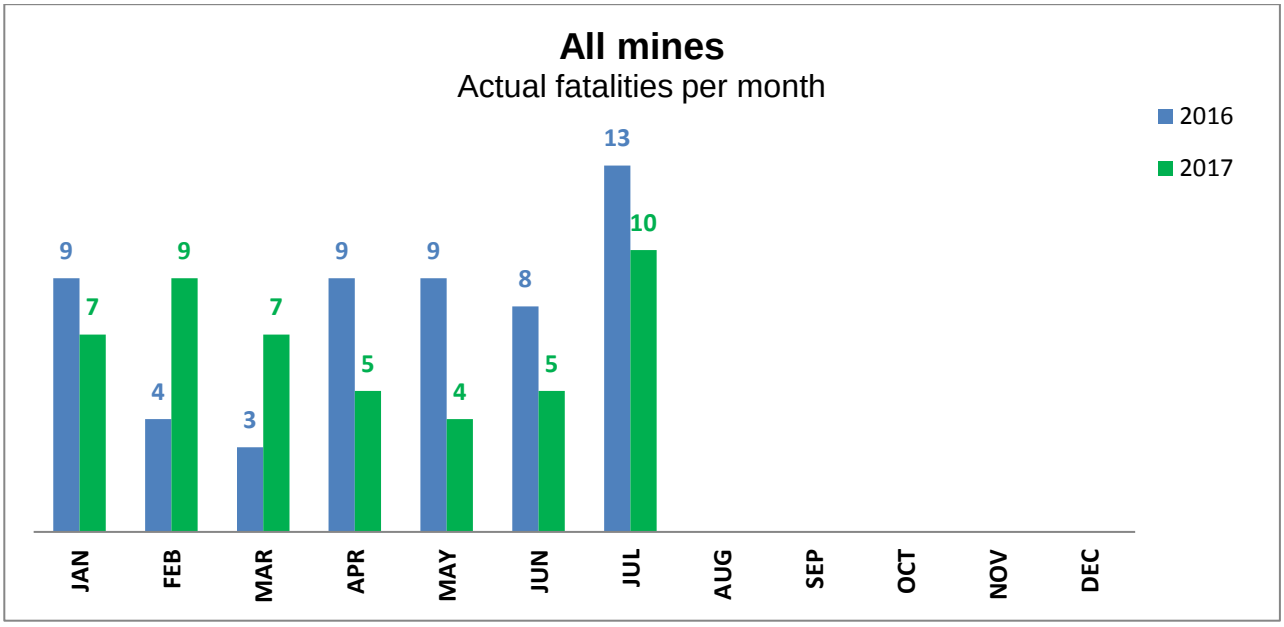
mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Occupational Health and Safety Report:

July 2017

1. OVERALL FATALITIES PER MONTH

During the month of July 2017, **ten (10)** fatalities were reported whilst during the same period in 2016 a total of **thirteen (13)** mine workers were fatally injured. Fatalities reported for the year up to July 2017 were **forty seven (47)** while **fifty five (55)** were reported over the same period in 2016. This translates to a decrease in fatalities of 15% year on year.



2. STATISTICS OF FATALITIES BY REGION

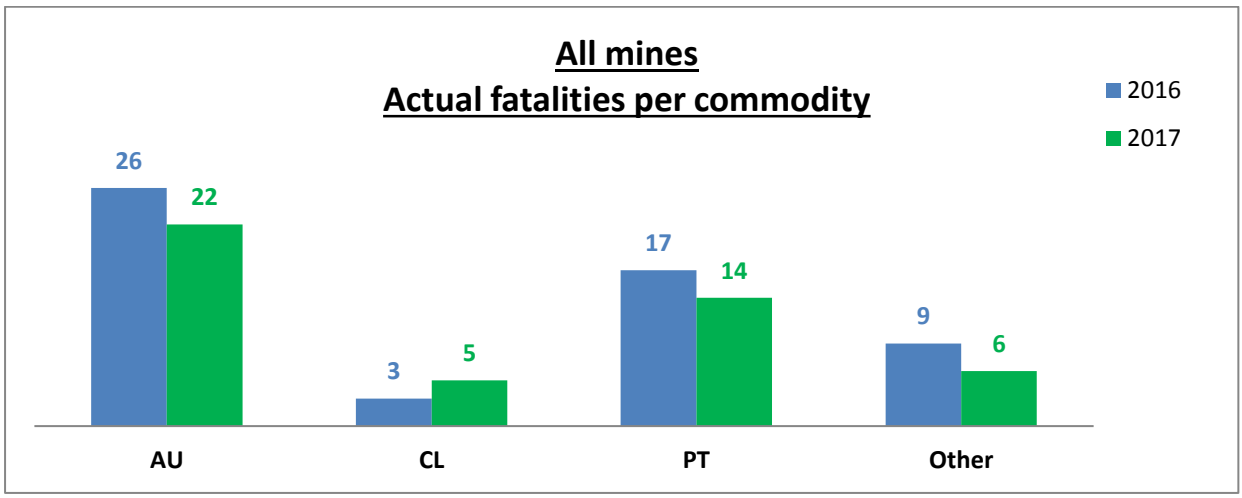
The table below illustrates the progressive performance of each region with regard to fatalities. During the month of July 2017, **six (6)** of the **ten (10)** regions managed to mine without a fatality. The Northern Cape, Eastern Cape and Kwa-Zulu Natal regions last reported a fatality on 09/11/2016, 11/10/2015 and 05/02/2015 respectively.

	WC	NC	FS	EC	KZN	MPU	LP	GP	NW-KD	NW-RB	TOTAL
Jan	2	0	1	0	0	1	0	1	0	2	**7**
Feb	0	0	3	0	0	1	1	2	0	2	**9**
Mar	0	0	1	0	0	2	2	0	0	2	**7**
Apr	0	0	0	0	0	2	0	2	0	1	**5**
May	0	0	1	0	0	0	0	2	0	1	**4**
Jun	0	0	0	0	0	0	1	1	0	3	**5**
Jul	0	0	1	0	0	3	0	0	5	1	**10**
Total	**2**	**0**	**7**	**0**	**0**	**9**	**4**	**8**	**5**	**12**	**47**

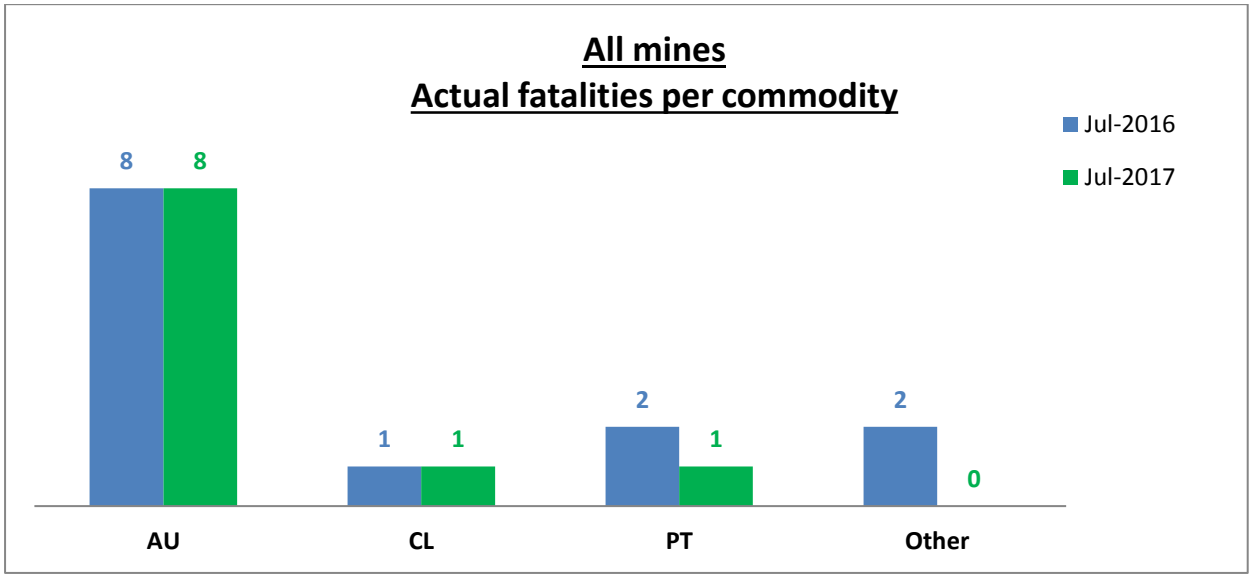
3. ANALYSIS OF FATALITIES BY COMMODITY

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.).

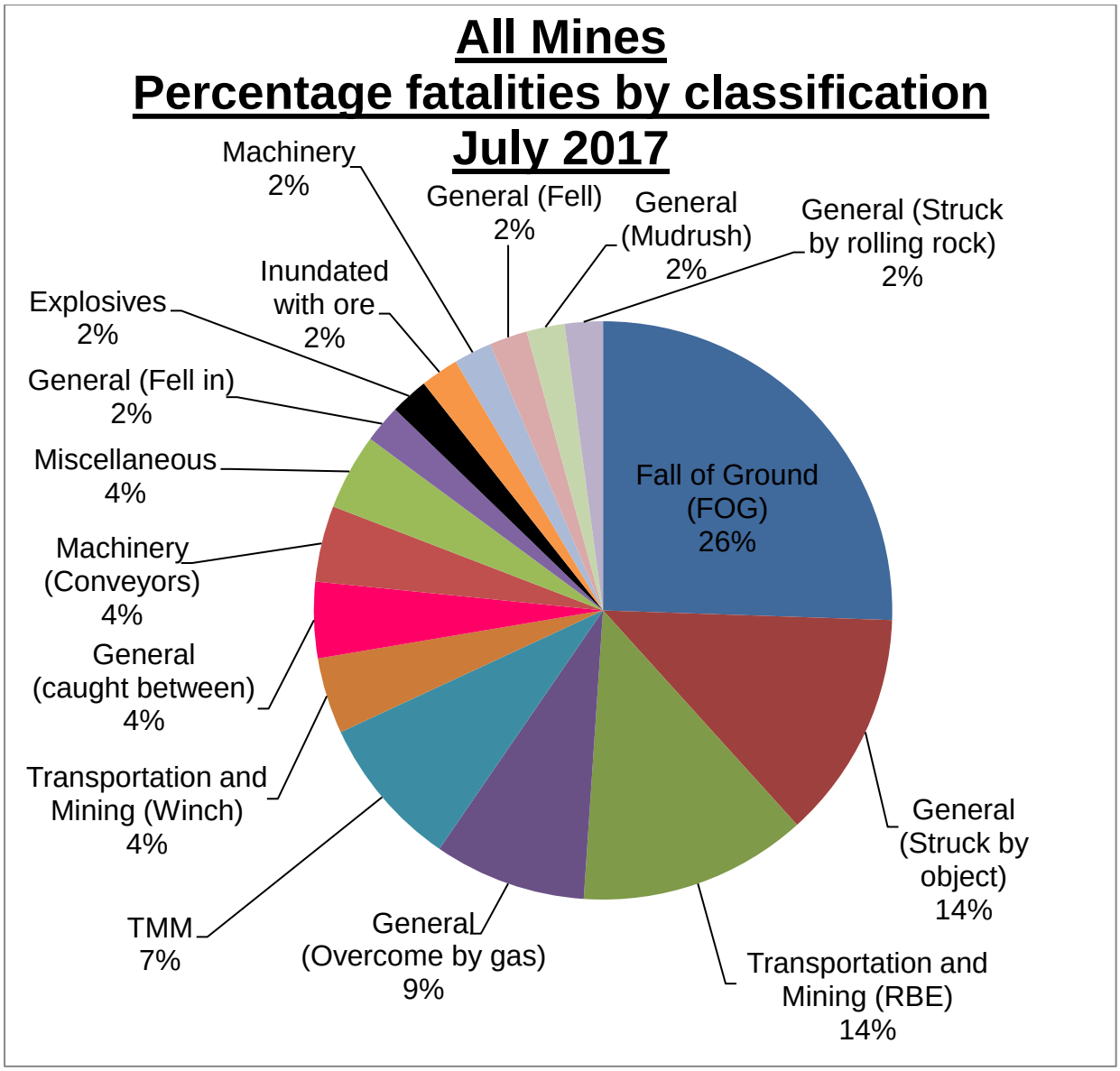
3.1 The comparison of fatalities year to date for July 2016 and 2017 are reflected on the graph below and shows a decrease in fatalities in the gold, platinum and other mines sectors of 15%, 18% and 33% respectively while the coal sector show an increase of 67%.



3.2 In July 2017, the gold sector reported **eight (8)** fatalities, the platinum and coal sectors reported **one (1)** each while the other mines sector reported **none (0)**.



4. ANALYSIS OF FATALITIES BY CLASSIFICATION



4.1 FOG (Fall of Ground) (26%)

There were **twelve (12)** fatalities reported in this category this year. **Five (5)** were gravity related while **seven (7)** were seismic related. **Four (4)** were reported in July 2017 at a gold mine. Four (4) employees were fatally injured in a seismic induced fall of ground accident that led to the sudden closure of a winze, where the four (4) employees were working.

4.2 General (Struck by object) (14%)

There were **six (6)** fatalities reported in this category this year, **four (4)** in the gold mines, **one (1)** in a coal mine and **one (1)** in a platinum mine. **One (1)** was reported in July 2017. The now deceased a Cutting Torch Team Leader was seriously injured in the Fridge Plant Section. He was opening up the water box door on the condenser vessel when the door

violently opened and hit him against his head and chest. Emergency response was immediately called but he was declared deceased a few hours later.

4.3 Transportation and Mining (RBE (Rail Bound Equipment)) (14%)

There were **six (6)** fatalities reported in this category this year, **two (2)** at a gold mine and **four (4)** at the platinum mines. **One (1)** was reported in July 2017. The now deceased a Diamond Drill Operator was fatally injured when he was struck by a passing hopper whilst standing in a restricted area in the haulage.

4.4 General (Overcome by gas) (9%)

There were **four (4)** fatalities reported in this category this year. **Two (2)** each were reported at a petroleum refinery and a gold mine. **None (0)** were reported in July 2017.

4.5 Trackless Mobile Machinery (TMM) (9%)

There were **four (4)** fatalities reported in this category this year, **three (3)** at the gold mines and **one (1)** at a chrome mine. **Two (2)** were reported in July 2017. In the first accident, which was a subsequent fatality at a gold mine: The now deceased a Load Haul Dumper (LHD) Driver was injured on the 28th October 2016 while on duty at the mine. He was operating the LHD when it tilted to the side and caused him to hit the hanging wall with his head. He had been hospitalised for treatment and rehabilitation. He subsequently passed away on the 3rd July 2017. In the second accident at another gold mine where the now deceased an Electrical Assistant was fatally injured when he was struck against the sidewall by the engineering utility vehicle which was reversing out of the decline. The now deceased was part of a cable gang that was installing eyebolts for the fibre optic cable installation.

4.6 Transportation and Mining (Winch) (4%)

There were **two (2)** fatalities reported in this category this year, **one (1)** each at a gold mine and a platinum mine. **None (0)** were reported in July 2017.

4.7 General (Caught between) (4%)

There were **two (2)** fatalities reported in this category this year, **one (1)** each at a coal mine and a diamond mine. **None (0)** were reported in July 2017.

4.8 Machinery (Conveyors) (4%)

There were **two (2)** fatalities reported in this category this year, both at the collieries. **One (1)** was reported in July 2017. The now deceased a Contractor Employee was fatally injured by a belt clamp that he had installed on the conveyor belt, during the slacking of the conveyor belt. He passed away en route to hospital, despite resuscitation efforts by paramedics in the ambulance. No external injuries were visible during the resuscitation efforts.

4.9 Miscellaneous (4%)

There were **two (2)** fatalities reported in this category this year, **one (1)** at a platinum mine and **one (1)** at a gold mine. **One (1)** was reported in July 2017 at a gold mine, which was a subsequent fatality: The now deceased an employee was injured on the 16th March 2017 in a loco accident and passed away on the 11th July 2017. According to the mine, the now deceased was diagnosed with TB on the brain and other underlying medical conditions which the hospital was busy treating before his untimely death.

4.10 General (Fell in) (2%)

There was **one (1)** fatality reported in this category this year at a gold mine. **None (0)** were reported in July 2017.

4.11 Explosives (2%)

There was **one (1)** fatality reported in this category this year at a platinum mine. **None (0)** were reported in July 2017.

4.12 Inundated with ore (2%)

There was **one (1)** fatality reported in this category this year at a gold mine. **None (0)** were reported in July 2017.

4.13 Machinery (2%)

There was **one (1)** fatality reported in this category this year at a diamond mine. **None (0)** were reported in July 2017.

4.14 General (Fell) (2%)

There was **one (1)** fatality reported in this category this year at a platinum mine. **None (0)** were reported in July 2017.

4.15 General (Mudrush) (2%)

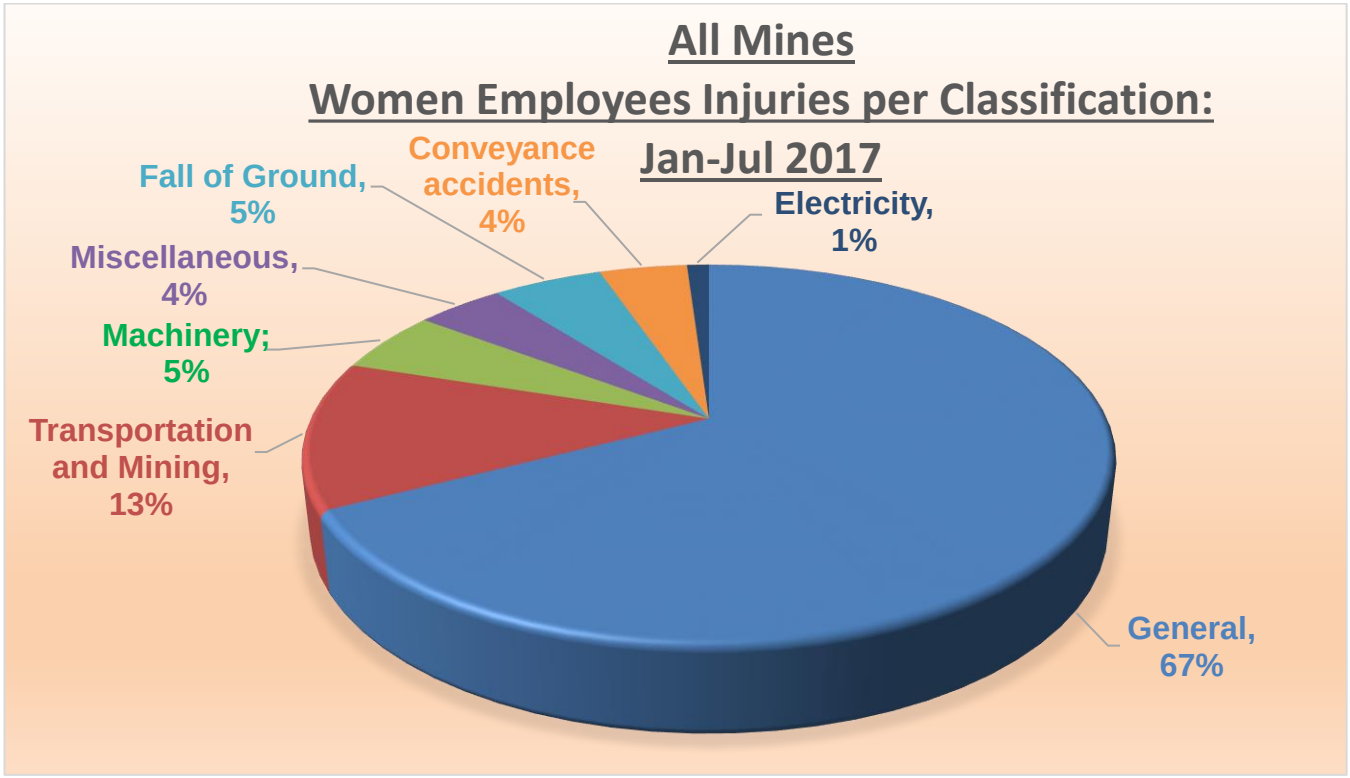
There was **one (1)** fatality reported in this category this year at a coal mine. **None (0)** were reported in July 2017.

4.16 General (Struck by rolling rock) (2%)

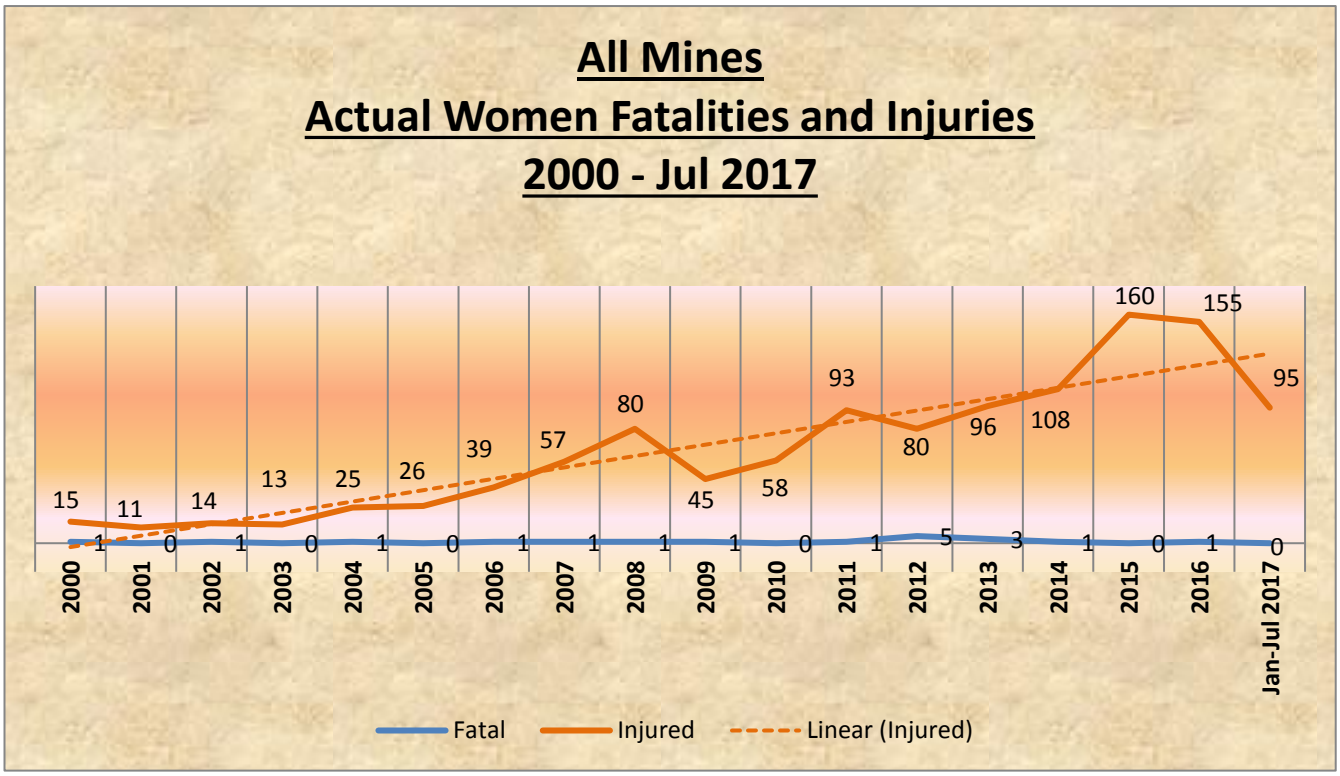
There was **one (1)** fatality reported in this category this year in at a granite mine. **None (0)** were reported in July 2017.

4.17 Women Employees

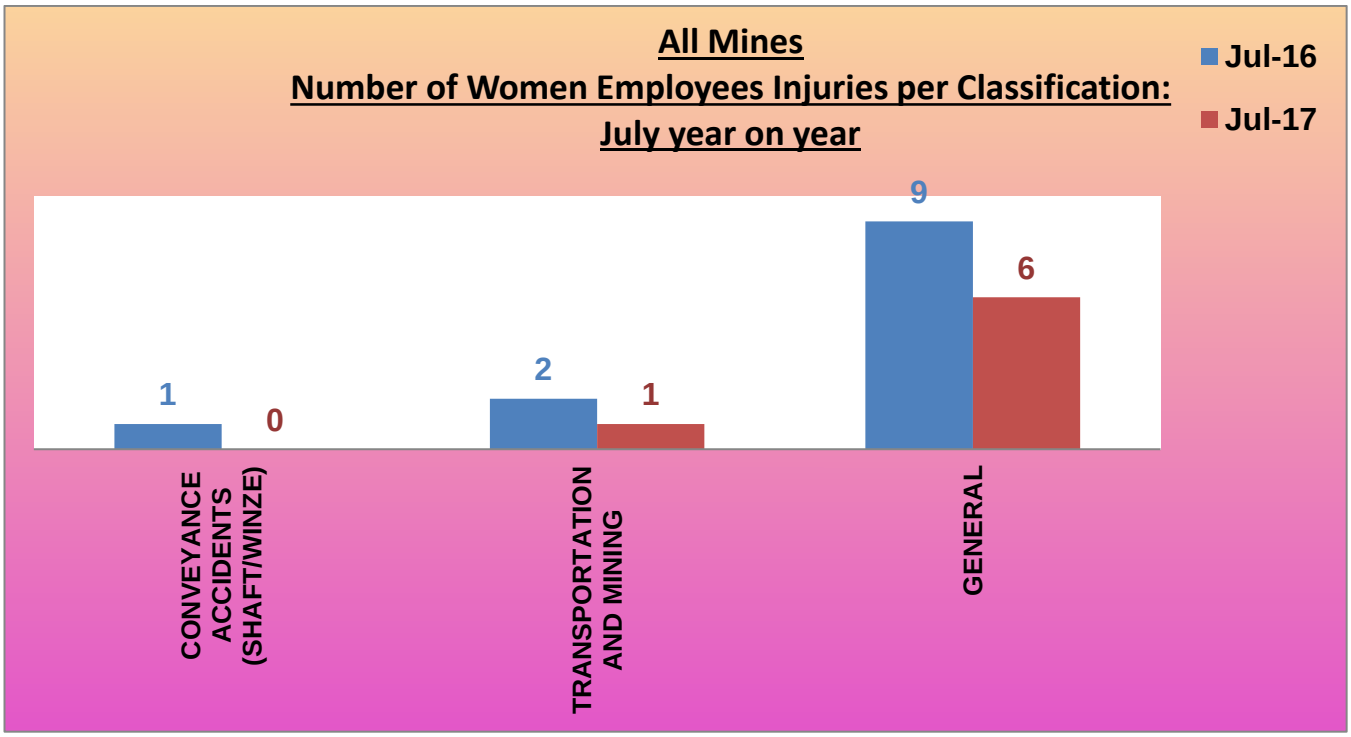
The number of women employees has steadily increased in the South African mining industry and the graph below shows a classification of injuries to women employees across all commodities from 2000 to July 2017:



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



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



5. FATALITIES AND INJURIES

5.1 FATALITIES

	Jan-Jul 2016	Jan-Jul 2017
Gold Mines	**26**	**22**
Anglo Gold Ashanti	**5**	**1**
Tau Tona	1	0
Savuka	2	0
Mponeng	1	0
Kopanang	1	0
Moab Khotsong	0	1
Sibanye Gold	**12**	**6**
Beatrix 3 MU1	0	2
Ezulwini	1	0
Rand Uranium	3	0
Kloof	2	1
Beatrix West Unit 3	1	0
Beatrix 4# - Oryx Mine	0	1
Driefontein	3	1
Beatrix Division	1	0
Beatrix South 2	1	0

	Jan-Jul 2016	Jan-Jul 2017
Burnstone	0	1
Gold Fields	**0**	**2**
South Deep: Twin Shaft	0	2
Harmony	**6**	**3**
Masimong	3	1
Bambanani	0	1
Kusasalethu	1	0
Phakisa	1	0
HJ Joel	1	0
Target	0	1
Other Gold Mines	**3**	**10**
Evander Gold Mine	1	1
DRD Gold: Ergo Mining	0	1
Fairview Gold Mine	0	1
Primrose Gold Mine	0	2
Mintails	1	0
Barberton Mines	0	1
Tau Lekoa	1	4
Platinum Mines	**17**	**14**
Impala	**8**	**4**
20 Shaft	0	1
Marula Platinum-Clapham Shaft	0	1
1 Shaft	2	1
14 Shaft	5	0
10 Shaft	0	1
12 Shaft	1	0
Lonmin	**3**	**4**
K3 Shaft	0	1
Newman Shaft	0	1
Marikana	2	0
4B Shaft	0	2
Roland Shaft	1	0
Anglo Platinum	**4**	**2**
Tumela	2	1
Khuseleka	2	0
Dishaba	0	1
Other Platinum Mines	**2**	**4**
Northam Platinum	0	2
Atlatsa Resources	1	1

	Jan-Jul 2016	Jan-Jul 2017
Sibanye Platinum	0	1
Bafokeng Rasimone	1	0
Coal Mines	**3**	**5**
Anglo Thermal Coal	**0**	**2**
Goedehoop Colliery	0	1
New Denmark Colliery	0	1
Other Coal Mines	**3**	**3**
Bankfontein Colliery	0	1
Matla Colliery	0	1
HCI	0	1
Sigma Colliery	2	0
South 32-Klipspruit	1	0
Other mines	**9**	**6**
Mosselbaai Refinery	0	2
Kolomela	1	0
Sishen	2	0
Blaaubosch Diamond Mine	0	1
Sefateng Chrome	0	1
PPC	1	0
Petra Diamonds	0	1
Foskor	1	0
Samancor	1	0
Elephant Granite	0	1
Hotazel Manganese Mine	1	0
Klipdam Diamond Mine	1	0
Scarlet Sun Diamond Mine	1	0
TOTAL	**55**	**47**

5.2 MINE INJURIES

The table below reflects the number of injury accidents that were reported for January to July 2016 and 2017 per the classification of the accident.

	INJURIES		
	Jan-Jul 2016	**Jan-Jul 2017**	**%change**
FALL OF GROUND	**297**	**260**	**-12**
Rockburst	49	40	-18
Strainburst	36	23	-36
Gravity	212	197	-7

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	Jan-Jul 2016	Jan-Jul 2017	%change
MACHINERY	**123**	**128**	**4**
Conveyor belts	30	37	23
Drives, belts, chains	17	9	-47
Portable power tools	60	63	5
Other	16	19	19
TRACKBOUND TRANSPORT	**122**	**118**	**-3**
Locomotive	28	21	-25
Locomotive drawn vehicle	30	41	37
Rerailing	5	8	-200
Coupling/uncoupling	20	23	15
Rocker arm shovel	15	10	-33
Personnel transport	12	5	-58
Hand trammed	9	4	-56
Other Transport	3	6	100
WINCHES	**61**	**77**	**26**
Scraper Winch Installation	50	56	12
Single drum winch	0	5	500
Double drum winch	7	11	57
Mono rope/rail	4	5	25
TRACKLESS MOBILE MACHINES	**101**	**90**	**-11**
Mechanical loaders	6	12	100
Tractor/trailer	2	3	50
Coal mining machines	5	2	-60
Transporters	34	32	-6
Motor vehicles	11	11	0
T&M lifting machines	19	11	-42
T&M mobile drilling machines	19	14	-26
Other TMM	5	5	0
GENERAL	**888**	**790**	**-11**
Fall of material/rolling rock	142	135	-5
Manual handling of material	264	232	-12
Manual handling of mineral	51	44	-14
Falling in/from	32	22	-31
Slipping and falling	265	225	-15
Burning and scalding	16	12	-25
Splinters	13	18	38
Dust, gas and fumes	8	19	138
Inundation/drowning	2	2	0
Struck by ventilation door	10	9	-10
Struck by any object manual handling	85	72	-15

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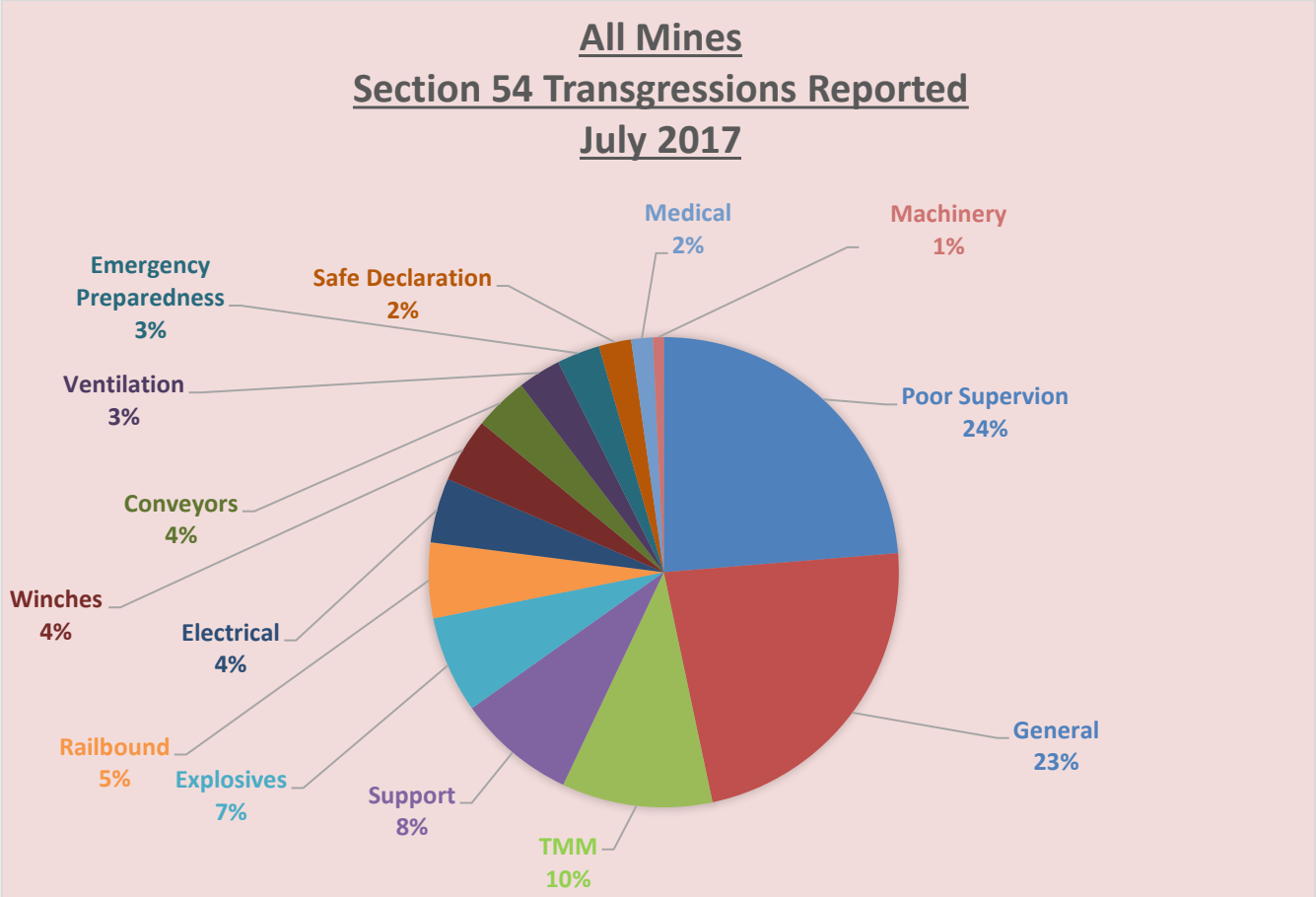
	Jan-Jul 2016	Jan-Jul 2017	%change
Conveyance accidents (shaft/winze)	**27**	**23**	-15
Electricity (Not causing fires)	**9**	**4**	**-56**
Fires	**3**	**5**	**67**
Explosives	**7**	**3**	**-57**
Subsidence/caving	**1**	**0**	**-100**
Occupational Disease	**1**	**0**	**-100**
Heat sickness	**1**	**1**	**100**
Miscellaneous	**59**	**58**	**-2**
TOTAL	**1699**	**1557**	**-8**

6. SECTION 54 TRANSGRESSIONS REPORTED DURING THE MONTH



6.1 Poor Supervision (24%)

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

- a supervisor had not signed the checklist as over-inspection
- there were no change-houses provided;
- the supervisor had not conducted the over-inspection and had not signed the operator's pre-use checklist;
- the mechanic was not scrutinising the checklist and there were defects that were not fixed for more than a week;
- a compressor was placed in a dead-end, with the radiator blowing in the wrong direction and a broken oil seal that was leaking oil. A pool of oil was observed underneath the compressor;
- the Miner and Shiftboss were not able to demonstrate how they measured temperature using a whirling hygrometer and employees were exposed to 28.5°wet bulb degrees against a standard maximum of 27.7°C;
- the mine management had completed or fabricated the stemming or tamping material utilisation documents when documents were requested by the Inspector of Mines;
- on the day of the accident, the Assistant Drill Rig Operator was appointed on the Shiftboss' logbook only as a UV (Utility Vehicle) Operator but was performing duties of

- Assistant Drill Rig Operator, employees were doing on-the-job training without the supervision of the competent person, unauthorised entry was allowed at the barricaded area while the drill rig was in operational;
- statutory reports were not posted up at the waiting place and recommendations by the safety departmental report were not carried out and were risk rated as "A" hazards (to be attended to immediately);
- service water sampling report showed water quality deterioration for three consecutive months but no investigation and closeout thereof had been conducted;
- the supervisor and the Assistant Drill Rig Operator were not trained with the standards and procedures relevant to drilling activities;
- there was no means of communication from the supervisor and Drill Rig Operator;
- slope stability Code Of Practice required the Rock Engineer to visit the pit on quarterly basis but this did not happen in the last quarter (April -June 2017), thereby exposing employees to the risk of rock falls;
- there were no means or system in place to warn locomotive operators when approaching curves, bends or crosscuts;
- there was no system in place to control allocation of locomotives keys;
- some locomotives were operating underground without lights and there was no system in place to prevent locomotive operators to proceed underground without lights;
- poor control of locomotives lights was observed;
- there were no measures in place to ensure that all TMMs entering the high risk area were complying with the mine standard;
- a Locomotive Guard was not appointed at the time of the accident;
- there was no over inspection conducted to ensure compliance;
- there was no means of communication - operators and the supervisor were using cell phones;
- poor planning of the workings on the mine was observed;
- poor quality of incident and accident investigation on the mine were observed;
- there were no measures in place for controlling the TMMs keys;
- no pre-use checklist was conducted before starting the plant;
- the waiting area was used as a change house;
- the employer had failed to staff the HTS (Heat Tolerance Screening) Centre with due regard for health and safety of employees;
- pillar robbing had taken place next to panel without the involvement of the rock engineering department;
- insufficient illumination at the plant was observed. This concern was verified by the report dated 18/05/2017. The employer failed to rectify all non -compliances as recommended by the Occupational Hygienist contracted;
- the accident scene was disturbed by employees; and
- fire detection system at the mine indicated that the blasting fumes cleared after 1h30 but the re-entry period was after 1 hour.

6.2 General (23%)

The areas covered in this category of transgressions were:

- poor fire-fighting equipment installation and lack of or no water along the belt were observed;
- poor ground conditions were observed in the centre gully;
- poor ground conditions were observed in the centre gully;
- a fault was not demarcated and a damaged pillar was observed;
- a pneumatic switch in the crosscut was not locked and a box front was leaking water;
- gullies were choked with ore;
- high dust amount was created due to moving Trackless Mobile Machinery;
- employees had entered the flash dryer confined space without a permit and required PEE;
- employees were welding at the Flash Dryer Baghouse without welding goggles, welding blankets and hearing protection;
- two prominent joint sets were observed dipping at between 75 degrees and 85 degrees where the rock that injured an employee had dislodged whilst he was trying to bar it down;
- three rocks were barred down along a 62cm thick brow that was demarcated during the inspection;
- a 40cm x20 cm x28cm rock was barred down during the inspection in the panel;
- a "no-go" zone of 2m was not maintained at the crest where drilling was taking place;
- barricade holes were not drilled approximately 2.0m from the edge (0.7m and 1.5m);
- unstable steel pipe was installed where it could not prevent a person from falling;
- poor water control was observed at the haulage where vehicles and pedestrians travel;
- employees were observed working without closing the high pressure water pipes that fed the high pressure pump that they were working on;
- there was noise from leaking compressed air pipe measuring 88.4db at a distance of 12.7m away from the waiting place;
- dust suppression was not done on the haul road to the quarry and the road was dusty;
- a rock in the haulage where the accident happened was drilled and not blasted, thereby creating a confined space;
- the haulage where employees were working was not illuminated;
- there was no dedicated walkways at the weighbridge and employees were observed walking between the idling trucks;
- there was no demarcation along the haul road which was hampering the visibility of TMMs at night;
- poor housekeeping observed at the plant;
- there was no workshop for the Artisans to perform their tasks and they were working in the open space;
- a face shape was not straight;

- diesel bay area had no concrete floor for spillage and no fire extinguisher at the diesel tank;
- employees were observed crossing through the moving chairlifts;
- tip barricade was not covering the grizzly fully;
- poor barring was observed; and
- ore spillage was observed underneath numerous box fronts.

6.3 TMM (Trackless Mobile Machinery) (10%)

The areas covered in this category of transgressions were:

- an Articulated Dump Truck, a Front End Loader, a water truck and a supervisor on a Light Delivery Vehicle were individually stopped for inspection and it was noted that the Operators did not use the fitted seatbelt whilst driving. Two Operators were found handling their cellphones whilst the machine was idling and not parked properly;
- a defected blade cylinder of the dozer was supposed to be replaced within seven days but was never done;
- two employees were found operating Front End Loaders without licences;
- drill rig operator was found operating without conducting a pre-use inspection;
- the drill rig operator had not reported the defects on the drill rig to the mechanic;
- defective lights were observed on the drill rig;
- when the Booyco system alerted the operator to stop when interacting with the pedestrian, operators did not stop, pedestrian did not acknowledge to the operator for safe passing, operators reset the system when it alerted them to stop, the Booyco system was malfunctioning in that it was picking a person where there was no person and did not pick a person where pedestrians were available, operator did not understand how the Booyco system was working including the pedestrians;
- the TMM Operator was not testing the brakes before start of shift - the brake test ramp was in construction;
- the TMM Operator was operating without completing the pre-use checklist;
- the TMM Operator was operating without the drivers' licence;
- a TMM was entering the high risk area without complying to the requirements (buggy whip flag and rotating beacon);
- the TMM Operator was operating with defective fire extinguisher;
- the TMM was operating with windows open due to air conditioner not working; and
- excavator operator was complaining about his eyesight.

6.4 Support (8%)

The areas covered in this category of transgressions were:

- missing support was observed, support was not installed on solid ground and the hanging-wall was not barred;

- seven fall of ground accidents had occurred from February 2017 to July 2017, all resulting in injuries to employees;
- last line of timber support was installed 3.0m to the face against a mine standard of 2.0m;
- six stick support units were missing on the second double-cluster sticks from the face and thirty two stick support units were missing on the last line of double cluster sticks from the face, not in line with the mine support standard;
- persons were found installing nails in the roof five meters past the last line of support in three roadways and this was an entrenched practice;
- the panel where the fall of ground had occurred, was not examined and declared safe by the night shift crew of the previous shift;
- a thick brow which was not demarcated was observed in the panel, three support units below the brow were spaced at 0.8m, 0.16m and 0.9m from the edge of the brow against a mine standard of 0.5m from the edge;
- the substandard support on the brow was identified six days ago in the strata control observer's checklist and additional support positions were marked but they were not installed;
- support in close proximity to where the accident had occurred had one Flexibolt that was installed at 2.83m from the east sidewall against the mine standard of 1m from the side wall;
- the last two support units on the western side of the panel strike were spaced at 2.1 m on dip, instead of 2m as per the support standard; and
- protruding rock bolts with lengths of 2.3cm, 30cm, 40cm and 50cm were not cut in the Advance Strike Gully where employees travel and this violated the mine's Standard Operating Procedure.

6.5 Explosives (7%)

The areas covered in this category of transgressions were:

- numerous sockets were not washed out nor plugged and one socket was found containing an active fuse but holes were drilled next to it; and
- an electric cable was found to be installed 90cm from explosives cluster instead of minimum 1m as per mine standard;
- the Miner was not able to demonstrate how the face was connected and timed;
- the employer had demonstrated the explosives amount on the mine but failed to demonstrate the amount of stemming or tamping material used;
- underutilisation of stemming or tamping material was observed;
- total tamping or stemming material supplied underground was not in line with the total explosive fuse used for firing such shotholes underground;
- employer had demonstrated the used amount of explosives on the mine but could not demonstrate the amount of stemming or tamping material used during firing of such shotholes underground;
- 1.2m drilled shotholes were stemmed with 2x400mm stemming material, 1.5m shotholes were stemmed with 1x400mm units per hole whilst the hole depths differed; and
- at another mine, the employer had demonstrated the explosives amount on the mine but failed to demonstrate the amount of stemming or tamping material used.

6.6 Railbound (5%)

The areas covered in this category of transgressions were:

- a locomotive was found with the light not functioning;
- a locomotive had failed the static braking test, the Locomotive operators were not fully understanding the anti-collision system, locomotives were observed with inadequate breaking system and the Loco Operators were not filling in the checklist properly;
- employees were observed working on the rails unsupervised and they had poor knowledge about risk assessment of work on the rails;
- rails were submerged under water and mud and mono winch ropes were rubbing against the cables;
- rails were submerged under water (another transgression at another operation);
- broken sleepers were observed, rail gap was measured to be 15mm, centre-to-centre distance between sleepers was measured to more than 0.9m in various portions of the rail, distance between sidewall and rail was measured to be less than 0.8m and there was no demarcation (yellow paint); and
- there were no means or system in place to reduce the speed of locomotives when approaching curves, bends or crosscuts.

6.7 Electrical (4%)

The areas covered in this category of transgressions were:

- the electrical cable supplying the dosing station cooling tower was exposed;
- the electrical cable at the dosing station cooling tower was immersed in water;
- employees were observed working without closing the high pressure water pipes that fed the high pressure pump that they were working on;
- the electrical cable connected at the back of the panel on bus bars was observed without any cable shrouds, cable glands and not secured;
- the 3-phase switch was not anchored on the wall and the isolation box for the switch was not locked out; and
- the chairlift supply transformer low voltage cables were on the ground and water was observed where the transformer was placed, Chairlift Attendants were sitting next to a transformer that was not locked out and not placed out of reach of employees.

6.8 Winches (4%)

The areas covered in this category of transgressions were:

- rails were submerged under water and mud and mono winch ropes were rubbing against the cables;
- winch signalling wire was not extended throughout the entire length of the scraper path and a winch was leaking grease;
- winch drum guard was damaged, winch was not locked and employees were walking in the same scraper path serviced by the unlocked winch, dead-man-triangle was not identified and demarcated as per mine standard, missing clips/pin were observed on

the winches; loose strands or wire were observed on the winch rope, centre line was not marked or demarcated as per mine procedure and the tip was damaged with an opening big enough to allow a person to go through;
- there were no means provided to stop face winches from the other side of the scraper path in case of emergency, winch stop blocks were not tightened to the winch frame, face winch was leaking grease and bell wire was not installed on both sides of the scraper path;
- face winch position was found to be 65m away from the face instead of maximum 60m as per mine Standard Operating Procedure; and
- ineffective scraper winch signalling devices were observed.

6.9 Conveyors (4%)

The areas covered in this category of transgressions were:

- there was no roof or deck underneath the conveyor belt for employees to walk;
- there was no trip wire installed along the length of the conveyor belt;
- the pre-use checklist for the conveyor belt was not classifying the hazard in terms of "no go" and "go -but";
- shaft conveyor, trunk conveyor and section conveyors were found running with duff frozen on idlers; and
- there was no fire suppression system installed on the conveyor belts underground.

6.10 Ventilation (3%)

The areas covered in this category of transgressions were:

- ventilation leaks along the belt were not fixed as per the Ventilation Superintendent's instruction;
- fans of two crosscuts were recirculating;
- the last ventilation holing was found to be 39m from the face instead of maximum 18m as per mine Standard Operating Procedure; and
- a 15kW fan in the crosscut was found recirculating and the fan was installed without ducting.

6.11 Emergency Preparedness (3%)

The areas covered in this category of transgressions were:

- first aid boxes were not available at the plant;
- second outlets audit reports were signed and submitted to the Department of Mineral Resources regional office without doing actual audit on the mine;
- a refuge chamber was not pressurising; and
- the refuge bay communication radio was not working with the control room on surface.

6.12 Safe Declaration (2%)

The areas covered in this category of transgressions were:

- no safe declaration was conducted at the start of the shift;
- unsafe entry examination practice was observed; and
- the panel where the fall of ground had occurred, was not examined and declared safe by the night shift crew of the previous shift.

6.13 Medical (2%)

The areas covered in this category of transgressions were:

- a system of medical surveillance of employees exposed to health hazards was not maintained; and
- medical surveillance was not conducted at appropriate intervals as per section 13(2)(a) of the Mine Health and Safety Act.

6.14 Machinery (1%)

The area covered in this category of transgressions was that a 16 tonne mobile crane was observed lifting a cone crusher liner at the plant. During inspection on the crane, it was noted that there was no load test records on the used slings, hooks, winding wire rope and any other attachments which came with the crane. The crane's rear left outrigger was observed rested on a pile of fine ore. The mine recently had an accident relating to incorrect lifting procedure/methods.

7. OCCUPATIONAL MEDICINE

7.1 Overall occupational diseases/illness per month

During July 2017, a total of 244 occupational diseases/illness were reported from Health Incident Reports (HIRs), when compared to a total of 258 reported during the same period in 2016.

7.2 Analysis of occupational disease trends by region

There is a decrease of 5.42% on the total occupational diseases/illness reported by eight (8) regions during July 2017 when compared to the total of cases reported by nine (9) 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. During July 2017, Gauteng reported most cases, followed by North West: Rustenburg, Free State, North West:

Klerksdorp, Mpumalanga, Northern Cape, KwaZulu-Natal and Limpopo regions. Eastern Cape and Western Cape regions did not report any occupational diseases.

7.3 Analysis of Health Incident Reports per common disease group

7.3.1 Pulmonary tuberculosis (PTB)

Pulmonary tuberculosis (PTB) showed an increase of 0.98% when compared to the same period during the previous year.

7.3.2 Silicosis

Silicosis has decreased by 43.6% when compared to the same period during the previous year.

7.3.3 Noise-induced hearing loss (NIHL)

Noise-induced hearing loss (NIHL) showed an increase of 36% 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.

Occupational Health and Safety Report:

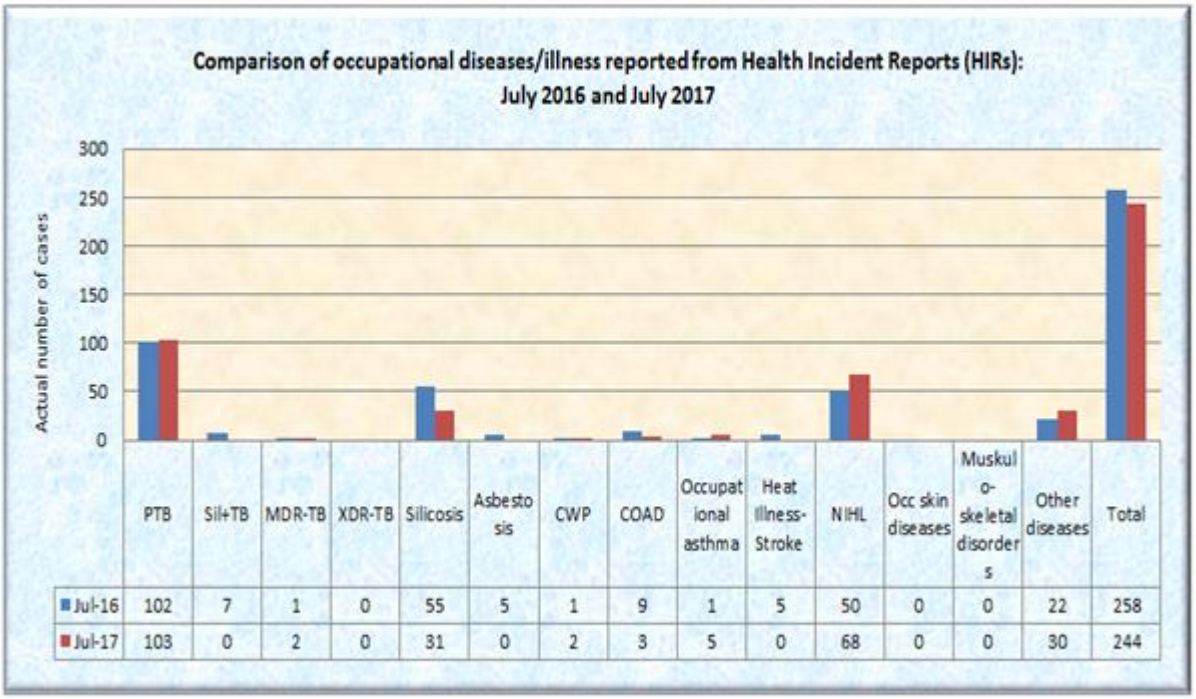
July 2017

Table 7.2.1 Comparison of occupational diseases/illness reported on Health Incident Reports (HIRs) per region: July 2016 and July 2017

	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017	Percentage change
Region	**EC**		**FS**		**GR**		**KZN**		**LP**		**Mpu**		**NC**		**NW K**		**NW R**		**WC**		**TOTAL**		
PTB	0	0	26	22	31	32	0	4	0	0	4	5	8	7	0	0	32	33	1	0	102	103	0.98
Sil+TB	0	0	1	0	3	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	7	0	-100
MDR-TB	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2	100
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
Silicosis	0	0	35	18	3	10	0	0	0	0	0	0	0	0	10	0	7	3	0	0	55	31	-43.6
Asbestosis	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5	0	-100
CWP	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	1	2	100
COAD	0	0	2	2	2	1	0	0	0	0	1	0	0	0	0	0	4	0	0	0	9	3	-67
Occupational asthma	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	5	400
Heat illness-Stroke	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	-100
NIHL	0	0	4	0	6	30	0	1	2	1	4	4	0	1	1	1	31	30	2	0	50	68	36
Occ skin diseases	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	0	0	0	0	0	0	0	0	0	0
Other diseases	0	0	0	0	13	16	0	1	0	0	0	1	2	0	7	12	0	0	0	0	22	30	36
Total	0	0	69	43	64	93	0	6	7	1	10	12	11	8	18	13	76	68	3	0	258	244	-5.42

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

Graph 7.2.1 Analysis of occupational diseases/illness reported from Health Incident Reports (HIRs) nationally: July 2016 andJuly2017



	PTB	Sil+TB	MDR-TB	XDR-TB	Silicosis	Asbestosis	CWP	COAD	Occupational asthma	Heat illness-Stroke	NIHL	Occ skin diseases	Musculo-skeletal disorders	Other diseases	Total
Jul-16	102	7	1	0	55	5	1	9	1	5	50	0	0	22	258
Jul-17	103	0	2	0	31	0	2	3	5	0	68	0	0	30	244

Verification source: Health Incident Reports submitted by regions: July 2016 and July 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:

No	Mine	Award	Date recorded	Last fatality
1	Shiva Uranium Mine	Thousand (7)	15/01/2017	24/08/2010
2	Magareng Mine	Thousand (4)	14/02/2017	14/02/2013
3	Impala Platinum 14 Shaft	Million (1)	24/02/2017	23/01/2016
4	Tweefontein Opencast Colliery	Thousand (3)	24/02/2017	02/10/2011
5	Usuto Colliery	Thousand (3)	07/03/2017	Never
6	Mototolo Platinum: Lebowa	Thousand (9)	08/03/2017	Never
7	Thorncliffe Mine	Thousand (10)	14/03/2017	28/11/2007
8	Tselentis Colliery	Thousand (16)	12/04/2017	05/09/1991
9	Dorstfontein Colliery West	Thousand (4)	21/04/2017	15/03/2012
10	Arthur Taylor Colliery Opencast Mine (ATCOM)	Thousand (7)	24/05/2017	31/03/2004
11	Ilima Coal Company	Thousand (6)	26/04/2017	06/01/2008
12	Impala Platinum 10 Shaft	Million (2)	05/05/2017	07/06/2017
13	Impala Platinum 9 Shaft	Million (2)	05/06/2017	02/08/2012
14	Vlakvarkfontein Colliery	Thousand (4)	16/06/2017	Never
15	Forzando Colliery South	Thousand (12)	21/06/2017	Never
16	Manungu Colliery	Thousand (2)	22/06/2017	Never
17	Wonderfontein Colliery	Thousand (4)	22/06/2017	Never
18	Khutala Colliery	Million (3)	28/06/2017	12/12/2012
19	Zibulo Colliery	Thousand (2)	05/07/2017	21/05/2015
20	Impala Platinum 16 Shaft	Million (2)	07/07/2017	04/09/2014
21	Dorstfontein Colliery East	Thousand (6)	20/07/2017	Never
22	Tharisa Minerals	Thousand (2)	27/07/2017	28/09/2015