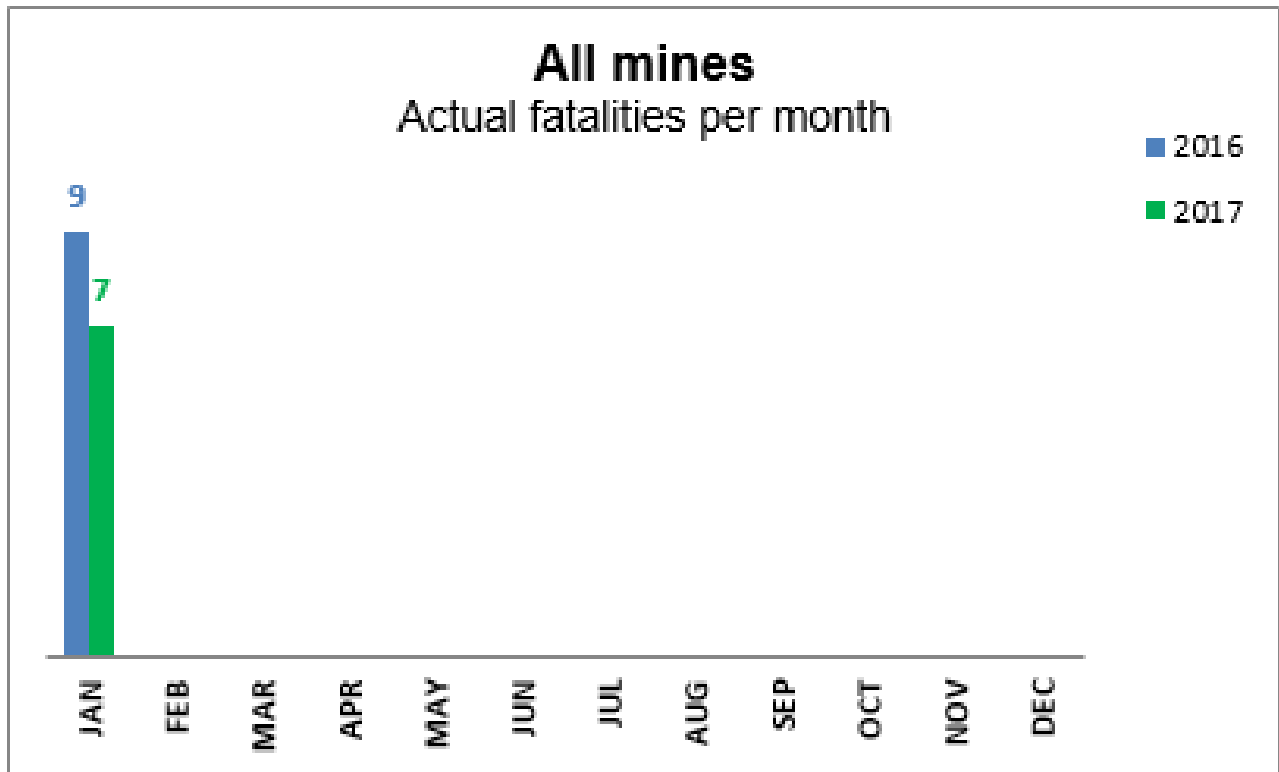




1. OVERALL FATALITIES PER MONTH

During the month of January 2017, **seven (7)** fatalities were reported whilst during the same period in 2016 a total of **nine (9)** mine workers were fatally injured. This translates to a decrease in fatalities of 22% year on year.



2. STATISTICS OF FATALITIES BY REGION

The table below illustrates the progressive performance of each region with regard to fatalities. During the month of January 2017, **five (5)** of the **ten (10)** regions managed to mine without a fatality. The Eastern Cape and Kwa Zulu Natal regions last reported a fatality on 11/10/2015 and 05/02/2015 respectively.

	WC	NC	FS	EC	KZN	MPU	LP	GP	NW-KD	NW-RB	TOT
Jan	2	0	1	0	0	1	0	1	0	2	7
Total	2	0	1	0	0	1	0	1	0	2	7

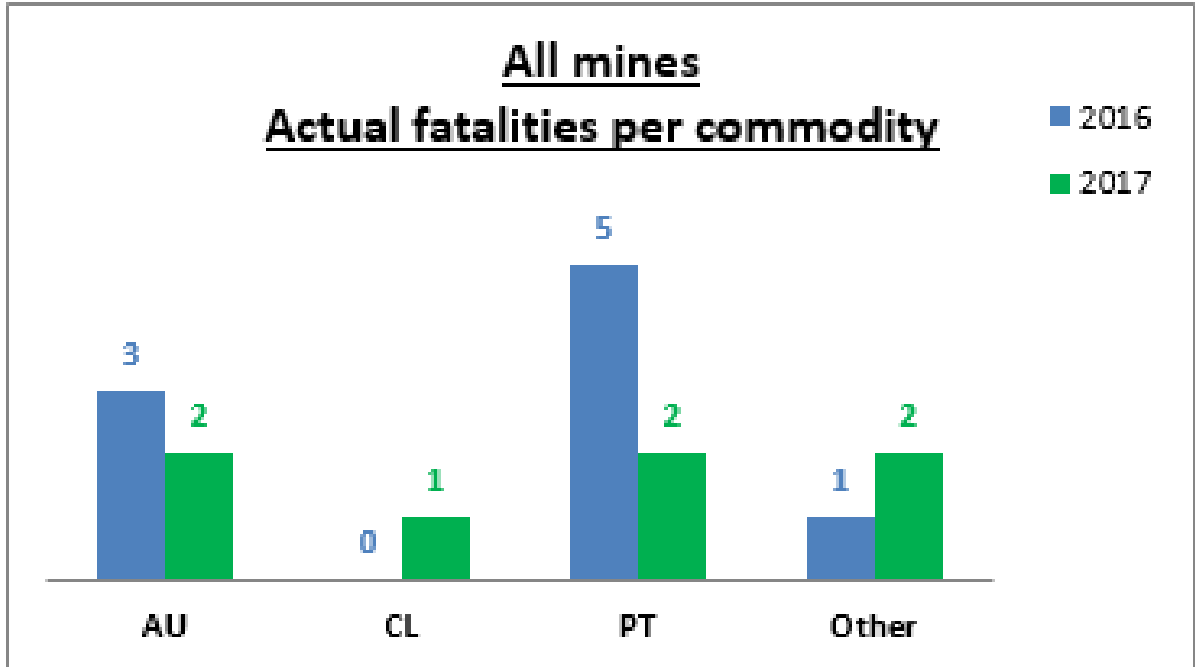
3. ANALYSIS OF FATALITIES BY COMMODITY

For the purpose of the analysis, commodities are grouped into gold (AU), platinum (PT), coal (CL) and other mines (i.e. chrome, manganese, diamonds, stone, sand, brickworks, etc.).

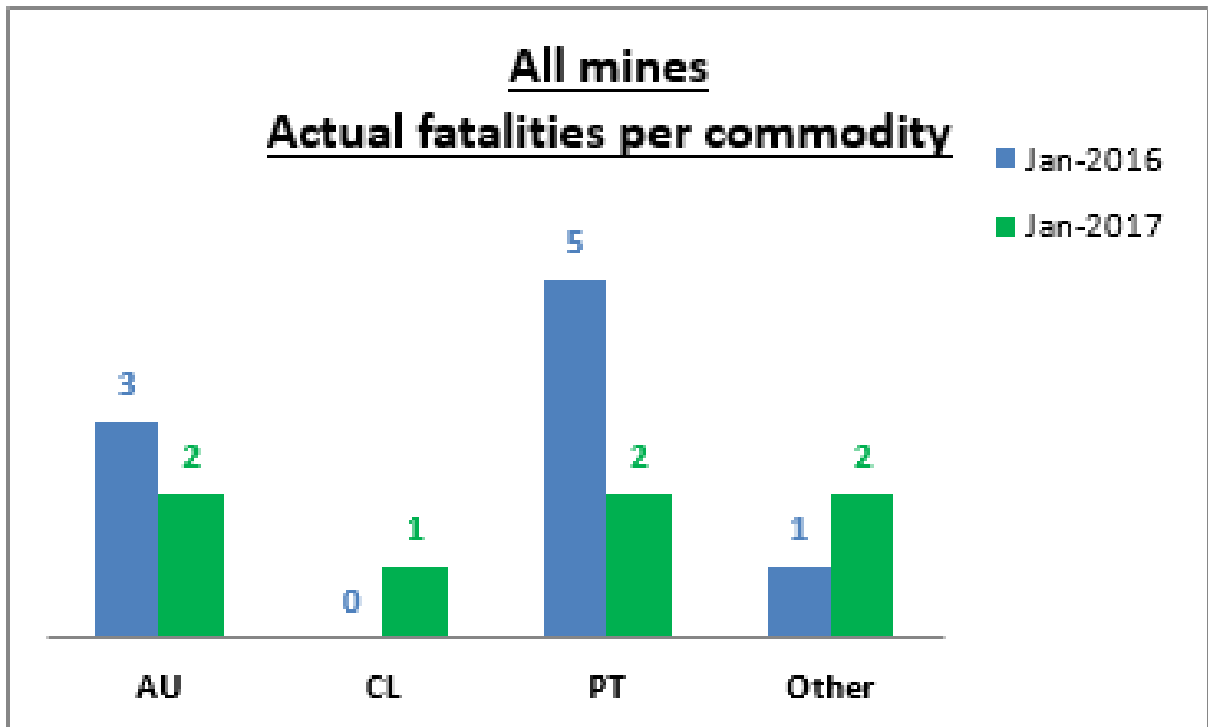
3.1 The comparison of fatalities year to date for January 2016 and 2017 are reflected on the graph below and shows decrease in fatalities in the gold and platinum sectors of



33% and 60% respectively, while the coal and other mines sectors show increase in fatalities of 100% each.

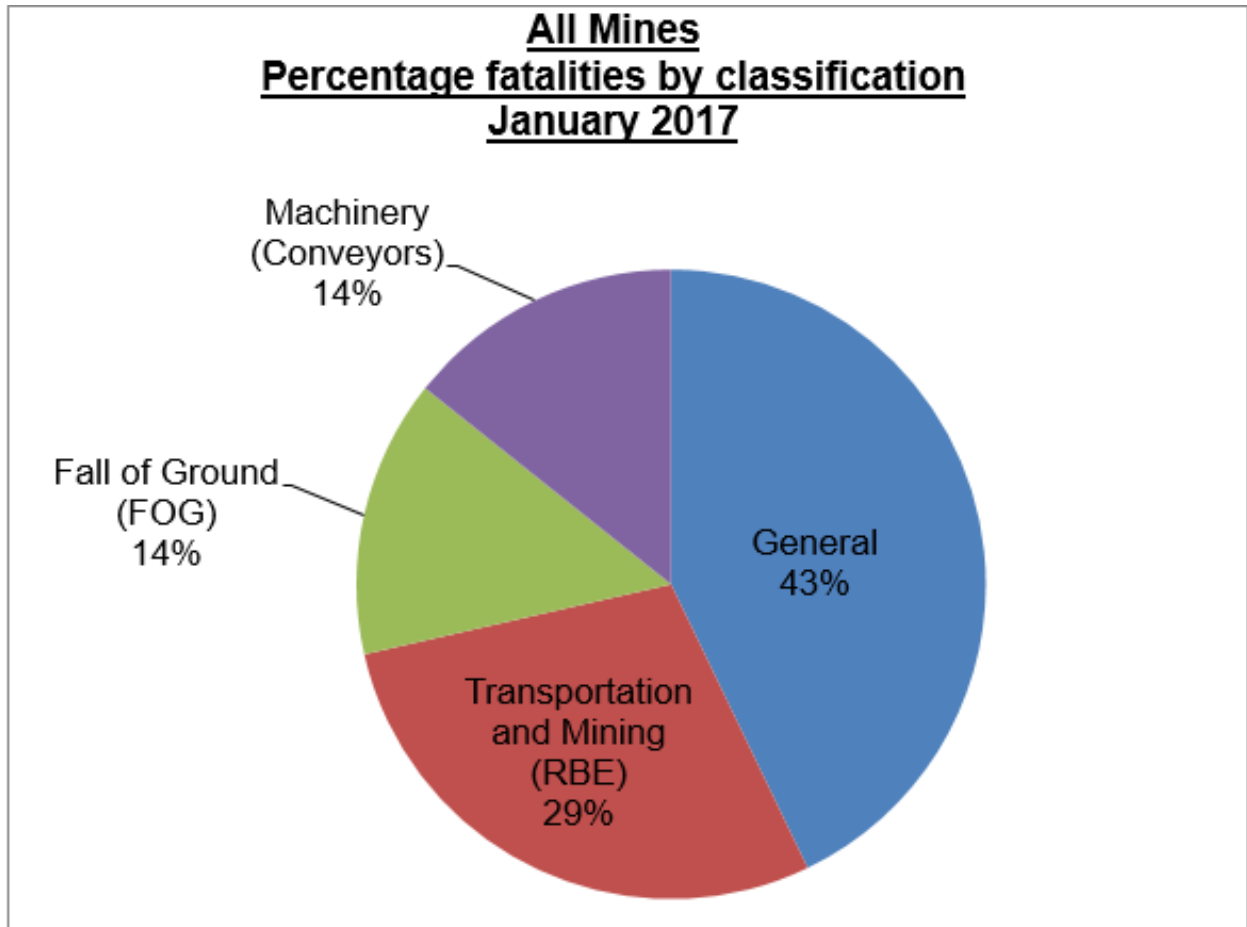


3.2 In January 2017, the gold, platinum and other mines sectors reported **two (2)** fatalities each, while the coal sector reported **one (1)**.





#### 4. ANALYSIS OF FATALITIES BY CLASSIFICATION



##### 4.1 General (43%)

There were **three (3)** fatalities reported in this category this year in January. **Two (2)** were reported in the other mines sector, where the now deceased a Plant Operator and a Fitter were fatally injured when they were overcome by nitrogen gas inside a vertical vessel at a petroleum refinery. **One (1)** fatality was reported in the gold sector, where the now deceased a Dump Truck Operator was fatally injured when he was struck and pinned against the steering wheel by the cross beam of the installed steel set support that had dislodged. He was operating the dump truck on the ramp between two adjacent distress cuts.

##### 4.2 Transportation and Mining (RBE (Rail Bound Equipment)) (29%)

There were **two (2)** fatalities reported in this category this year in January. **One (1)** each was reported in the gold and platinum sectors respectively.

##### 4.3 FOG (Fall of Ground) (14%)

There was **one (1)** fatality reported in this category this year in January at a platinum mine. The now deceased an employee was fatally injured by the rock that fell down from the sidewall whilst busy barring it at the tip area in the centre gully.

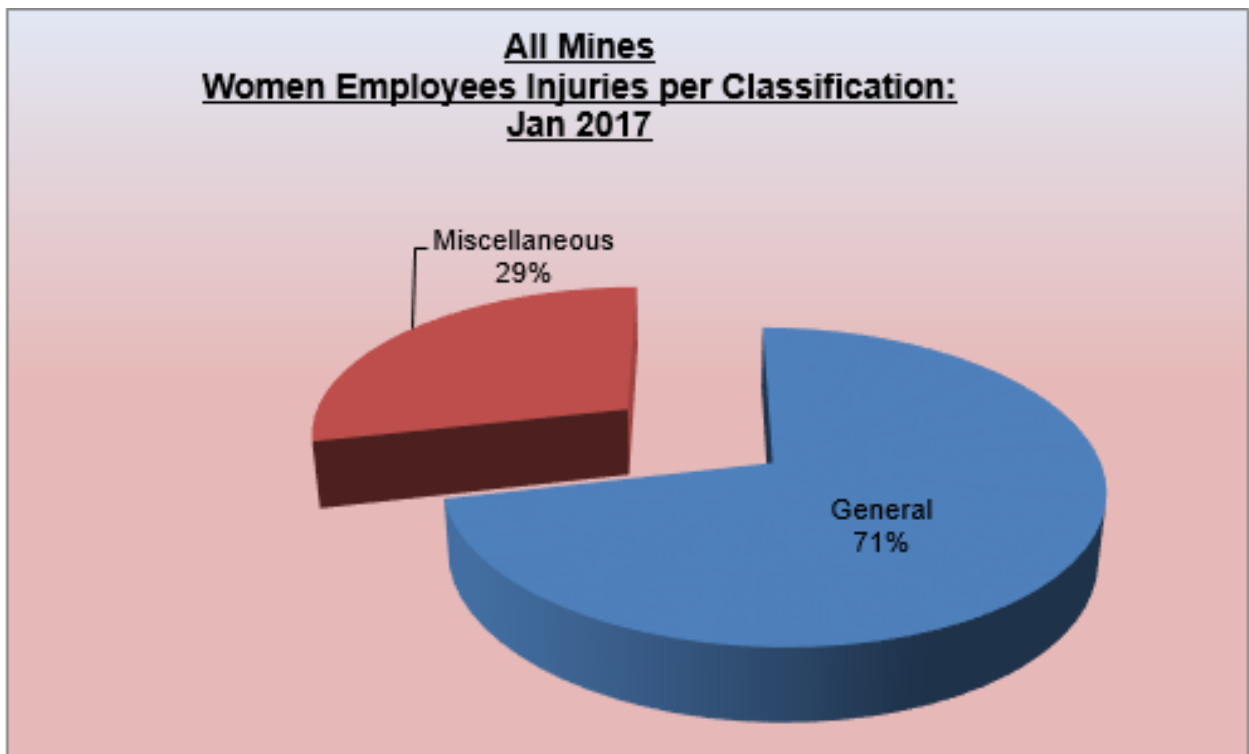


**4.4 Machinery (Conveyors) (14%)**

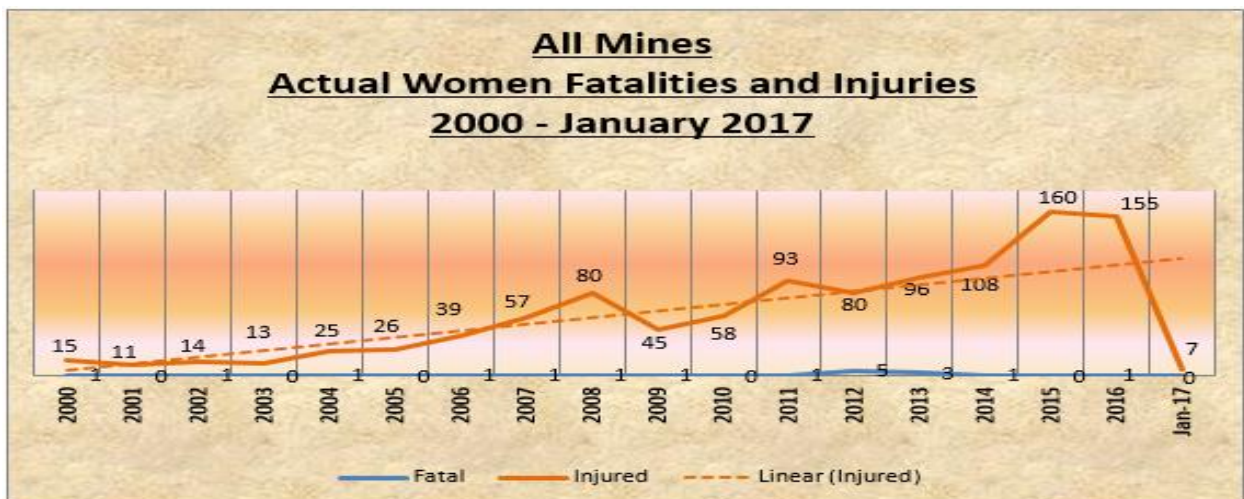
There was **one (1)** fatality reported in this category this year in January at a colliery. The now deceased an employee was pulled into the conveyor belt tailend pulley.

**4.5 Women Employees**

The number of women employees has steadily increased in the South African mining industry and the graph below shows a classification of injuries to women employees across all commodities from 2000 to January 2017:

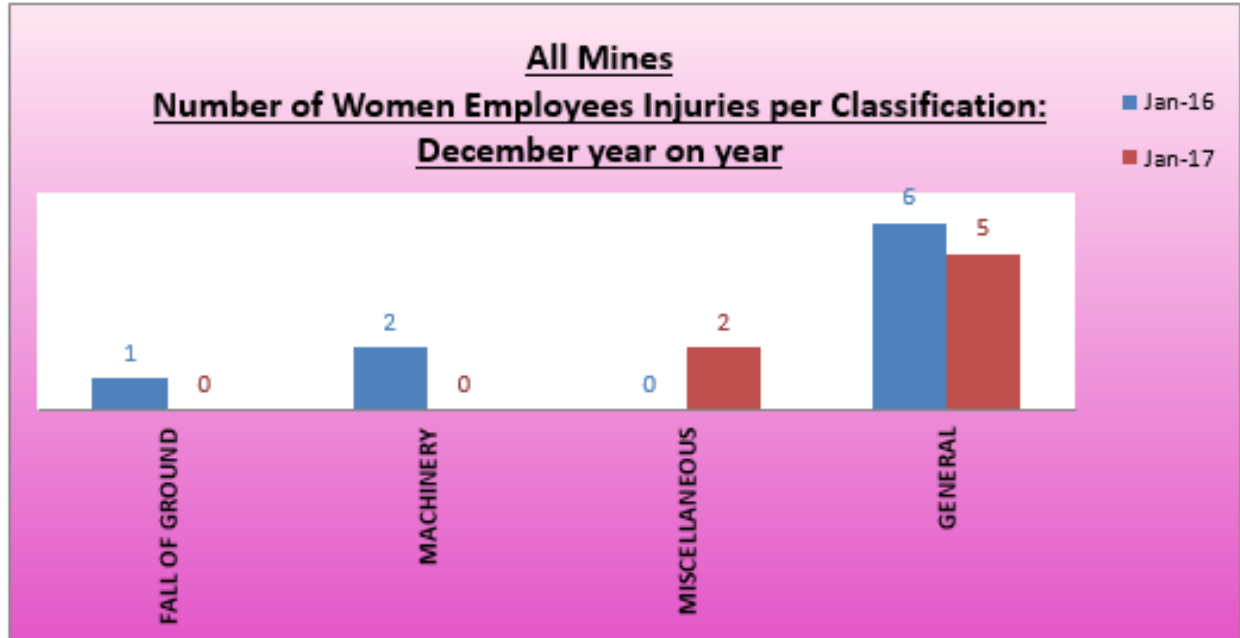


The graph below shows the number of injuries and fatalities to women employees across all commodities since 2000 to January 2017:





The graph below shows the comparison of injuries to women employees across all commodities in January 2016 and January 2017:



## 5. FATALITIES AND INJURIES

### 5.1 FATALITIES

	Jan 2016	Jan 2017
<b>Gold Mines</b>	<b>3</b>	<b>2</b>
<b>Sibanye Gold</b>	<b>1</b>	<b>1</b>
Beatrix 3 MU1	0	1
Cooke 3	1	0
<b>Gold Fields</b>	<b>0</b>	<b>1</b>
South Deep: Twin Shaft	0	1
<b>Harmony</b>	<b>2</b>	<b>0</b>
Masimong	2	0
<b>Platinum Mines</b>	<b>5</b>	<b>2</b>
<b>Impala</b>	<b>5</b>	<b>1</b>
20 Shaft	0	1
1 Shaft	1	0
14 Shaft	4	0
<b>Other Platinum Mines</b>	<b>0</b>	<b>1</b>
Northam Platinum	0	1
<b>Coal Mines</b>	<b>0</b>	<b>1</b>
<b>Other Coal Mines</b>	<b>0</b>	<b>1</b>
Bankfontein Colliery	0	1



	Jan 2016	Jan 2017
<b>Other mines</b>	<b>1</b>	<b>2</b>
Mosselbaai Refinery	0	2
Kolomela	1	0
<b>TOTAL</b>	<b>9</b>	<b>7</b>

## 5.2 MINE INJURIES

The table below reflects the number of injury accidents that were reported for January 2016 per the classification of the accident.

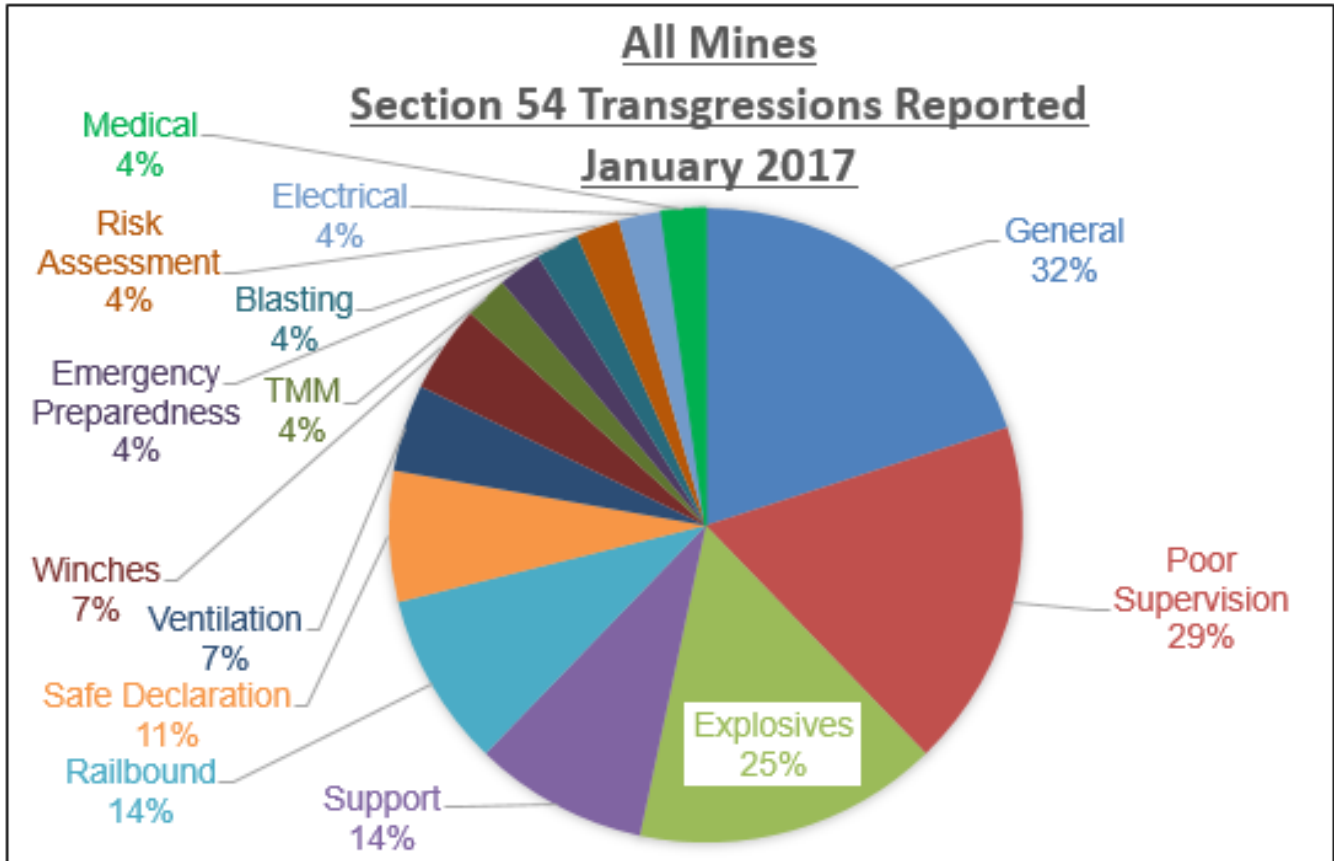
	INJURIES		
	Jan-16	Jan-17	%change
<b>FALL OF GROUND</b>	<b>25</b>	<b>17</b>	<b>-32</b>
Rockburst	3	3	0
Strainburst	4	3	-25
Gravity	18	11	-39
<b>MACHINERY</b>	<b>14</b>	<b>4</b>	<b>-71</b>
Conveyor belts	4	1	-75
Drives, belts, chains	2	1	-50
Portable power tools	6	2	-67
Other	2	0	-200
<b>TRACKBOUND TRANSPORT</b>	<b>14</b>	<b>5</b>	<b>-64</b>
Locomotive	4	0	-400
Locomotive drawn vehicle	1	1	0
Rerailing	1	0	-100
Coupling/uncoupling	2	1	-50
Rocker arm shovel	0	1	100
Personnel transport	3	1	-67
Hand trammed	2	0	200
Other Transport	1	1	0
<b>WINCHES</b>	<b>2</b>	<b>7</b>	<b>250</b>
Scraper Winch Installation	1	5	400
Single drum winch	0	1	100
Mono rope/rail	1	1	0
<b>TRACKLESS MOBILE MACHINES</b>	<b>10</b>	<b>9</b>	<b>-10</b>
Mechanical loaders	1	3	200
Tractor/trailer	1	0	-100
Transporters	2	3	50
T&M lifting machines	4	1	-75
T&M mobile drilling machines	1	1	0
Other TMM	1	1	0



	Jan-16	Jan-17	%change
<b>GENERAL</b>	<b>96</b>	<b>80</b>	<b>-17</b>
Fall of material/rolling rock	12	9	-25
Manual handling of material	27	24	-11
Manual handling of mineral	2	5	150
Falling in/from	4	1	-75
Slipping and falling	33	20	-39
Burning and scalding	4	5	25
Splinters	3	2	-33
Dust, gas and fumes	2	5	150
Struck by any object manual handling	9	9	0
<b>Conveyance accidents (shaft/winze)</b>	<b>0</b>	<b>1</b>	<b>100</b>
<b>Electricity (Not causing fires)</b>	<b>1</b>	<b>0</b>	<b>-100</b>
<b>Fires</b>	<b>1</b>	<b>0</b>	<b>-100</b>
<b>Explosives</b>	<b>2</b>	<b>0</b>	<b>-100</b>
<b>Heat sickness</b>	<b>0</b>	<b>1</b>	<b>100</b>
<b>Miscellaneous</b>	<b>3</b>	<b>7</b>	<b>133</b>
<b>TOTAL</b>	<b>168</b>	<b>131</b>	<b>-22</b>



## 6. SECTION 54 TRANSGRESSIONS REPORTED DURING THE MONTH



The categorised details below were extracted from the Section 54 Instruction documents that were forwarded from the various Department of Mineral Resources regions, showing the transgressions that led to mostly partial closures of mines, as per Section 54 of the Mine Health and Safety Act.

### 6.1 General (33%)

This category of transgressions accounted for most of the section 54 transgressions observed in January 2017 and the areas covered were:

- poor illumination was observed at the crosscut;
- the old tip was found not properly closed leaving apertures of the tip grizzly open and thereby exposing employees to the risk of falling into the ore pass;
- back area was not demarcated;
- poor barring was observed;
- poor start-up the working place was observed;
- employees were barring from the down-dip position, watering down was not conducted during barring operation, buddy-buddy system was applied during barring operation and barring was not done solid in all access ways of the working place;
- sockets seemed to have been washed and plugged with a cardboard, not an approved socket plug; and



- the intake airway along the travelling way was barricaded with a wire mesh but it seemed like people were entering the area through a hole on the side.

## **6.2 Poor Supervision (30%)**

The areas covered in this category of transgressions were:

- the Mine Overseer and Shiftboss had disturbed the scene of accident with the intent of hiding evidence;
- poor supervision and management were observed;
- the Miner was found with a malfunctioning GDI (Gas Detection Instrument) which was not sent for repairs as per mine procedure;
- no Miner had been appointed to take charge of tramming personnel;
- no working place orientation was done for tramming personnel and no pre-start audits and inspection were done by engineering personnel to ensure safety of RBE (Railbound Equipment) during the mine start-up;
- poor supervision and management were observed;
- poor start-up was observed; and
- the Team Leader did not acknowledge the instruction from the Miner on the safe declaration document and the Team Leader did not go in together with the crew during safe declaration.

## **6.3 Explosives (26%)**

The areas covered in this category of transgressions were:

- the Sinker had prepared primers at shaft bottom while drilling was not complete, against the mine charging procedure;
- twenty eight (28) primers were already inserted into the shot holes and twenty nine primers were hanged on the mesh wire around the shaft, not placed in an approved explosives lockable container or properly secured;
- Cortex was suspended with a piece of wire against the wire mesh, not placed in an approved explosives lockable container or properly secured;
- loose boosters were found in a transparent plastic bag, suspended on a wire mesh, not placed in an approved explosives lockable container or properly secured;
- explosives control document was not corresponding to the items;
- sixteen 25kg bags of explosives were found hidden/abandoned behind the ventilation curtain at the centre gully; and
- an explosives charging unit was observed underground without a pre-use checklist which is part of the controls in the risk assessment.

## **6.4 Support (15%)**

The areas covered in this category of transgressions were:

- support on the second line was measured to be 4.7m and 2.8m along the dip instead of the 1.5m mine standard;



- scaling on the sidewall of the centre gully was observed and support bolts were protruding 0.8m;
- drilling of roofbolts holes was done without installation of temporary net, temporary net installation was not covering the entire panel, holes at the toe of the panel were drilled under unsupported hangingwall and temporary net installation measured 1.2m from the face against a standard of 0.5m; and
- the panel was found not supported and there was no support at the holing.

### **6.5 Railbound (15%)**

The areas covered in this category of transgressions were:

- rails were submerged in water and ore spillage was covering the rails underneath the box fronts;
- three rail switches were not fully switching, fouling areas were not demarcated and broken slippers were observed along the haulage;
- locomotive was forced to move through the rails which were covered underneath the spillage; and
- rails were covered underneath the spillage.

### **6.6 Safe Declaration (11%)**

The areas covered in this category of transgressions were:

- a panel was declared safe for normal work to continue while sticks were 6.2m, 6.3m and 6.8m from the face instead of maximum 4.4m;
- poor safe declaration was observed at the stope; and
- areas were declared safe while the panel was barricaded due to a brow and the crew was busy with making safe.

### **6.7 Ventilation (7%)**

The areas covered in this category of transgressions were:

- that ventilation was measured to be static on the face; and
- ventilation fan was found recirculating.

### **6.8 Winches (7%)**

The areas covered in this category of transgressions were:

- winch tip barricade was secured with wires, compressed air hoses were removed thereby disabling the operation of bell wires and bell wires were not installed on the other side of the scraper rope path; and
- gully box connecting the winch was left open exposing electrical wires whilst the Artisan was busy at the winch and the Service Man did not have a lock-out key.



### **6.9 TMM (Trackless Mobile Machines) (1%)**

The areas covered in this category of transgressions was that a LDV (Light Delivery Vehicle) was operated with a dysfunctional safety belt interlock.

### **6.10 Emergency Preparedness (1%)**

The areas covered in this category of transgressions was that there were no documents available to indicate inspections done inside the refuge bays, the Miner had not signed the check-list, the check-list did not indicate the shift when the start-up was done and details of the Miner were not indicated on the document.

### **6.11 Blasting (4%)**

The area covered in this category of transgressions was that it seemed like people were entering an abandoned area which had a chain barricade and a no-entry sign.

### **6.12 Risk Assessment (1%)**

The area covered in this category of transgressions was that pre-work risk assessment had not been conducted.

### **6.13 Electrical (1%)**

The area covered in this category of transgressions was that cables at the charging bay were submerged in water.

### **6.14 Medical (2%)**

The area covered in this category of transgressions was that a system of medical surveillance was not maintained.

## **7. OCCUPATIONAL MEDICINE**

### **7.1 Overall occupational diseases/illness per month**

During January 2017, the regions reported a total of 326 occupational diseases/illness from Health Incident Reports (HIRs), when compared to a total of 185 cases reported during the same period in 2016.

### **7.2 Analysis of occupational disease trends by region**

There is an overall increase of 76.2% in the total occupational diseases/illness reported by eight regions during January 2017 when compared to the total of cases reported by nine regions during the same period in 2016.



The table and graph below illustrate the progressive performance of each region with regards to the number of occupational diseases/illness reported on HIRs. In January 2017, Gauteng reported most cases, followed by West Rustenburg, Mpumalanga, Free State, Northern Cape, North West Klerksdorp, Limpopo and Western Cape regions. In January 2016, Free State reported most cases followed by Gauteng, North West Klerksdorp, North West Rustenburg, Northern Cape, KwaZulu-Natal, Limpopo, Mpumalanga and Western Cape regions. KwaZulu-Natal did not report any occupational diseases/illness in January 2017 and the Eastern Cape region did not report any occupational disease/illness during the same period for both years.

### **7.3 Analysis of Health Incident Reports per common disease group**

#### *7.3.1 Pulmonary tuberculosis (PTB)*

Pulmonary tuberculosis (PTB) cases have increased by 26.7% (27%) when compared to the same period during the previous year.

#### *7.3.2 Silicosis*

Silicosis cases reported have increased by 15.6% (16%) when compared to the same period during the previous year.

#### *7.3.3 Noise-induced hearing loss (NIHL)*

Noise-induced hearing loss (NIHL) cases have increased by 227.7% when compared to the same period during the previous year.

### **7.4 Conclusion**

The analysis of occupational disease trends from the health incident reports show an overall decrease on occupational disease reported when compared to the same period of the previous year. It must also be noted that reported occupational diseases/illness are based on the system of medical surveillance which is not conducted at the same time on mines.

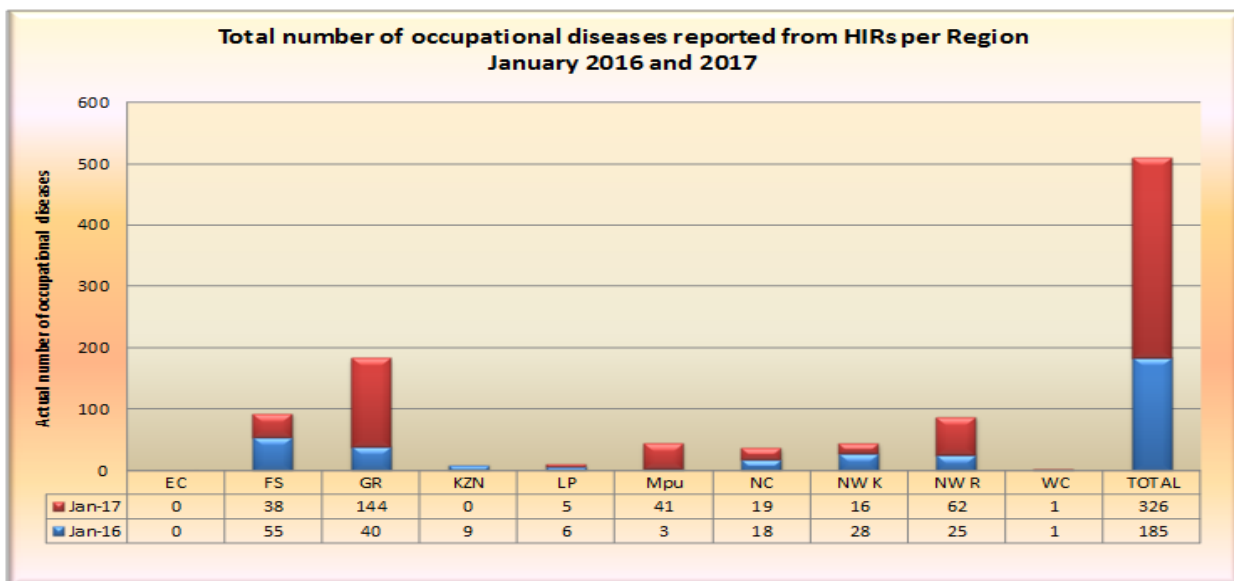


*Table 7.2.1 Occupational diseases/illness reported on Health Incident Reports (HIRs) per region:  
 January 2016 and January 2017*

	EC		FS		GR		KZN		LP		Mpu		NC		NW K		NW R		WC		TOTAL	TOTAL	%
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	Change TOTAL
PTB	0	0	32	21	31	46	3	0	4	1	2	12	5	8	7	2	2	19	0	0	86	109	27
Sil+TB	0	0	1	1	1	1	0	0	0	0	0	0	0	0	3	1	5	0	1	0	11	3	-73
MDR-TB	0	0	1	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	1	2	3	50
XDR-TB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sil	0	0	17	16	1	12	4	0	0	0	2	0	0	5	5	5	2	0	0	32	37	16	
Asb	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	100
CWP	0	0	0	0	0	0	0	0	0	1	1	12	0	0	0	0	0	0	0	0	1	13	1200
COAD	0	0	4	0	1	6	0	0	0	1	0	3	1	1	6	0	0	0	0	0	12	11	-8
Occ Asthma	0	0	0	0	0	3	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	5	500
Heat Illness/Stroke	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NIHL	0	0	0	0	5	58	2	0	1	0	0	8	10	7	5	4	13	41	0	0	36	118	228
Occ Skin Dxs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Muskulo- skeletal Disorders	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	100
Other Dxs	0	0	0	0	1	18	0	0	1	0	0	1	1	2	2	4	0	0	0	0	5	25	400
<b>Total</b>	<b>0</b>	<b>0</b>	<b>55</b>	<b>38</b>	<b>40</b>	<b>144</b>	<b>9</b>	<b>0</b>	<b>6</b>	<b>5</b>	<b>3</b>	<b>41</b>	<b>18</b>	<b>19</b>	<b>28</b>	<b>16</b>	<b>25</b>	<b>62</b>	<b>1</b>	<b>1</b>	<b>185</b>	<b>326</b>	<b>76</b>

Verification source: Health Incident Reports submitted by regions: January 2016 & 2017

*Graph 7.3.1 Occupational diseases/illness reported on Health Incident Reports (HIRs) per region:  
 January 2016 and 2017*



Verification source: Health Incident Reports submitted by regions: January 2016 and 2017



## **8. STATUS REPORT ON THE MINE HEALTH AND SAFETY COUNCIL (MHSC) AWARD SCHEME 2017**

### **Table 8.1 Mines that have achieved the safety awards:**

There were no safety awards issued in January 2017.