on conveyors.
- Poor or no barring of hanging walls and sidewalls.
- Substandard ventilation conditions - persons working where wet bulb temperatures exceed the maximum allowable reading as per mine standards
- Poor rail maintenance.
- Failure to demarcate and support geological anomalies according to mine standards and procedures.
- TMM operated with defective "no-go (A-hazards) items.
- Employees not trained as blasting assistants.
- Persons working at heights without using safety harnesses.
- Persons working in standoff areas at opencast mines i.e. 1m or 2m from the crest, and 5m or 10m

from toe of highwalls.

- Persons exposed to fumes or noxious gases underground.
- Locomotives and TMM operated without conducting pre-use inspection and without authorisation (licence).
- Persons working in flooded pits without conducting risk assessments and without precautionary measures.

4.2.2.7 Administrative fines

No of fines recommended by Inspector	2
Value recommended	0
No set aside by PI	2
Value set aside	0
No imposed by PI	2
Value of fines imposed	R200 000
Appeals	0
Value of fines paid	R30 000-00

4.2.2.8 Examinations

Lampsman

CATEGORY	LIMPOPO
Examination boards	4
Number of candidates	18
Certificates issued	18

Mine overseer

CATEGORY	LIMPOPO
Examination boards	19
Number of candidates	193
Certificates issued	17

Onsetters

CATEGORY	LIMPOPO
Examination boards	2
Number of candidates	16
Certificates issued	15

4.2.2.9 Land use applications and complaints

	RECEIVED	COMPLETED	PERCENTAGE
Surface utilisation applications	129	129	100
Mining and prospecting permits/rights	1	1	100
Closure certificates	47	47	100
Environmental management	169	169	100
Complaints	2	2	100

4.2.2.10 Matters of interest

Additional platinum mines and a coal mine have opened and are using labour from the local communities and outside communities.

The Limpopo mines have developed minimum standards for the construction of brake test ramp for both underground and surface mines. A new coal mine has started in the Lephalale area and Grootegeluk is ramping up to be ready for the Medupi Power Station.

To address the challenge of stray animals in most of the mines, a task team has been put in place to work with the municipalities and CEOs of affected mines. Mines have employed and trained people who are working with the Department of Transport to control traffic at main crossroads, especially during peak traffic hours.

Challenges

Attraction and retention of inspectors is a challenge, as are repeat findings from inspections and audits. General accidents have increased, as have FOG- and TMM-related accidents. Medical-related fatalities are up, particularly myocardial infarctions. However, a 40% regression in fatalities was achieved during 2012.

Declaration of workplaces safe underground and supervision during inspections and audits continue to pose problems. . Children have drowned in non-rehabilitated borrow pits.

Achievements

The region has had almost a full staff complement in the last five years.

The total accident improvement was 37%.

The following mines achieved one million fatality-free shifts: Modikwa, Dwarsrivier, Twickenham and Bokoni. Tripartite forums for underground and surface mines have been running smoothly with attendance increasing each time.

4.2.2.11 Strategies to improve the status quo

Following the regression in the number of fatalities in 2012, the region developed a strategic plan focusing on:

- **Mine safety**

Mine planning, safe declaration of workplaces, competent A and B training, centralised blasting systems and critical analysis to ensure that there is a link among risk assessments, COPs, standard working procedures and related documents.

- **Mine equipment**

Task teams (brake test ramps and checklists), maintenance systems, lockout systems and PDS systems.

- **Occupational hygiene**

Analysis of hygiene reports, linkage of hygiene and medical reports, ventilation plans, noise monitoring and areas of responsibility of part-time occupational hygienists.

- **Occupational medicine**

TB and HIV/AIDS policies, analysis of annual medical reports, medical equipment audits.

Inspectors conduct follow-up audits and inspections to monitor progress of action plans at mines issued with Section 54 and 55 instructions. After the presentation for a Section 54 has been done, an unannounced follow-up inspection is undertaken.

A tripartite safety forum for all safety practitioners has been established involving the Inspectorate, employers and employee representatives to improve health and safety conditions on mines. Another opencast tripartite forum has been set up to address issues specific to surface mines, including quarries. Where repeat findings are found, the CEO is must make a presentation on improving the status quo. The enforcement and administrative fines guideline is enforced to the letter.

Inspectors conduct system audits to complement the group audits and odd shifts are monitored to ensure compliance on other shifts. Inspectors close the loop on all issues addressed in the presentations of Section 54 and 55 during inspections and audits. All major accidents reported are investigated immediately to address root causes. Training for supervisors has been started in many mines to improve their supervision capabilities.

4.2.3 Regional Report: Mpumalanga

4.2.3.1 Overview of the region

Coal is the main commodity, but gold, platinum and other base minerals are mined and there are a large number of crushers and quarries in the region.

The table below shows the present number of operating mines in the region:

TYPE OF MINE	2011	2012
Underground coal	59	40
Opencast coal	78	86
Gold	10	7
Platinum	2	2
Other	61	41
Total	210	175

The number of employees increased from 82 076 to 84 908. Not all mines report labour figures to the regional office but all efforts are being made to rectify this.

Challenges

The workload is clearly increasing, stretching available resources.

The region is short of staff, specifically in the engineering discipline where the PI is the only qualified engineer. The region has 60 winding plants, 29 shafts, 18 elevators, 17 chairlifts and four boilers on which statutory inspections and tests were not done. The office motivated for the appointment of a specialist contractor to fulfil this task.

Achievements

Various mines in the region qualified for safety achievements and were congratulated on their efforts. Among those registered with the MHSC Award Scheme were: Forzando Colliery (South and North), Kriel Colliery (Northwest Shaft, Surface Operations and Opencast Division), Zibulo Colliery, Halfgewonnen Colliery, Weltevreden Colliery, Isibonelo Colliery, Eastside Coal, Pembani Coal, Ferreira Colliery, Goedehoop Colliery, Woestalleen Colliery, Vuna Colliery and New Denmark Colliery

4.2.3.2 Inspections and audits

The following number of inspections and audits were conducted:

CATEGORY	INSPECTIONS	AUDITS	
		INDIVIDUAL	GROUP
Planned	866	455	36
Actual	943	276	33
% compliance	109	61	92

These figures are based on the actual number of inspectors. The planned number of inspections for full complement is 1 419 and for audits 737.

4.2.3.3 Total accidents reported

Fatal accidents	14
> 14 day accidents	314
1 to 13 day reportable accidents	81

4.2.3.4 Investigations and inquiries

	INVESTIGATIONS	INQUIRIES	TOTAL
3.2 initiated	385	18	403
Completed	448	25	473
% completed	116	138	117

The high percentages completed are due to some accident investigations from 2011 that were completed in 2012.

4.2.3.5 Disaster-type accidents

No disaster-type accidents were reported. During the year under review, the region concentrated on the elimination of disaster-type accidents such as:

- Methane and coal dust explosions;
- Underground fires;
- Major FOGs, and
- Transport accidents, including winding plant, elevators, chairlifts and mine residue dams.

4.2.3.6 Statutory notices

SECTION 55 NOTICES	SECTION 54 NOTICES
125	55

Stoppage instructions in terms of Section 54 were issued mainly to:

- Mines that did not have change-house facilities.
- Mines where employees worked without certificates of fitness.
- Mines that did not comply with underground roof support standards.
- Mines that did not have adequate ventilation.
- Mines with unsafe and unguarded machinery.
- Mines with unsafe electrical installations.

4.2.3.7 Administrative fines

No of fines recommended by inspector	3
Value recommended	0
No set aside by PI	2
Value set aside	0
No imposed by PI	1
Value of fines imposed	R50 000
Appeals	0
Value of fines paid	0

4.2.3.8 Examinations

CERTIFICATE/ QUALIFICATION	EXAM BOARDS	NO OF CANDIDATES	CERTIFICATES ISSUED
Mine overseer certificate	39	354	39
Blasting certificate	0	0	0
Onsetter certificate	0	0	0
Lampsman certificate	8	12	11

4.2.3.9 Land use applications and complaints

	RECEIVED	COMPLETED	PERCENTAGE
Township developments	114	107	94%
Mining and prospecting rights and permits	210	125	60%
Closure applications	15	10	67%
Environmental management	9	7	78%
Complaints	30	24	80%
Applications for approvals, exemptions and permissions	841	780	93%

4.2.3.10 Matters of interest

a) The issuing of mining permits and rights, especially to the smaller mining concerns, caused great concern for the Inspectorate. Some small mining entities began mining operations without complying with the MHSA. Numerous places received stoppage instructions to force compliance.

Contractors working for some of these new mines were not compensated for services rendered and withdrew from the sites without undergoing exit medical examinations, which contravenes the MHSA. Some employees did not receive full pay every month, which can be seen as exploitation.

Some smaller mines are developed in areas with insufficient water supply for change-house and laundry facilities, which presents a major health problem.

b) A request was put to the mines to forward all early NIHL cases flagged for occupational disease investigation. It was alarming that contractors were disregarded, not investigated and, therefore, were overlooked for possible compensation.

Large mining companies with well-controlled TB programmes on site contributed to a decrease in TB rates. Unfortunately they are in the minority and this trend is not seen on the large gold mines.

4.2.3.11 Strategies to improve the status quo

The number of injury accidents increased from 289 in 2011 to 302 in 2012, but the number of fatal accidents dropped from 17 in 2011 to 14 in 2012.

The regional office identified the fatal risks and developed protocols to address them. Inspections and audits concentrate on the implementation of fatal risk protocols. In addition, the following actions were taken:

Mining:

- Investigate mine planning: mines to present long-term mine planning avoiding areas prone to FOGs.
- Investigate rock engineers" schedule for audits and inspections.
- Initial inspection and safe declaration of

workplaces.

- Support mine occupational safety and health (MOSH) initiatives (barring/netting).
- Safety management components to be audited.
- Address competency by planned task observations and take corrective actions.
- Start FOG focus groups.

Engineering:

- Personnel vehicle detection system implementation programme (working group).
- Check planned maintenance systems (reliability-centred maintenance).
- Lockout procedures to include stored energy.
- Apply SANS for rails.
- Follow up on repetitive accidents (>3) and see if they were communicated.
- Monitor training for operators.
- Monitor mine strategies to reduce noise and dust.

Medicine:

- Audit mines' TB programme.
- Workshop with DoH and service providers to promote new TB screening test and DOTS.
- Occupational health centres to notify DMR of all occupational diseases flagged for investigation.
- Follow up on NIHL investigations
- Ensure linking of areas of exposure to illness.
- Induction to include more detail on occupational health issues.
- TB statistics to be included in monthly safety meetings.
- Exit medicals to be enforced.

Occupational hygiene:

- Enforce codes of practice on methane and coal dust explosions.
- Check on underground welding permissions (form focus group).
- Ensure submission of hygiene reports (create spread sheet to monitor submission).
- Support MOSH initiative on dust suppression.
- Ensure achievable scope of responsibility for hygienist (contractors).
- Ensure linkage of hygiene and medicals.
- Obtain annual reports, not only quarterly reports.
- Create spread sheet to monitor submission.
- Propose a regulation limiting the number of mines under one hygienist.
- Strategic planning of ventilation (five year plans).
- Dust control in return airways (stone dust barriers).
- Mines to have a strategy for noise and dust.

4.3 WESTERN REGIONS

General

The Chief Directorate: Western Regions consists of Western Cape, North West: Klerksdorp and North West: Rustenburg regions. These three regions employ 184 110 which represents 36% of the mining industry labour force in South Africa. The major commodities mined in the Western regions are gold, PGMs, diamonds, limestone, clay and sand.

It is with sadness that the retirement is announced of the Principal Inspector of Mines for Western Cape region, Mr HJOP Smith from 31 May 2013. The Department would like to thank him sincerely for the contribution he has made to the public service and wish him a happy retirement.

Overall Health and Safety performance

During the period under review the Regional Operations: Western Regions experienced 36 fatalities compared to 45 in 2011. This is a significant 25% year-on-year improvement as compared to the results achieved in 2011. Rustenburg region was the major contributor to the above improvement. Unfortunately there was a 5% year-on-year regression in terms of reportable injuries from 1 578 in 2011 to 1 650 in 2012. Most of the accidents were repeats.

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.

Occupational health issues are still the main challenge facing the mining industry and which will only take a collaborative and well-dedicated effort to overcome. TB and the effects of HIV and AIDS, silicosis and noise induced hearing loss are the main occupational health challenges faced by the mining industry.

Topical issues and matters of interest

The period under review was unfortunately characterised by violent labour unrest in the mining sector which included the tragic fatal shootings of 34 persons by the SAPS on 16 August 2012 at Lonmin Platinum Mine. This unfortunate and tragic event prompted President Jacob Zuma to establish the Farlam Judicial Commission of Inquiry to look into the conduct of Lonmin, the SAPS, NUM and AMCU during the labour unrest at Lonimn in 2012.

Achievements

- For the second consecutive year no disaster-type accident was reported;
- AngloGoldAshanti – Kopanang Mine achieved a fatality-free year;
- North West: Klerksdorp region achieved five consecutive fatality-free months;
- North West: Rustenburg region achieved a fatality-free month in January 2012; and
- Many mines in the Klerksdorp and Rustenburg regions achieved a Million Fatality Free shifts.

Strategies for improving status-quo

- Prioritising of high risk mines;
- Recommendations and imposition of administrative fines;
- Involvement of SAPS in cases where there is a deliberate disregard of the issued statutory instructions;
- Promotion of MHSA at small-scale and emerging mines;
- Engagements with all relevant stakeholders to ensure a common collaborative approach;
- The regional Health and Safety Tripartite Forums are utilized as a platform to share knowledge and good practices in the mining sector;
- Involvement of CEOs in health and safety matters;

- The implementation of the DMR and Inspectorate policies and procedures to ensure that a common approach is adopted by all the regions; and
- The respective working places and mines are stopped where serious contraventions have been revealed during inspections and accident investigations.

4.3.1 Regional Report: North West (Klerksdorp)

4.3.1.1 Overview of the Region

North West: Klerksdorp is where gold is predominantly being mined and is made up of labour intensive underground operations. There are also numerous crushers, cement, sand, brickworks and diamond diggers which are surface operations.

The regional office enforces the requirements with the MHSA (No. 29 of 1996 as amended) with the emphasis on the employer ensuring health and safety of employees at the mines. This is done through monitoring compliance to the MHSA through inspections, audits, investigations and inquiries. The regional office also participates in Health and Safety Tripartite Forums and RMDEC meetings.

Challenges and Progress

As is often the case, mine employees are exposed to various hazards in underground workplaces at various levels and intervals; of major concern in the region are recurrences of non-compliances. Unfortunately many of these result in fatalities and injuries as a result of:

a. Rock related accidents which are mostly caused by:

- Non-adherence to mine support standards.
- Failure to conduct proper early entry examination and making safe.
- Occupying an unsafe position during barring and inadequate barring.
- Failure to identify or treat unsafe geological features accordingly.

b. Machinery/Transportation related accidents caused by:

- Non-compliance with the Guideline for the Mandatory COP on TMM.
- Poor track work with regard to switches and track layout.
- Employers not willing to adopt new technology (PDS) system.
- Failure to conduct statutory inspections of compressors and boilers.
- Poor communication between loco operator and guard.
- Illegal joining of cables at the working places.

c. Blasting and explosions accidents caused by:

- Drilling into misfired holes or gas pockets.
- Employer's reluctance to use centralised blasting.

d. OH accidents caused by:

- Poor control of dust emissions at source.
- Failure to report heat related accidents.
- Poor monitoring of employees with chronic illnesses (resulting in employees collapsing underground).
- Poor compliance with National Strategies document on TB and HIV/AIDS at mines.

4.3.1.2 Inspections and Audits

CATEGORY	INSPECTIONS	AUDITS
Planned	531	48
Actual	483	38
% Compliance	91	79

Set targets were not achieved due to high staff turn-over.

4.3.1.3 Total Accidents Reported

Fatal Accidents	9
> 14 day reportable accidents	378
1 to 13 day reportable accidents	287

4.3.1.4 Investigations and Inquiries

	INVESTIGATIONS	INQUIRIES	TOTAL
Initiated	194	9	203
Completed	186	8	194
% Completed	96	89	96

4.3.1.5 Disaster Type Accidents

No disaster type of accident occurred during this reporting period.

Investigations and inquiries into mine accidents have revealed that non-compliance to health and safety measures and poor supervision are the major contributing factors of mine accidents.

4.3.1.6 Statutory Notices

SECTION 54 NOTICES	SECTION 55 NOTICES
108	75

Mine Health and Safety Act Section 54 instructions issued were mainly on deviations from mine standards and procedures, poor contractor management and unavailability of systems. Most of the Section 54 instructions issued resulted in the stoppage of the workplace(s) or equipment until remedial measures were implemented and presented to the Principal Inspector of Mines.

4.3.1.7 Administrative Fines

No. of fines recommended by Inspector	30
Value recommended	0
No set aside by Principal Inspector	30
Value set aside	0
No imposed by Principal Inspector	0
Value of fines paid	0
Appeals	0
Value of fines paid	0

4.3.1.8 Examinations

CERTIFICATE/ QUALIFICATION	EXAM BOARDS	NUMBER OF CANDIDATES	CERTIFICATES ISSUED
Mining Overseers	16	139	13
Blasting	0	0	0
Onsetter	8	63	58
Lampsman	4	16	4

Generally, a low percentage of certificates was issued as most candidates were not adequately prepared for the examinations.

4.3.1.9 Land Use Applications and Complaints

	RECEIVED	COMPLETED	PERCENTAGE
Township developments	24	24	100
Mining and Prospecting Rights	126	126	100
Closure Certificates	140	140	100
Environmental Management	66	66	100
Complaints	8	8	100

4.3.1.10 Matters of Interest

- Illegal copper theft at unused mines has unfortunately resulted in the fatal shooting of a mine security guard.
- Some small-scale diamond diggers have a tendency to disregard statutory instructions issued in terms of the MHSA. The DMR has decided to work hand in glove with the HAWKS from the SAPS to clamp down on mine operators disregarding statutory instructions.
- Although there was a slight improvement on the number of mine fatalities, there are still great challenges with medical-related deaths where mineworkers collapsed and died as a result of ill-health.

4.3.1.11 Strategies to Improve the Status Quo

The following strategies are adopted to improve performance:

- Mines that report high number of accidents/ incidents monthly are classified and visited frequently.
- Stoppage statutory instructions are issued to mines, where repeat deviations are identified; verification inspections are conducted prior to the lifting of the instruction.
- Recommendation for relieving supervisors from their duties for making health and safety decisions for employees to be sent for further re-training.
- Inspectors are conducting follow-up audits and inspections to monitor progress of action plans presented to the regional office.
- Bi-annual meetings / workshops are held with small to medium operations to highlight health and safety issues.

4.3.2 Regional Report: North West (Rustenburg)

4.3.2.1 Overview of the Region

North West: Rustenburg is where the PGMs are predominantly being mined and is made up of labour intensive underground operations. There are also numerous crushers, brickworks, slates and granite quarries with the rest being open pit operations.

The regional office promotes health and safety within the region by enforcing the MHSA (No. 29 of 1996 as amended); focusing on the ability and willingness of employers to create and maintain a safe and healthy working environment at the mines. This is done through monitoring compliance to the MHSA through a series of inspections, audits, investigations and inquiries. The regional office also participates in matters likely to impact on the safety of mine employees and the people in the surrounding communities.

Challenges and progress

It is often the case that mine employees are exposed to various hazards in underground workplaces at various levels and intervals; of major concern in the region are recurrences of non-compliances. Unfortunately many of these non-compliance results in fatalities and injuries as a result of:

a. Rock related accidents which are mostly caused by:

- Non-adherence to mine support standard
- Failure to conduct proper early entry examination and making safe
- Occupying an unsafe position during barring and inadequate barring.
- Failure to identify or treat unsafe geological features accordingly.

b. Transportation and Mining accidents caused by:

- Lack or disregard of anti-collision devices.
- Poor track work in regard to switches and track layout.
- Deviation from mine standards and procedures.
- Lack of PDS on TMM.

c. Blasting and explosions accidents caused by:

- Drilling into misfired holes or gas pockets.
- Pre-mature ignition in a centralised blasting system during connecting up time.

The medical deaths at the mines also increased mainly as a result of heart attacks and persons collapsing underground and on surface. TB and the effects of HIV/ AIDS were also the main challenges faced by the region, the more so because many mines were found without TB and HIV/AIDS policies in place.

4.3.2.2 Inspections and Audits

CATEGORY	INSPECTIONS	AUDITS
Planned	610	47
Actual	627	41
% Compliance	103	87

Inspections and audits were planned for the existing staff complement at the time.

4.3.2.3 Total Accidents Reported

Fatal Accidents	25
> 14 day reportable accidents	1 255
1 to 13 day reportable accidents	197

4.3.2.4 Investigations and Inquiries

	INVESTIGATIONS	INQUIRIES	TOTAL
Initiated	1 146	22	1 168
Completed	1 000	13	1 013
% Completed	87	59	87

4.3.2.5 Disaster Type Accidents

For the second year in a row, no disaster type accidents occurred in the region during the reporting period.

The mine investigations conducted in terms of Section 65 of the MHSA have revealed that negligence in adherence to mine standards and procedures was the major contributor of accidents in this region.

Complacency is also a problem especially with employees who perceive themselves as experienced persons. Investigations have also shown that in cases of bolt support, failure to grout holes properly remain a challenge.

4.3.2.6 Statutory Notices

SECTION 54 NOTICES	SECTION 55 NOTICES
167	126

The MHSA Section 54 instructions issued were mainly on deviations from standards and procedures, poor contractor management and unavailability of systems. Most of the Section 54 instructions issued resulted in the stoppage of the workplace(s) or equipment until remedial measures were put in place and presented to the PI.

4.3.2.7 Administrative Fines

No. of fines recommended by Inspector	13
Value recommended	0
No set aside by Principal Inspector	8
Value set aside	0
No imposed by Principal Inspector	2
Value of fines paid	R 813 500.00
Appeals	0
Value of fines paid	R 813 500.00

4.3.2.8 Examinations

CERTIFICATE / QUALIFICATION	EXAMINATION BOARDS	NUMBER OF CANDIDATES	CERTIFICATES ISSUED
Mine Overseers	30	412	39
Blasting	0	0	0
Onsetter	11	59	35
Lampsman	10	85	36

Generally, a low percentage of certificates was issued as most candidates were not adequately prepared for the examinations.

4.3.2.9 Land Use Applications and Complaints

	RECEIVED	COMPLETED	PERCENTAGE
Township developments	N/A	N/A	N/A
Mining and Prospecting Rights	N/A	N/A	N/A
Closure Certificates	N/A	N/A	N/A
Environmental Management	N/A	N/A	N/A
Complaints	23	23	100%

Please note that township developments, Mining and Prospecting Rights, Closure Certificates and Environmental Management Programmes are processed in the North West: Klerksdorp Region.

4.3.2.10 Matters of Interest

The North West: Rustenburg region strives towards safe and healthy mines; and this can only be achieved through collective effort from all stakeholders; being the employers, employees and Government. Though the region has experienced serious labour unrest and the tragedy of Marikana in the year 2012, where our friends, brothers, sisters and co-workers lost their lives; it remains our responsibility to learn from these incidents and realise that health and safety know no boundaries. This means that when it comes to unsafe practices/conditions at your workplace, it does not matter to which union you are affiliated. A mine accident affects all of us equally and the region sees you as mine employees and members of the South African public who have a right to work in a safe environment as per the Constitution of the country.

Although the year 2012 has seen improvements on fatalities, there are still challenges on health matters that the region experienced during the reporting period, more so in medical cases where mineworkers collapsed as a result of ill health.

4.3.2.11 Strategies to Improve the Status Quo

The following strategies were adopted to improve performance:

- Identification of mines that report a high number of accidents/incidents monthly and classify them needing "intensive care". Managers have to come and present remedial measures.
- Stoppage statutory instructions issued to mines until corrective action has been successfully presented to the PI.
- Recommendation for relieving of supervisors from making health and safety decisions for further re-training if necessary.
- Inspectors are conducting follow-up audits and inspections to monitor progress of action plans presented to the regional office.
- Mines will be encouraged through monthly Tripartite Forums and newsletters to adopt systems that work and are based on best practices.
- Profiling mines that are frequently reporting gassing incidents and instituting appropriate enforcement interventions.
- The mines are summoned to the office to give a detailed presentation on the shortcomings and proposed strategies to minimize accidents/ incidents where:
  - Five reportable accidents/incidents per month occurred; the Manager appointed in terms of Section 3.1(a) of the Act must present and explain challenges and corrective measures.
  - More than five and less than eight accidents/incidents per month, the General Manager appointed in terms of Section 4.(1) of the Act must present and explain the challenge and corrective action taken.
  - More than eight accidents/incidents per month occur, the CEO appointed in terms of Section 2A(1) in terms of the Act must present and explain challenges and corrective action.

4.3.3 Regional Report: Western Cape

4.3.3.1 Overview of the Region

The Western Cape has only one small underground mine which was dormant for a very long time but is in the process of re-opening. The other mines are offshore oil and gas at Mossel Bay; sea diamonds on the West Coast; limestone for cement and other purposes and then sand, stone and clay for the construction industry.

4.3.3.2 Inspections and Audits

Inspections were planned for all the mines in the region on an annual basis; no matter how small they are. There are currently 204 operational mines. All the mines have some form of a risk management programme in place.

A risk matrix has been developed whereby mines are classified as small, medium or large risks according to their risk profile.

The regular inspection frequency has the desired effect of ensuring mines are compliant in terms of physical conditions and making safety and health part of the operating culture.

A register is kept of all new mining rights and mining permits issued and any new operation is registered upon commencement of activities; at which time the full scope of the requirements of the Mine Health and Safety Act are discussed with the employer.

CATEGORY	INSPECTIONS	AUDITS
Planned	512	38
Actual	433	36
% Compliance	85	95

4.3.3.3 Total Accidents Reported

A total of 45 accidents were reported with the breakdown as illustrated below.

Caught between and struck by continue to be the prevalent type of reportable accidents that occur in the Western Cape.

The region had two fatalities after being fatal free for two years. Comparing 2012 with 2011 accident statistics there has seen a 26 % drop in accidents. The sharp decrease is attributed to the lengthy stoppage of several brick operations and lowered production at aggregate producers due to the economic slump.

Fatal Accidents	2
> 14 Day Accidents	14
1 to 13 Day Reportable Accidents	29

4.3.3.4 Investigations and Inquiries

The injuries sustained in the > 14 day accidents were all of a minor nature and did not warrant investigation.

	INVESTIGATIONS	INQUIRIES	TOTAL
Initiated	0	2	2
Completed	0	2	2
% Completed	100	100	100

4.3.3.5 Disaster Type Accidents

There were no disaster type accidents and no recommendations for prosecution.

4.3.3.6 Statutory Notices

The majority of the Statutory Notices were issued for inadequate guarding of machinery, training and risk management issues.

SECTION 54 NOTICES	SECTION 55 NOTICES
3	25

4.3.3.7 Administrative Fines

No admin fines were recommended.

No. of Fines recommended by Inspectors	0
Value recommended	0
No. set aside by PI	0
Value set aside	0
No. imposed by PI	0
Values of Fines imposed	0
Appeals	0
Values of Fines paid	0

4.3.3.8 Examinations

Since there are no underground mines in this region no Mine Overseer, Underground blasting, Onsetter and Lampsman examinations take place in this region.

There were no examination boards for opencast certificates during the year under review.

CERTIFICATE / QUALIFICATION	EXAM BOARDS	NO OF CANDIDATES	CERTIFICATES ISSUED
Mining Overseers	0	0	0
Blasting	0	0	0
Onsetter	0	0	0
Lampsman	0	0	0

4.3.3.9 Land Use Applications and Complaints

The past year has seen a flood of wind energy facility applications. Because of the expansive nature of these proposed operations they more often than not occupy a farm on which sand or gravel is also mined. However with sensible communication there is no reason why the two land uses cannot co-exist.

On the complaints front it has been a quiet year.

	RECEIVED	COMPLETED	PERCENTAGE
Township Developments	97	97	100
Mining and Prospecting Rights	44	44	100
Closure Certificates	24	24	100
Environmental Management	72	72	100
Complaints	0	0	100

4.3.3.10 Matters of Interest

By and large there is a strong willingness by mine owners and managers in the region to comply with the requirements of the MHSA.

Inspectors have also contributed to a large extent in encouraging owners / managers not just to comply but to establish a health and safety culture on the mines and the fruits of this are evident in the accident statistics.

Tri-partite meetings have been introduced on a regional scale and have been well attended with active participation.

During the year 39 mine and prospecting closure applications were dealt with. Nine new mines were registered.

4.3.3.11 Strategies to Improve the Status Quo

The inspectors are continuously motivated to influence the mines to up the quality and effectiveness of:

- Risk management
- Training
- Safety based behaviour

4.4 CHIEF DIRECTORATE: TECHNICAL SUPPORT

The Chief Directorate: Technical Support provides specialist and technical services to the Inspectorate, with particular focus on the regional components and other head office units. It has three directorates, namely Mine Safety, Mine Surveying and Support Services.

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

- Participate in specialist investigations and inquiries in the regions when required;
- Provide integrated professional advice and make recommendations on incidents, accidents and legislation to other government departments, the mining sector and other key stakeholders;
- Ensure quality assurance of the performance of the Inspectorate by providing mentorship, knowledge transfer and promotion of safety;
- Ensure high-quality guidelines for codes of practice are distributed to the mining industry;
- Provide technical and implementation guidance to regional inspectors in areas such as enforcement and administrative penalties;
- Ensure the efficacy of the examination process for certificates of competency;
- Manage the various certificates of competency examination processes; identify technical training needs in the Inspectorate and recommend appropriate action, and
- Liaise with other government departments and key stakeholders on the development of standards and specifications.

Achievements

The Chief Directorate: Technical Support, through the Directorate: Mine Safety finalised the Harmony Gold Mining Company Limited: Phakisa Mine accident inquiry report. Regional tripartite meetings were supported by technical advisers in the preparation of terms of reference and safety statistics required.

Challenges

The main challenge is sourcing adequate qualified and experienced staff. Advertisements were placed, but there has been only one successful candidate. The Directorate: Mine Safety Directorate is still three technical advisers short out of the required complement of five.

4.4.1 Directorate: Mine Safety

During the year, the Directorate:

- Revised regulations and guideline for conveyor belts;
- Developed a monthly OH and safety report that provides information on fatalities, occupational diseases, evaluation of Section 54 instructions and safety awards achievements;
- Prepared statistics and presentations for health and safety tripartite meetings;
- Liaised with the regional offices to collate quarterly reports;
- Developed an inspector of mines qualification with the MQA, and
- Verified the applications of candidates for various certificates of competency.

4.4.1.1 Section 54 instructions issued during the financial year 2012/13

BACKGROUND

The Mine Health and Safety Act, Act No. 29 of 1996 as amended, Section 54 provides that "If an inspector has a reason to believe that any occurrence, practice or condition at a mine endangers or may endanger the health or safety of any person at the mine, the inspector may give any instruction necessary to protect the health and safety of persons at mines". This section of the Act empowers an inspector to either issue an instruction that operations at the mine or part of the mine be halted or the performance of any act or practice be suspended or halted.

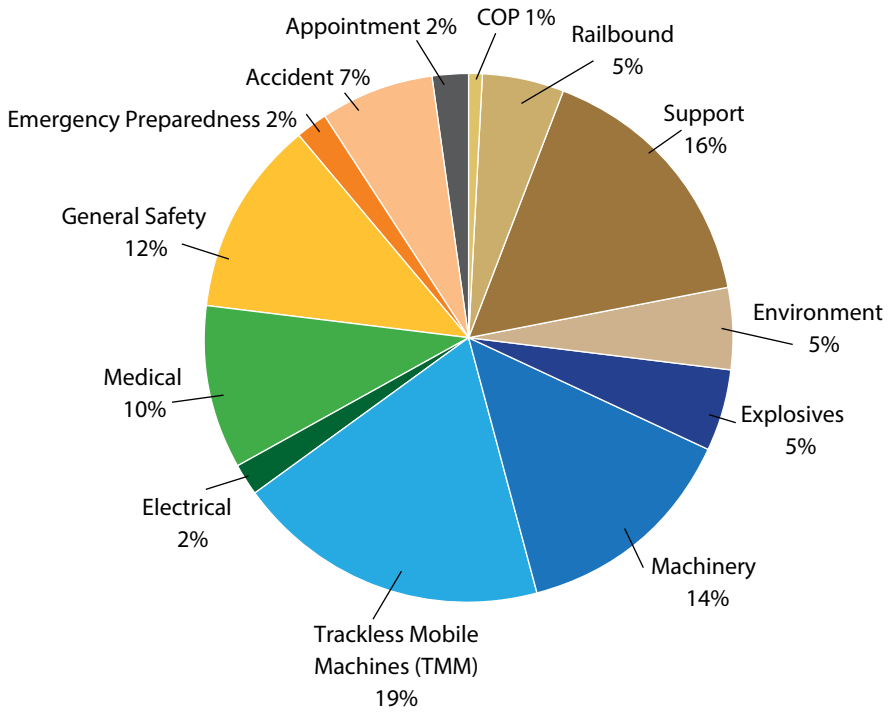
All Section 54 instructions are issued in accordance with the Enforcement Guideline, which requires listing of any occurrence, practice or condition that endangers or may endanger the health or safety of any person at the

mine; checking whether the similar occurrence, practice or condition was ever identified and brought to the attention of the employer in the past twelve months; and checking whether such occurrence, practice or condition has ever contributed to an injury or death of an employee in the past twelve months at that particular mine. There is no doubt that this approach has since saved hundreds of lives of mine workers.

The DMR is very clear about the ways in which they implement legislation and mining standards in order to reduce mining deaths, occupational injuries, and ill health. Section 54 has no intention whatsoever of affecting the mining industry in a negative way. It is supposed to improve health and safety. Safe mining is profitable mining. If miners act responsible then Section 54 becomes a piece of legislation that harms no one.

While Section 54 has achieved the desired results in terms of improving health and safety, there have been concerns voiced by the business regarding its implementation. Section 54 is never intended to be hazardous and had been endorsed by government, business and labour as no legislation was ever passed in the sector without the involvement of stakeholders in the mining industry. It was for this reason that in 2012, the DMR, business and labour agreed on a process to review the enforcement guideline.

4.4.1.2 The main transgressions covered by section 54 instructions during the year 2012/13



From the above graph of the main transgressions covered by section 54 instructions during the reporting period it is noticeable that the classification of the fatal accidents reported during same period is comparative to the section 54 instructions issued.

The table below illustrate the above relationship between the fatalities reported and the section 54 instructions issued.

CLASSIFICATION	FATALITIES	RELATED 54 INSTRUCTIONS
Fall of Ground	23%	16%
Transport and mining	26%	19%(TMM) and 5% (Rail Bound)
Machinery	14%	14%
General accidents	31%	12%

The main transgressions listed on the section 54 Instructions issued during reporting period are as follows:

- **Support (16%)**
  - No safe declaration;
  - Installation of substandard support;
  - Non compliance to mine standards; and
  - Poor barring practice
- **General Safety (12%)**
  - Employees working without personal protective equipment (PPE) and HIRA;
  - Lack of knowledge of mine standards;
  - No mine planning;
  - No pilot holes drilled;
  - Inadequate or poor supervision;
  - No drinking water;
  - Risk assessment not carried out;
  - Poor accident investigation;
  - No training carried out by the mine; and
  - No general demarcation of dangerous areas.
- **Machinery (14%)**
  - Machinery not properly locked out;
  - Open moving machine parts;
  - Substandard Guarding on conveyors
  - Conveyor pre-warning alarms not operating;
  - Slack rope devices not operational;
  - Sub Standard winches;
  - Sub-standard crushing plant;
  - Conveyor pre-warning alarms not operating;
  - Equipment not locked out
  - Sub-standard crushing plant; and
  - Slack rope devices not operational.
- **Trackless Mobile Machines (19%)**
  - No Code of Practice;
  - No checklists;
  - Check lists show faults and vehicles are still used;
  - No tyre management system in place; and
  - Contractors' vehicles do not comply to mine standard.
- **Medical (10%)**
  - Person working without a medical certificate;
  - No noise monitoring program in place;
  - No Annual medical report submitted; and
  - No medical surveillance conducted.
- **Rail bound (5%)**
  - Rail conditions not to mine standards;
  - Excessive water in haulages and drives ; and
  - Spillage under the chutes.
- **Explosives (5%)**
  - No explosives control; and
  - Inadequate explosive storage.
- **Electrical (2%)**
  - Electrical reticulation in poor condition; and
  - No earth leakage protection.
- **Environment (5%)**
  - Inadequate ventilation;
  - No ventilation plans available; and

- Lamp room attendants not qualified to check test instruments

- **Emergency Preparedness (2%)**
  - No escape routes provided;
  - Escape routes not inspected; and
  - Escape routes not maintained.

- **Appointment (2%)**
  - Medical Practitioner not appointed;
  - Manager, Engineer not appointed;
  - Worker operating LHD without licence; and
  - Machine operator not appointed, not licensed.

4.4.2 Directorate: Mine Surveying

This Directorate continuously monitors mine surveying standards and practices to promote a culture of health and safety on mines, ensures the safe use of undermined land for surface development, ensures safe and optimal exploitation of mineral resources, and renders mapping and draughting services. Additional key functions are hazard identification and risk control, and training of new employees.

4.2.1 Surveying matters

The Directorate provides a service to the regional offices in maintaining surveying and mapping standards in terms of regulations, and in monitoring the mine compliance thereof. It also makes comments and recommendations on the safe use of land for township development and inspects the administration of the departmental Copies of mine plans kept in the regional offices.

Also given priority were underground check measurements in restricted mining areas, where surface structures are to be protected.

The following table shows a comparison of tasks completed:

ACTIVITIES	2011 ACTUAL	2012 PLANNED	2012 ACTUAL
Mine surveying inspections (underground and surface mines)	558	323	430
Underground inspections (control measurements)	231	182	201
Surface utilisation files received and completed • Carried over from previous year • Received during the year • Completed during the year • Carried over to next year	 6 498 498 0		 5 502 471 36
Miscellaneous tasks (examinations, projects etc.)	492		496
Permissions and exemptions	192		108

Applications for exemptions and permissions as well as surface utilisation are received from the regional offices for comments and recommendations.

4.4.2.2 Special surveys

The Directorate: Mine Surveying is constantly involved in practical surveying projects, assisting mostly with mine boundary disputes and fatal accident plans. The Directorate also verifies the accuracy of survey data and plans submitted by candidates undertaking the trial survey project - part of the mine surveyor's certificate of competency examination.

4.4.2.3 Mapping services

The Mapping Services Sub-directorate administers archiving; retrieving and safekeeping of prescribed mine plans and survey records of mines that have closed down. It also serves clients who require information on the undermining status of land for township development and other purposes, as well as making available to mine owners or their representatives mine plans of closed down mines.

The Sub-directorate intends to create an electronic archive database of all mine plans and relevant survey information, which will ensure more efficient archiving and retrieving.

4.4.3 Directorate: Support Services

4.4.3.1 Administration Sub-directorate

The establishment of the Directorate: Support Services provided for 23 posts, 20 of which are filled, with three vacant. Staff demographics on 31 March 2013 were as follows:

GENDER	AFRICAN	WHITE	ASIAN	COLOURED	TOTAL
Male	8	1	0	0	9
Female	7	4	0	0	11

4.4.3.2 Management Information System Sub-directorate

The Management Information System (MIS) Sub-directorate enforces the provision of systems to the core business of the Inspectorate to store and process data to generate accurate and reliable information.

Currently, MIS oversees the following databases:

- SAMRASS;
- AMRs;
- South African mines occupational diseases database (SAMODD);
- Occupational hygiene, and
- Examinations.

The Sub-directorate is developing a more integrated information system, SAMSHA, which will provide for better planning, with all the information related to the Inspectorate stored in one place for improved workflow and operational efficiencies.

4.4.3.3 Promotions Sub-directorate

Publications

During the reporting period, four quarterly editions were published and one edition distributed to internal and external stakeholders.

Awareness and promotional activities

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

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

- Three international/national conferences and exhibitions;
- One regional exhibition, and
- Eleven mining technical exhibitions.

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, 23 mines achieved 1 000 000 fatality free shifts. Of these:

- Thirteen mines achieved 2 000 000 or more fatality-free shifts;

- Six mines achieved 4 000 000 or more fatality-free shifts;
- Three mines achieved 5 000 000 or more fatality-free shifts, and
- Two mines achieved 6 000 000 fatality-free shifts.

In the category of a thousand fatality-free production shifts, a total of 33 mines achieved 1 000 fatality-free production shifts. Of these:

- Twenty-seven mines achieved 3 000 or more fatality-free production shifts;
- Sixteen achieved 5 000 or more fatality-free production shifts;
- Four mines achieved 10 000 or more fatality-free production shifts, and
- One mine achieved an exceptional 35 000 fatality-free production shifts.

4.4.4 Training Sub-directorate

4.4.4.1 Implemented training

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

- A total of 71 officials attended technical and non-technical training courses, and
- Three managers attended Project Khaedu and advanced management development programmes.

4.4.4.2 Training interventions

Assistant inspector programme

Fourteen assistant inspectors recruited with electrical/mechanical engineering tertiary qualifications were undergoing inspector training at various regional offices of the Department at the beginning of the financial year.

This was in preparation for permanent appointment as inspectors of mines on acquisition of the GCC.

One of the 14 attained his GCC during the reporting period. He has been permanently absorbed in the Department as part of the human resource capacity pool. The other 13 are at various stages of completion.

The four assistant inspectors who obtained the GCC during the previous reporting period resigned during the financial year, reflecting the Department's challenge of retaining talent that is in demand by industry.

Learner inspector programme

The Department had five learner inspectors at the beginning of the reporting period.

These learners, who had initially been recruited as bursary holders, completed their undergraduate qualifications and were placed for mine experiential training at a mining site. One of the group completed her experiential training in mine surveying during the reporting period and was offered employment in the Department. A second learner completed his experiential training in mine engineering and was placed in a regional office for inspector training.

One learner completed his training in electrical engineering and will be placed likewise. The two mining engineering trainees are undergoing experiential training.

Bursary scheme

The Department had 20 bursary holders during the reporting period, five with DMR bursaries and 15 with MQA bursaries.

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

- Electrical engineering (heavy current);
- Mechanical engineering;
- Mine engineering, and
- Mine surveying.

The 15 learners funded by the MQA are at various stages of completion, while two of the five DMR bursary recipients completed their qualifications and started practical underground training in preparation for acceptance as GCC candidates.

Two or more are due to complete their qualifications at the end of 2013. The fifth will complete her studies in 2014.

One bursary holder breached the terms of contract by accepting industry employment while having a bursary obligation.

Examinations

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

TABLE 4.4.4.2: Number of written candidates vs. certificates issued per examination category

TYPE OF CERTIFICATE	NUMBER OF CANDIDATES WRITING EXAMINATIONS	CERTIFICATES ISSUED	PERCENTAGE PASS RATE
Mine engineer (electrical and mechanical)	924	71	8%
Mine manager	764	62	8%
Mine overseer	1 858	158	9%
Mine surveyor	501	14	3%
Winding engine driver	36	18	50%
TOTAL	**4 083**	**323**	**8%**

The Department remains greatly concerned about the low pass rate on the certificate of competency examinations and is collaborating with stakeholders through the MQA to review the examination model.

ANNEXURES

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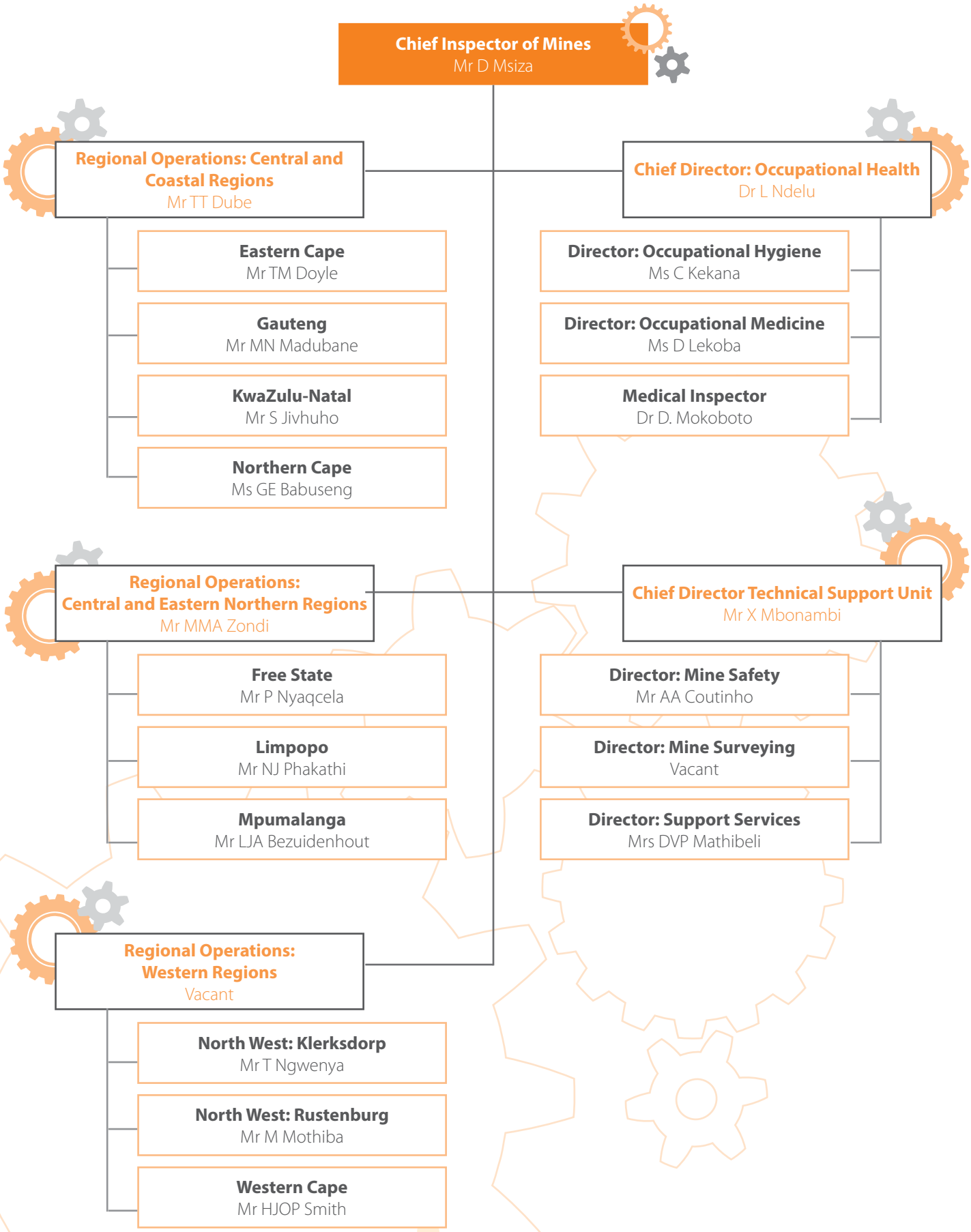
ANNEXURE A: ORGANOGRAM



ANNEXURE B: CONTACT LIST

POSITION	OFFICIAL	WORK TEL	WORK FAX	ADDRESS	E-MAIL
Chief Inspector of Mines	Mr D Msiza	012 444 3639 012 444 3970	086 6931 613	Private Bag X59 ARCADIA 0007	phumudzo.rambau@dmr.gov.za sithembile.mkhize@dmr.gov.za
Regional Operations Manager: Central and Eastern Northern Regions	Mr MMA Zondi	012 444 3663	012 341 2271	Private Bag X59 ARCADIA 0007	lindiwe.sekwati@dmr.gov.za
Regional Operations Manager: Western Regions	Vacant	012 444 3662	012 341 2271	Private Bag X59 ARCADIA 0007	mokgadi.lesoka@dmr.gov.za
Regional Operations Manager: Central and Coastal Regions	Vacant	012 444 3649	012 341 2271	Private Bag X59 ARCADIA 0007	freda.seema@dmr.gov.za
Chief Director: Occupational Health	Dr L Ndelu	012 444 3667	012 341 2271	Private Bag X59 ARCADIA 0007	zanele.ngcobo@dmr.gov.za
Chief Director: Technical Support Unit	Mr X Mbonambi	012 444 3676	012 341 2271	Private Bag X59 ARCADIA 0007	arista.muller@dmr.gov.za
Director: Mine Safety	Mr A Coutinho	012 444 3611	012 341 2271	Private Bag X59 ARCADIA 0007	portia.sokhulu@dmr.gov.za
Medical Inspector	Dr D Mokoboto	012 444 3614	012 341 2271	Private Bag X59 ARCADIA 0007	pertunia.makhubela@dmr.gov.za
Director: Occupational Medicine	Ms D Lekoba	012 444 3349	012 341 2271	Private Bag X59 ARCADIA 0007	ncumisa.ncobo@dmr.gov.za
Director: Occupational Hygiene	Ms CT Kekana	012 444 3650	012 341 2271	Private Bag X59 ARCADIA 0007	anesia.matjokane@dmr.gov.za
Director: Mine Health and Safety Legal Services	Mr G Ndamse	012 444 3274	012 444 3131	Private Bag X59 ARCADIA 0007	mmasello.maimela@dmr.gov.za
Director: Mine Surveying	Vacant	012 444 3791	012 444 3135	Private Bag X59 ARCADIA 0007	goitsemang.sekwati@dmr.gov.za

POSITION	OFFICIAL	WORK TEL	WORK FAX	ADDRESS	E-MAIL
Director: Support Services	Ms DVP Mathibeli	012 444 3547	086 710 1406	Private Bag X59 ARCADIA 0007	daphney.sekgobela@dmr.gov.za
Principal Inspector of Mines: Eastern Cape	Mr TM Doyle	041 396 3940	041 373 8171	Private Bag X6076 PORT ELIZABETH 6000	megan.singh@dmr.gov.za
Principal Inspector of Mines: Free State	Mr PH Nyaqcela	057 391 1371/1373	057 352 2270	Private Bag X33 WELKOM 9460	ouma.mokoena@dmr.gov.za
Principal Inspector of Mines: Gauteng	Mr MN Madubane	011 358 9776	011 339 6910	Private Bag X5 BRAAMFONTEIN 2017	nokhaya.magudumana@dmr.gov.za
Principal Inspector of Mines: KwaZulu-Natal	Mr S Jivhuho	031 333 9626	031 305 5803	Private Bag X54307 DURBAN 4000	sindy.dlamini@dmr.gov.za
Principal Inspector of Mines: Limpopo	Mr NJ Phakathi	015 287 4705	015 287 4740	Private Bag X9467 POLOKWANE 0700	nancy.montana@dmr.gov.za
Principal Inspector of Mines: Mpumalanga	Mr LJA Bezuidenhout	013 653 0500	013 690 2390	Private Bag X7279 WITBANK 1035	loraine.coetzee@dmr.gov.za
Principal Inspector of Mines: Northern Cape	Mrs GE Babuseng	053 807 1735	053 832 8527	Private Bag X6093 KIMBERLEY 8300	rosy.sereko@dmr.gov.za
Principal Inspector of Mines: North West (Klerksdorp)	Mr T Ngwenya	018 487 9867	018 487 9836	Private Bag XA1 KLERKSDORP 2570	elizabeth.mmota@dmr.gov.za
Principal Inspector of Mines: North West (Rustenburg)	Mr M Mothiba	014 594 9240	014 594 9260	PO BOX 150 TLHABANE 0309	tintswalo.baloyi@dmr.gov.za
Principal Inspector of Mines: Western Cape	Vacant	021 427 1004	021 427 1047	Private Bag X9 ROGGE BAY 8012	ntombikayise.ntlenzi@dmr.gov.za
Mining Qualifications Authority Chief Executive Officer	Mr S Seepei	010 593 1916		7 Anerley Road Parktown 2193	EstelleT@mqa.org.za
Mine Health and Safety Council General Manager	Mr TT Dube	011 656 1797 Ext: 112	011 656 1796	Private Bag X11 WENDYWOOD 2144	dndumndum@mhsc.org.za

ANNEXURE C: ACRONYMS

ACOSH	Advisory Council for Occupational Health and Safety
AIDS	Acquired Immune Deficiency Syndrome
AMCU	Association of Mine Workers and Construction Union
AQI	Air Quality Index
ASPASA	Aggregate and Sand Producers' Association of South Africa
CEO	Chief Executive Officer
CIOM	Chief Inspector of Mines
CM	Continuous Miners
COAD	Chronic Obstructive Airway Disease
COIDA	Compensation for Occupational Injuries and Diseases Act
COP	Code of Practice
CSIR	Council for Scientific Industrial Research
CSM	Cold Stress Management
CWP	Coal Workers' Pneumoconiosis
DCIOM	Deputy Chief Inspector of Mines
DG	Director-General
DoH	Department of Health
DMR	Department of Mineral Resources
EC	Eastern Cape
ECL	Environmental Critical Level
EE	Employment Equity
EMP	Environmental Management Plan
EMPR	Environmental Management Programme Report
ERPM	East Rand Proprietary Mines
FOG	Fall of Ground
FS	Free State
GCC	Government Certificate of Competency
GIS	Geographic Information Systems
GP	Gauteng
GTT	Government Task Team on Mine Closure and Water Management
HCP	Hearing Conservation Programme
HDI	Historically Disadvantaged Individuals
HDSA	Historically Disadvantaged South Africans
HEG	Homogeneous Exposure Group

HIV	Human Immune Virus
HSM	Heat Stress Management
HTC	HIV Counselling and Testing
JIPSA	Joint Initiative for Priority Skills Acquisition
KRA	Key Responsibility Areas
KZN	KwaZulu-Natal
LDC	Legal Drafting Committee
LIM	Limpopo
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
MPRDA	Mineral and Petroleum Resources Development Act, 2002
MPU	Mpumalanga
MQA	Mining Qualification Authority
MRS	Mine Rescue Services
NC	Northern Cape
NCMMA	Northern Cape Mine Managers' Association
NCSMT	National Coordination Strategic Management Team
NIHL	Noise Induced Hearing Loss
NIOH	National Institute of Occupational Health
NMPS	National Minerals Promotion System
NOSHCON	National Occupational Safety and Health Conference
NPA	National Prosecuting Authority
NQF	National Qualifications Framework
NSP	National Strategic Plan
NUM	National Union of Mineworkers
NW: K	North-West: Klerksdorp
NW: R	North-West: Rustenburg
ODMWA	Occupational Diseases in Mines and Works Act
OEL	Occupational Exposure Limit
OH	Occupational Health
OHS	Occupational Health and Safety
OMP	Occupational Medical Practitioner
PDS	Personal Detection System(s)

PGM	Platinum Group Metals
PI	Principal Inspector(s) of Mines
PPE	Personal Protective Equipment
PTB	Pulmonary Tuberculosis
RBE	Rail Bound Equipment
RMDEC	Regional Mining Development and Environment Committee
ROM	Regional Operations Manager
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
SANS	South African National Standards
SAQA	South African Qualifications Authority
SDM	Systems Development and Maintenance Directorate
Sil+TB	Silico-Tuberculosis
SIMRAC	Safety in Mines Research Advisory Committee
SMME	Small Micro and Medium Enterprises
SSA	State Security Agency
STI	Sexually Transmitted Infections
SWV	South West Vertical (Shaft)
TB	Tuberculosis
TMM	Trackless Mobile Machinery
TPLD	Trapped Persons Locating Devices
TRG	Technical Research Group
TTG	Technical Task Group
UASA	United Associations of South Africa
WC	Western Cape

NOTES

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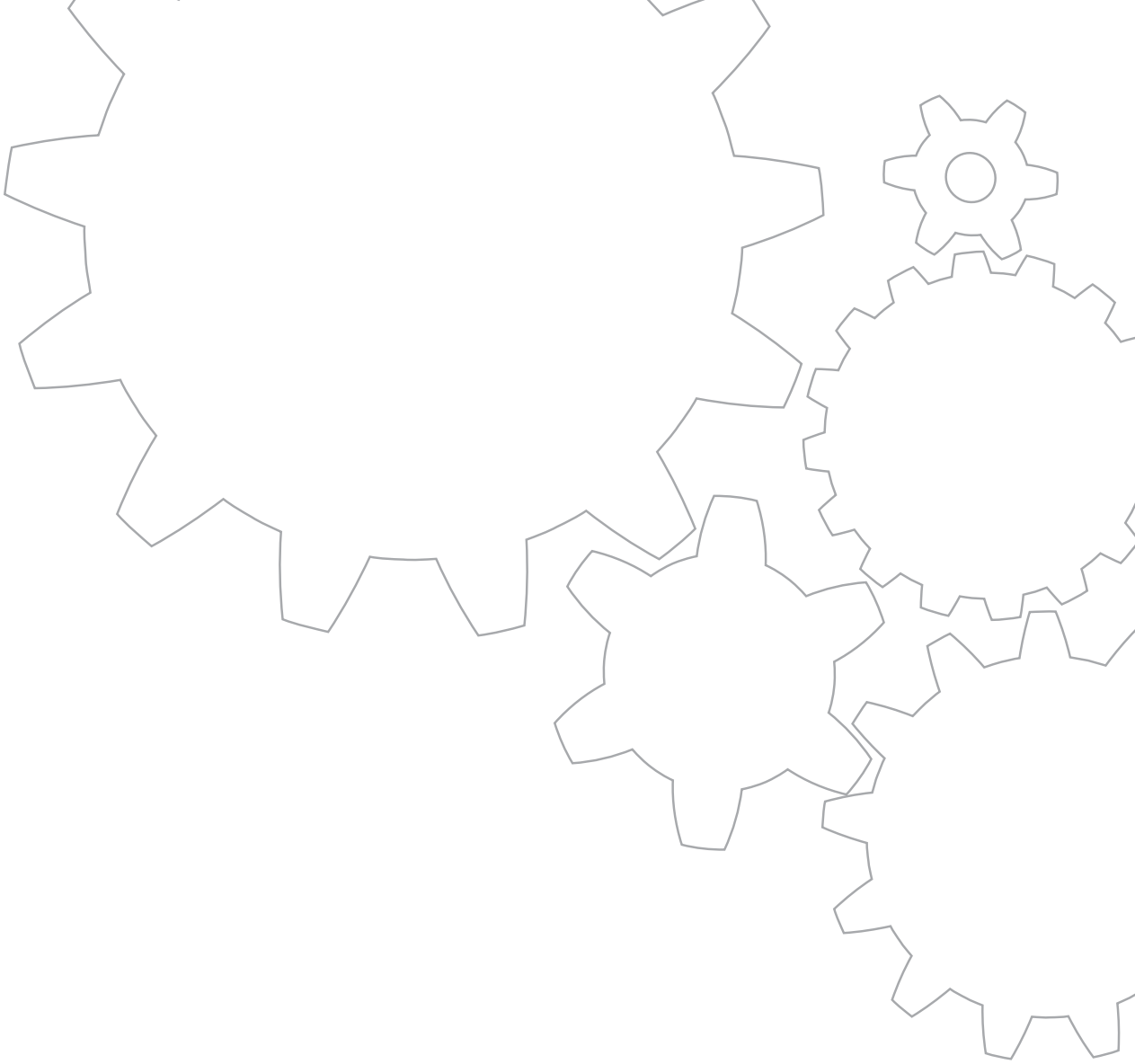

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