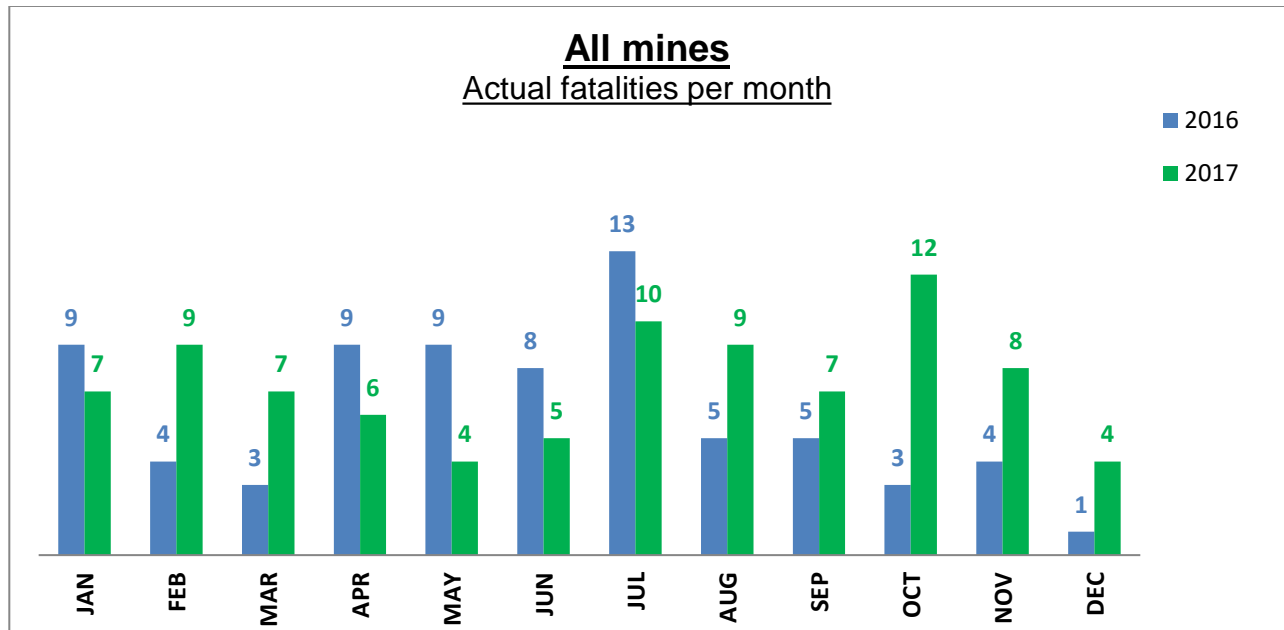




1. OVERALL FATALITIES PER MONTH

During the month of December 2017, **four (4)** fatalities were reported whilst during the same period in 2016 a total of **one (1)** mine worker was fatally injured. Fatalities reported for the year up to December 2017 were **eighty eight (88)** while **seventy three (73)** were reported over the same period in 2016. This translates to an increase in fatalities of 21% 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 December 2017, **seven (7)** of the **ten (10)** regions managed to mine without a fatality.

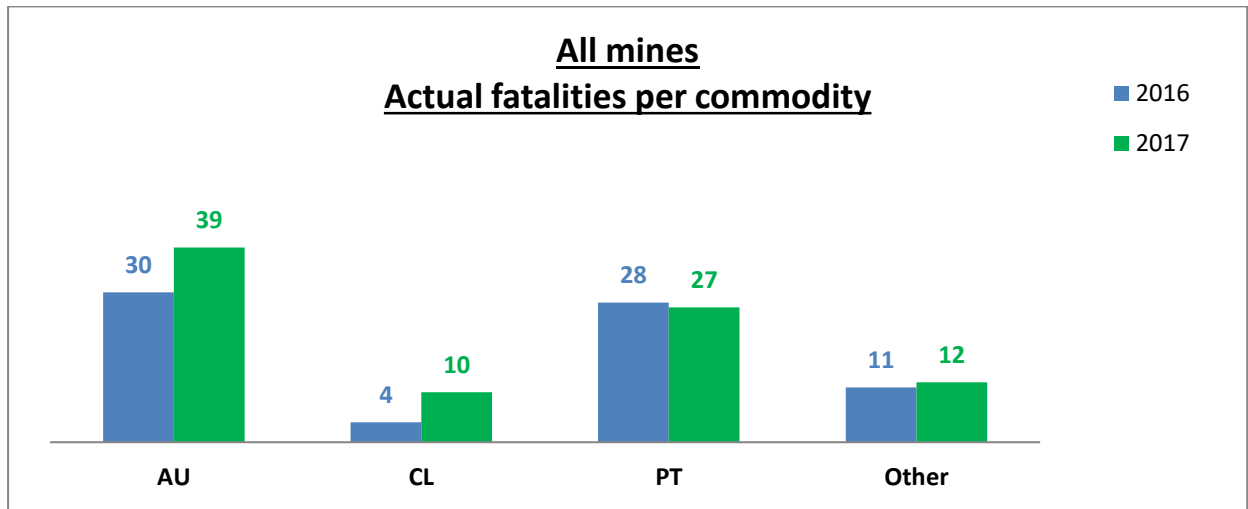
| | WC | NC | FS | EC | KZN | MP | LP | GP | NW-KLD | NW-RST | TOTAL |
|-------|----|----|----|----|-----|----|----|----|--------|--------|-------|
| JAN | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 7 |
| FEB | 0 | 0 | 3 | 0 | 0 | 1 | 1 | 2 | 0 | 2 | 9 |
| MAR | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 2 | 7 |
| APR | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 1 | 6 |
| 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 |
| AUG | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 6 | 1 | 1 | 9 |
| SEP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 5 | 7 |
| OCT | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 5 | 12 |
| NOV | 0 | 1 | 2 | 1 | 0 | 1 | 0 | 2 | 0 | 1 | 8 |
| DEC | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 4 |
| TOTAL | 2 | 1 | 10 | 1 | 1 | 13 | 6 | 20 | 8 | 26 | 88 |



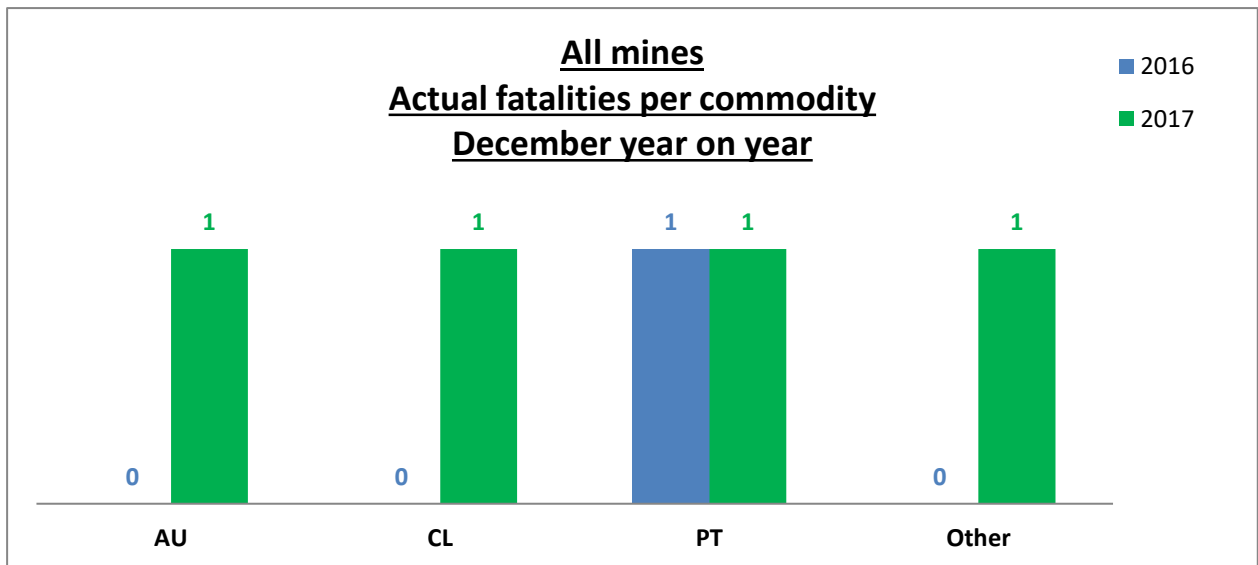
3. ANALYSIS OF FATALITIES BY COMMODITY

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 from January to December 2016 and 2017 are reflected on the graph below and shows an increase in fatalities in the gold, coal and other mines sectors of 30%, 150% and 9% respectively, while the platinum sector shows a decrease in fatalities of 4%.

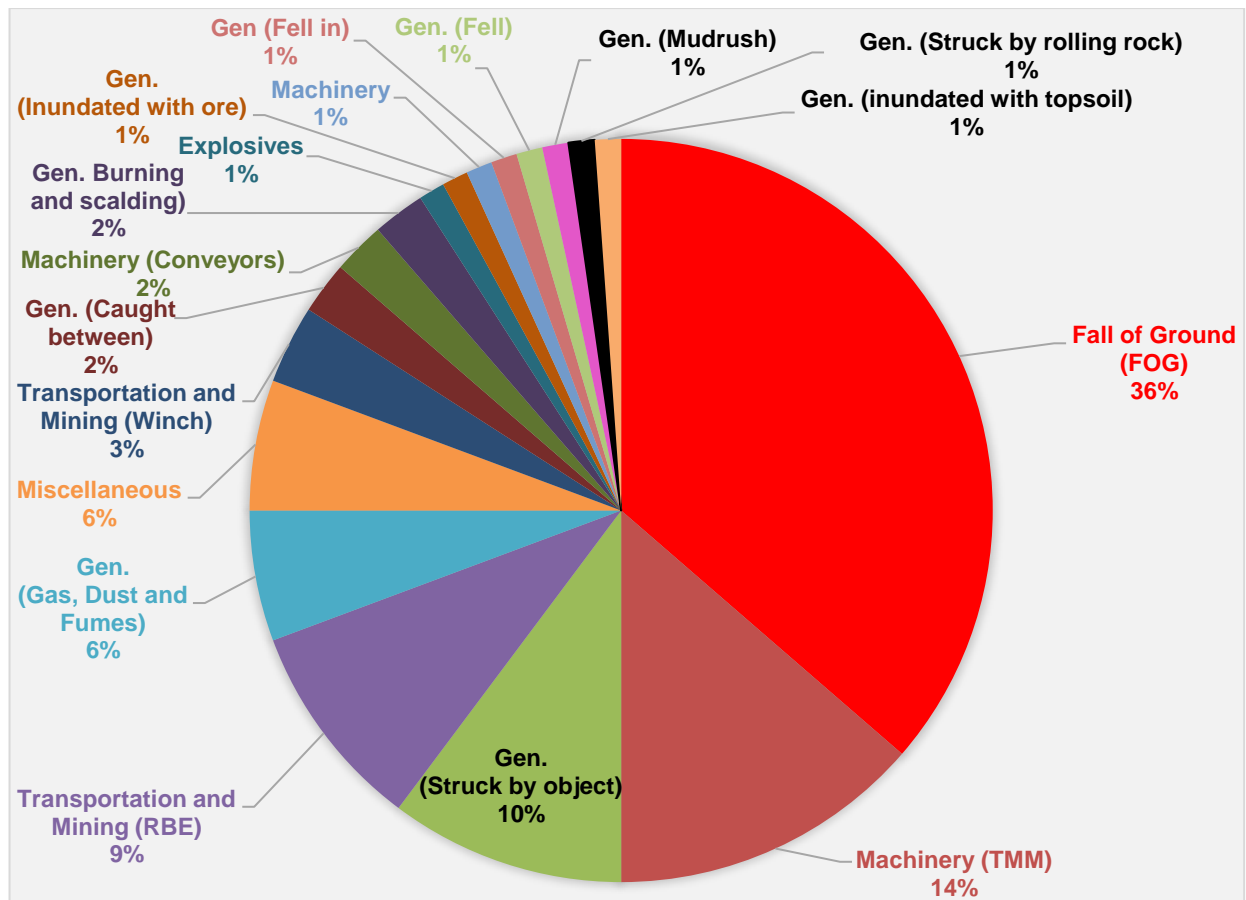


3.2 In December 2017, the gold, platinum, coal and other mines sectors reported **one (1)** fatality each.





4. ANALYSIS OF FATALITIES BY CLASSIFICATION – ALL MINES – 2017



4.1 FOG (Fall of Ground) (36%)

There were **thirty two (32)** fatalities reported in this category this year. **Sixteen (16)** were gravity related and the other **sixteen (16)** were seismic related. **One (1)** was reported in December 2017, at a gold mine. The now deceased Miner's Assistant was fatally injured when she and other four (4) employees were caught up in a fall of ground accident in a decline working place. Three (3) employees escaped with minor abrasions and one (1) employee sustained multiple lacerations but was stable. The accident happened on 05/12/2017 and she was recovered on 07/12/2017. The hangingwall conditions were identified as friable and the area characterised by shale and faulting.

4.2 Trackless Mobile Machinery (TMM) (14%)

There were **twelve (12)** fatalities reported in this category this year. **Three (3)** each were reported in the gold, coal and platinum sectors respectively, two (2) in the diamond sector and **one (1)** was reported at a chrome mine. **Two (2)** were reported in December 2017. In the first incident at a coal mine, the now deceased Light Delivery Vehicle (LDV) Driver was fatally injured when he was struck by a trailer that had unhitched from a tractor that was driving out on the incline. The now deceased had tried to overtake the tractor on the incline when his LDV got stuck. He had gotten out to diagnose the sticking of the LDV and the tractor proceeded moving up the incline. The trailer then unhitched from the tractor and rolled back towards the stationary LDV, fatally injuring the LDV Driver. In the

second incident at a smelter, the now deceased Plant Operator was fatally injured when he was run over by a Trackless Mobile Machine.

4.3 General (Struck by object) (10%)

There were **nine (9)** fatalities reported in this category this year, **five (5)** at the gold mines, **two (2)** at the platinum mines and **two (2)** at the coal mines. **None (0)** were reported in December 2017.

4.4 Transportation and Mining (RBE (Rail Bound Equipment)) (9%)

There were **eight (8)** fatalities reported in this category this year, **three (3)** at the gold mines and **five (5)** at the platinum mines. **None (0)** were reported in December 2017.

4.5 General (Dust, gas and fumes) (6%)

There were **five (5)** fatalities reported in this category this year. **Two (2)** each were reported at a petroleum refinery and a gold mine while **one (1)** was reported at a platinum mine. **None (0)** were reported in December 2017.

4.6 Miscellaneous (6%)

There were **five (5)** fatalities reported in this category this year, **two (2)** in the platinum sector, two **(2)** in the gold sector and **one (1)** in the coal sector. **None (0)** were reported in December 2017.

4.7 Transportation and Mining (Winch) (3%)

There were **three (3)** fatalities reported in this category this year, **one (1)** at a gold mine and **two (2)** at the platinum mines. **None (0)** were reported in December 2017.

4.8 General (Caught between) (2%)

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 December 2017.

4.9 Machinery (Conveyors) (2%)

There were **two (2)** fatalities reported in this category this year, both at the collieries. **None (0)** were reported in December 2017.

4.10 General (Burning and Scalding) (2%)

There were **two (2)** fatalities reported in this category this year, one (1) at a granite mine and the other one (1) at a Ferro Vanadium Plant. **One (1)** was reported in December 2017 at a Ferro Vanadium Plant. The now deceased Senior Furnace Operator was fatally injured when he suffered whole body 3rd degree burns when a hot metal eruption occurred at the plant.

4.11 Explosives (1%)

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

4.12 Inundated with ore (1%)

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

4.14 General (Fell in) (1%)

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

4.15 General (Fell) (1%)

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

4.16 General (Mudrush) (1%)

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

4.17 General (Struck by rolling rock) (1%)

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

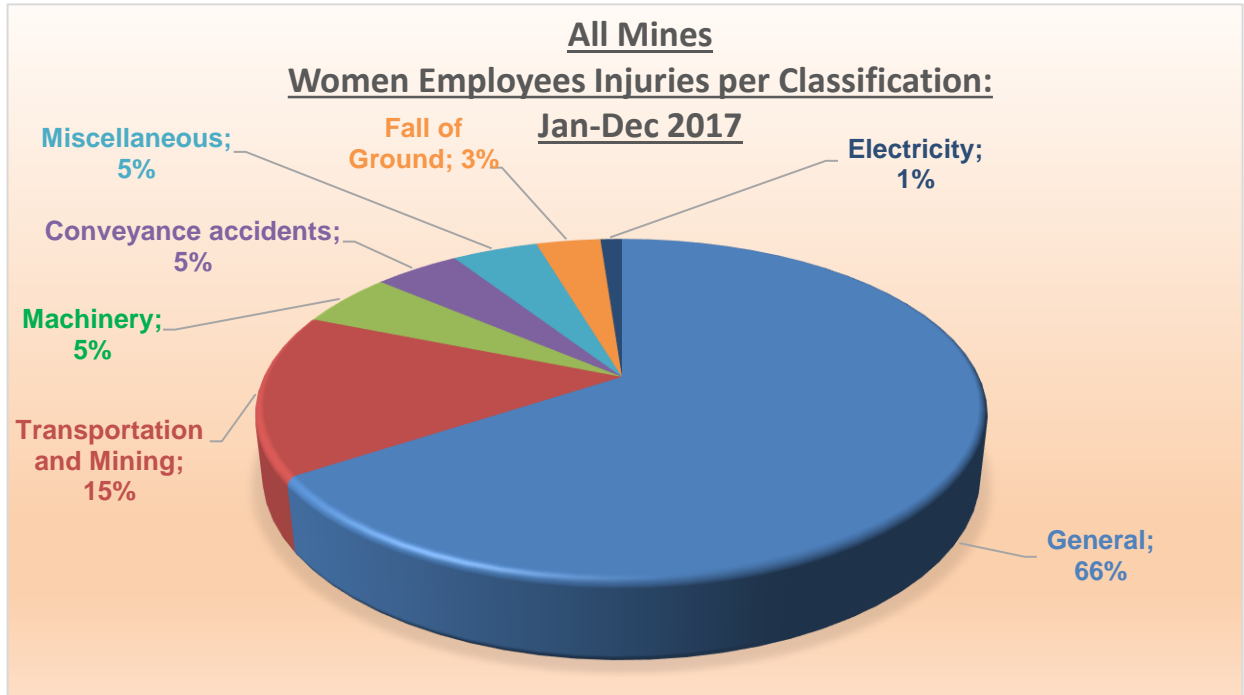
4.18 General (Inundated with topsoil) (1%)

There was **one (1)** fatality reported in this category this year at a sabunga quarry. **None (0)** were reported in December 2017.

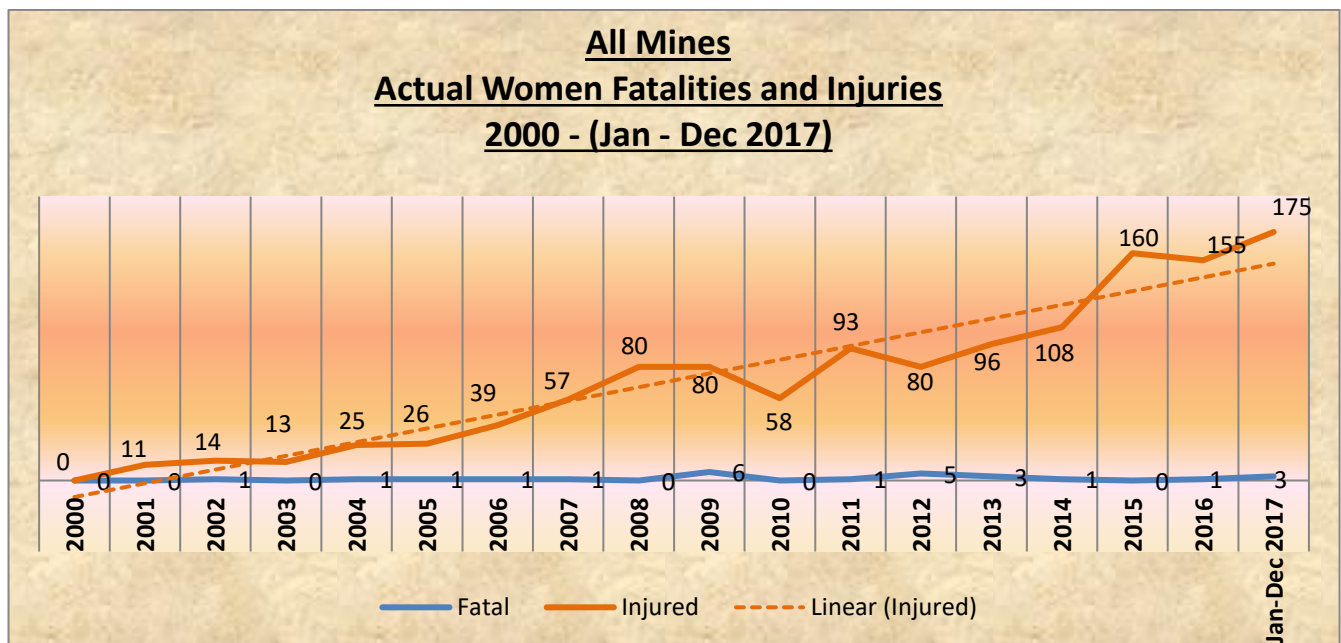


4.19 Women Employees

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 January to December 2017:

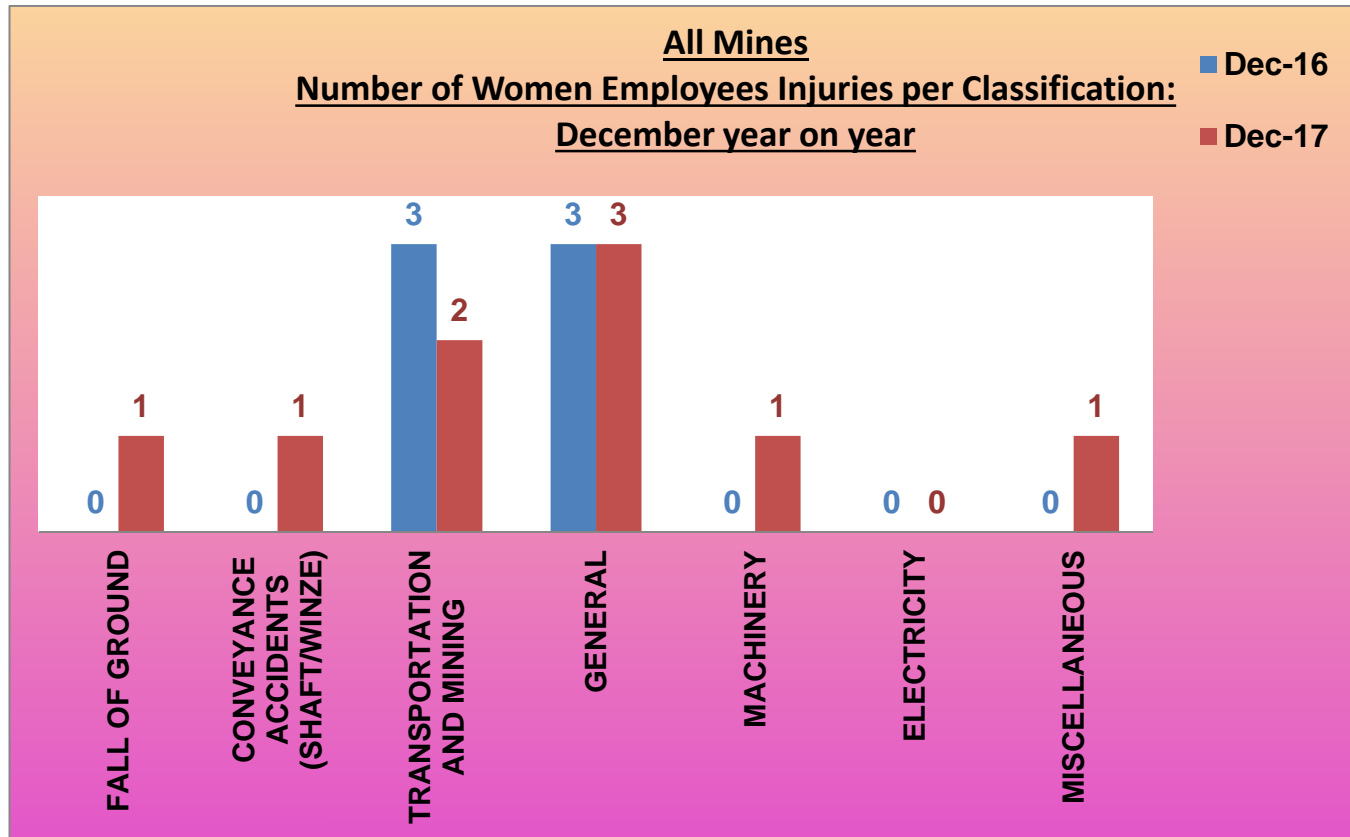


The graph below shows the number of injuries and fatalities to women employees across all commodities since 2000 to December 2017:





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



5. FATALITIES AND INJURIES

5.1 FATALITIES

| | Jan-Dec 2016 | Jan-Dec 2017 |
|----------------|--------------|--------------|
| Gold Mines | 30 | 39 |
| Platinum Mines | 28 | 27 |
| Coal Mines | 4 | 10 |
| Other mines | 11 | 12 |
| TOTAL | 73 | 88 |

5.2 MINE INJURIES

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

| | INJURIES | | |
|-------------|----------------|----------------|---------|
| | Jan - Dec 2016 | Jan - Dec 2017 | %change |
| | 471 | 443 | -6 |
| Rockburst | 88 | 81 | -8 |
| Strainburst | 49 | 45 | -8 |



Occupational Health and Safety Report:

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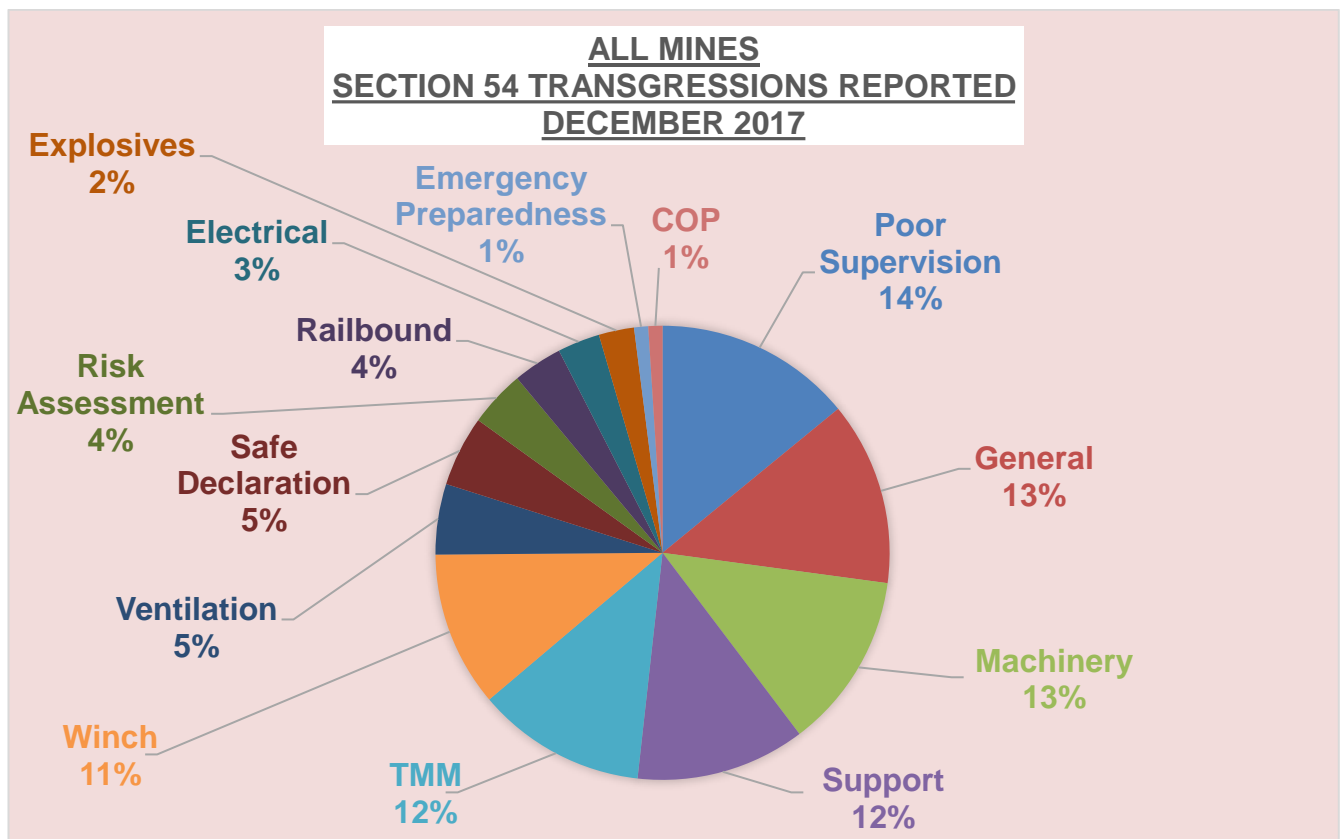
| | Jan - Dec 2016 | Jan - Dec 2017 | %change |
|---------------------------------------|----------------|----------------|-----------|
| Gravity | 334 | 317 | -5 |
| MACHINERY | 210 | 195 | -7 |
| Conveyor belts | 53 | 47 | -11 |
| Drives, belts, chains | 28 | 16 | -43 |
| Portable power tools | 100 | 100 | 0 |
| Other Machinery (Not included in TMM) | 29 | 32 | 10 |
| TRACKBOUND TRANSPORT | 206 | 209 | 1 |
| Locomotive | 47 | 40 | -15 |
| Locomotive drawn vehicle | 54 | 63 | 17 |
| Rerailing | 9 | 23 | 156 |
| Coupling/uncoupling | 37 | 39 | 5 |
| Rocker arm shovel | 19 | 13 | -32 |
| Personnel transport | 19 | 10 | -47 |
| Hand trammed | 13 | 15 | 15 |
| Other Transport | 8 | 6 | -25 |
| WINCHES | 112 | 133 | 19 |
| Scraper Winch Installation | 90 | 97 | 8 |
| Single drum winch | 1 | 10 | 900 |
| Double drum winch | 11 | 17 | 55 |
| Mono rope/rail | 10 | 9 | -10 |
| TRACKLESS MOBILE MACHINES | 153 | 143 | -7 |
| Mechanical loaders | 14 | 24 | 71 |
| Tractor/trailer | 3 | 6 | 100 |
| Coal mining machines | 6 | 4 | -33 |
| Transporters | 44 | 45 | 2 |
| Motor vehicles | 11 | 15 | 36 |
| T&M lifting machines | 26 | 21 | -19 |
| T&M mobile drilling machines | 41 | 21 | -49 |
| Other TMM | 8 | 7 | -13 |
| GENERAL | 1529 | 1392 | -9 |
| Fall of material/rolling rock | 238 | 228 | -4 |
| Manual handling of material | 444 | 377 | -15 |
| Manual handling of mineral | 76 | 66 | -13 |
| Falling in/from | 49 | 48 | -2 |
| Slipping and falling | 465 | 409 | -12 |
| Burning and scalding | 31 | 27 | -13 |
| Splinters | 34 | 37 | 9 |
| Dust, gas and fumes | 17 | 26 | 53 |
| Inundation/drowning | 4 | 2 | -50 |
| Struck by ventilation door | 16 | 17 | 6 |
| Struck by any object manual handling | 155 | 155 | 0 |



| | Jan - Dec 2016 | Jan - Dec 2017 | %change |
|------------------------------------|----------------|----------------|-----------|
| Conveyance accidents (shaft/winze) | 40 | 27 | -33 |
| Electricity (Not causing fires) | 15 | 12 | -20 |
| Fires | 6 | 8 | 33 |
| Explosives | 7 | 4 | -43 |
| Subsidence/caving | 1 | 1 | 0 |
| Occupational Disease | 1 | 0 | -100 |
| Heat sickness | 2 | 1 | -50 |
| Miscellaneous | 0 | 68 | 6800 |
| TOTAL | 2752 | 2636 | -4 |

6. SECTION 54 TRANSGRESSIONS REPORTED DURING THE MONTH

The pie chart below shows categories of the Mine Health and Safety Act Section 54 transgressions observed for the month of December 2017. Repeat transgressions were either observed at the same operation or at different operations and were used to create the pie chart. These repeat transgressions may be used to focus attention.



6.1 Poor Supervision (14%)

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



- there was no procedure in place following the Section 54 instruction that was issued in October 2017;
- there was no recorded proof of inspections and over-inspections by relevant supervisors for the borrow pit;
- poor pre-planning of working places on the mine was observed;
- inadequate supervision on locomotives operation was observed;
- training was not practically conducted for the train operators and train assistants;
- locomotives checklists were incorrectly completed during training but were signed by the Trainer and Moderator;
- working plans at the waiting place did not show the face position and the stopped panel;
- Shiftboss was not plotting on the working plan available at the waiting place;
- there were no statutory reports available at the waiting place and there was no proof that the reports had been communicated to the employees;
- updated escape route plan had not been signed by the Mine Overseer, and Mine Manager;
- the Mine Overseer was not conversant with the escape route plan displayed at the waiting place;
- the Rock Engineer's report was not signed by all responsible personnel;
- Shiftboss was not recording his visits in the Shiftboss' logbook;
- the waiting place was too far from the working places;
- Shiftboss was not providing crew members with information from service departments;
- Shiftboss was not familiar with his appointment;
- the night shift was allowed to work before investigating the fall of ground incident;
- Mine Overseer and Shiftboss were not providing correct information to the investigating team;
- there were no training records for some employees who were operating lifting equipment;
- unauthorised employees were issued with lifting equipment;
- work permit for lifting or rigging was not issued by the supervisor or manager as per the mine standard;
- inadequate training was provided to employees on conveyor belt procedures and related documents including pre-use checklist;
- persons were not authorised by the responsible engineer in writing;
- pre-use inspection checklist used by the Tip Attendant did not cover all the items around the tip area;
- the Tip Attendant's pre-use checklist had identified a deviation but was not attended to by the relevant personnel;
- the employer had failed to report occupational accidents in accordance to the Mine Health and Safety Act Chapter 23 Regulations;
- quality inspections were not done during and after the installation of furnace cooling water pipes and refractory relining installations; and
- illumination report perused indicated that some lights were below the minimum standard on the FEL and other areas of the plant, no re-survey was done to ensure compliance, targets and completion dates were not completed on the action plan and the responsible person had not signed to ensure that the deviations were fixed.

6.2 General (13%)

The areas covered in this category of transgressions were:

- poor barring was observed at the sidewall of the winch cubby;
- a 100mm pipe in front of the winch was obstructing the Winch Operator's view;
- poor stacking of material was observed;
- poor house-keeping was observed
- hand rail surrounding the tip cylinder cover mechanism was secured with nylon twine;
- and rail surrounding the tip cylinder cover mechanism was completely loose and not secured to barricade the tip area;
- an opening of 0.55 meters was observed near the tip when the cover was in 'closed' position;
- openings around the tip that could allow personnel to get inside the tips were observed;
- the now injured had fallen inside the tip which was worked out to the height of approximately 28 meters;
- poor arrangement and design at the road crossing in the plant were observed;
- there was no explosion splash protector screen around the furnace and tap hole inspection points;
- ergonomically unsafe positioning of the furnace tilting control panels were observed;
- the travelling way was observed with substandard conditions;
- water control mismanagement was observed;
- sidewalls and hangingwall were not barred adequately;
- excessive leads and lags were observed in the section;
- tip barricade was not covering the entire tip area;
- poor barring practice was observed, where an employee was hit by a rock while barring;
- employees were doing "horse-play";
- no fencing off around the mine workings to prevent non employees from entering the mine workings was observed;
- there was accumulation of ore and water around the winch area;
- mined out areas were not barricaded;
- irregular face shape was observed;
- drain was covered with mud; and
- accumulation of big rocks and ore in the centre line were observed.

6.3 Machinery (13%)

The areas covered in this category of transgressions were:

- lifting equipment were found being used without Section 54(1)(b) instructions that were issued in October 2017 being uplifted by the Principal Inspection of Mines;
- lifting equipment was not locked;
- there were no identification or serial numbers on lifting equipment;
- no quarterly, six monthly and annual inspections were conducted on lifting equipment and no colour coding was adhered to;



- there was no control over the issuing and receiving of the lifting equipment;
- there was no inspection register available for the lifting equipment;
- no load test was conducted on the lifting equipment;
- no pre-use inspection was conducted on the lifting equipment;
- defected lifting equipment were being used by the external contractors;
- there were no identification or serial numbers on portable electrical equipment;
- there was no control over the issuing and receiving of ladders;
- ladders were just lying on the floor;
- there was no inspection register or pre-use checklist available for the ladders;
- missing lifting equipment were not accounted for, lifting equipment issuing control register and monthly inspections were a paperwork exercise;
- poor key control was observed for rigger store;
- no control over the issuing and receiving of lifting equipment was observed;
- lifting equipment was not locked;
- colour coding for inspection of lifting equipment was not adhered to;
- lifting equipment were just tagged without conducting an inspection;
- no pre-use inspection had been conducted on lifting equipment as required by the mine procedure;
- an unauthorised employee who was not trained on the use of lifting equipment was found operating the lifting equipment;
- employees who were not authorised to use lifting equipment were issued with lifting equipment store keys; and
- no pre-use inspection had been conducted on the chain block and there were no records of pre-use inspections conducted on lifting equipment after the Section 54(1)(b) instruction was issued on 23 October 2017.

6.4 Support (12%)

The areas covered in this category of transgressions were:

- substandard support was observed;
- face was marked off before in-stope bolts were installed to standard;
- protruding tendon support was observed;
- substandard support was observed between the last line of support and the face;
- integrity of support was compromised due to blasted out support and fall of ground;
- fall of ground was observed with no support in place;
- a fault along where the fall of ground had occurred was not demarcated nor supported and was never reported to the relevant departments;
- missing elongates, stick support were not replaced before drilling;
- micro faults were not demarcated and supported;
- temporary support cam lock jacks measured 2.5m, 2.7 and 1.6m apart on dip instead of 1.5m;
- prominent joints were not supported;
- block of ground about 3m from face and 3m from gully was not barred nor supported;
- missing elongate support elements were missing and 36 loose tendons were observed in the panel;
- safety nets were damaged in the panel and Advanced Strike Gully;
- brows were not supported;



- stick support elements were damaged;
- stick support elements were not pressurised;
- support spacing measured 2.5m from the pillar against a mine standard of 1m;
- missing support stick cluster was observed;
- damaged safety net was observed;
- safety net was inadequately tensioned;
- an undermined pack was observed;
- substandard support was observed; and
- unsupported areas were not barricaded off.

6.5 Trackless Mobile Machinery (TMM) (12%)

The areas covered in this category of transgressions were:

- there were no measures in place to prevent persons from being injured due to collision between diesel powered TMMs;
- operators were using licences that did not have date of issue;
- there were no measures in place for a person to interact with external trucks;
- substandard TMM was observed;
- tyres on the FEL (Front End Loader) were not in safe and usable condition, the FEL was not prepared and made safe and the FEL was not maintained;
- employees who were not trained were issued with TMM keys on the day of the inspection;
- only one of the four operators who were found operating TMMs on the day of inspection was trained after the Section 54 instruction issued in October 2017;
- an employee was observed operating a LDV and this employee was not trained as per Section 54(1)(b) instruction issued in October 2017;
- poor control of TMM keys was observed;
- records showed that TMMs were continued to be used even before the Section 54 instruction issued in October 2017 was not uplifted;
- a TMM was being operated with no fire extinguisher and strobe light;
- a dump truck was operated without a pre-use checklist;
- a FEL was operated with a cracked windscreen and lights out of order;
- there was no proper control over the issuing and receiving of TMM keys;
- LDV, water truck and grader were all parked at the same parking area;
- no illumination survey had been conducted on TMM equipment on the mine;
- the TMMs at the opencast operations were not fitted with Proximity Detection Systems;
- the PDS (Proximity Detection System) tested on two vehicles could not detect the presence of pedestrians in the vicinity and the PDS tested on the LHD (Load Haul Dumper) rendered the unit inoperative;
- the door interlock breaking system was tested and found out of order;
- Operator was operating the service truck without wearing the safety belt;
- Operator was operating the service truck whilst on the cellphone conversation, which was against the mine standard;
- authorisations detailing the duties, responsibilities, limitations and areas of operation for fourteen trackless mobile machine operators were not available;



- the written acknowledgement and acceptance of the appointment to operate trackless mobile machine for the operator was not available; and
- inadequate monitoring of Trackless Mobile Machines was observed.

6.6 Winches (11%)

The area covered in this category of transgressions were:

- the winch trip-wire was not in place but the operator had marked it OK on the pre-use checklist;
- the winch motor terminal cover was fastened with one bolt where three bolts were missing;
- there were no R-clips on the snatch block pins;
- there was no signalling device installed along the winch scraper path;
- substandard cross rigging was observed;
- there were no R-clips on the winch clutch bands;
- the front winch holding down bolts were covered with broken rocks;
- drum guards were damaged;
- substandard cross rigging was observed;
- stop blocks were not secured to winch pedestal frame;
- winch bell wire was not installed throughout the scraper path;
- winch bell wires were not installed on the other side of the scraper path;
- bottom centre gully winch ropes were crossing the diagonal winch rope without cross rigging installed;
- ineffective winch signalling devices were observed;
- four eyebolts were installed instead of six as per mine standard;
- there was no safety chain installed on the return mono-winch;
- elevating snatch-block was fastened with a piece of wire;
- winch bell wires were not installed;
- ineffective signalling device was observed;
- face winch return pulley with no safety chain installed was observed;
- face winch return pulley was secured with one sling eyebolt; and
- there was no snatch block at the front of the winch.

6.7 Ventilation (5%)

The areas covered in this category of transgressions were:

- temperature in the centre gully close to the face was measured to be at action level and no action was taken to rectify ventilation problems. Little to zero velocity was measured at the winch cubby;
- last pillar holing from the face measured 40.3m but holing was not effected towards the mined-out panel on top;
- ventilation flow was declared safe but ventilation flow was measured to be 0.12 against a standard of 0.25m/s;
- working place was choked with smoke and dust;
- working places were advancing more than 32m without ventilation fans;
- face air speed measured 0.18m/s against minimum standard of 0.25m/s;
- pillar holing was choked with ore;

- gullies were choked with ore;
- temperature was saturated at 23°C; and
- the crew was drilling the panel without clearing ore accumulation in the gully.

6.8 Safe Declaration (5%)

The areas covered in this category of transgressions were:

- access road to the pit was not declared safe at start of shift and there were two big rocks on top of the highwall above the travelling way which were not identified as hazards;
- employees were observed entering unsafe an area before the area was declared safe;
- there was no record of safe declaration for the borrow pit where two minors had drowned; and
- there were no proof of records for safe declaration for the borrow pit;
- Miner was not signing the safe declaration document;
- access was made to the pit without conducting safe declaration;
- the competent persons declaring the pit safe were found not to understand the correct information to be recorded in the safe declaration book;
- the Miner was not completing the safe declaration book;
- the Miner and Competent A Person had conducted safe declaration without gas detecting instruments nor Whirling Hygrometers; and
- support on the declaration book was ticked not in order but the crew was busy drilling the face without fixing the support.

6.9 Risk Assessment (4%)

The areas covered in this category of transgressions were:

- inadequate risk assessment on the locomotives operation was observed;
- inadequate risk assessment to protect the health or safety of employees was conducted;
- insufficient risk assessment was conducted on the TMMs operating at the stockpile or dump;
- poor start-up risk assessment was conducted;
- here were no proper first aid and accidental release measures in place for the three types of chemicals used at the mine;
- employer had not adequately assessed and responded to risk on conveyor belt;
- inadequate risk assessment was conducted; and
- no proper risk assessment was carried out by the Miner.

6.10 Railbound (4%)

The areas covered in this category of transgressions were:

- a number of rail switches was observed submerged under water;
- a rail switch was not switching properly;
- a rail joint was misaligned;
- pneumatic control switch for box fronts was not locked;
- rails were not properly aligned;



- rails were submerged in mud and rail switches were not operational; and
- there was mud accumulation along the rails.

6.11 Electrical (3%)

The areas covered in this category of transgressions were:

- there was no control over the electrical portable equipment;
- there was no control over the issuing and receiving of electrical portable equipment;
- soldering machine was placed at the workshop while no one was in charge of it;
- issue register for electrical portable equipment did not cover the identity number of the equipment;
- electrical cables were not suspended; and
- electrical cables were not suspended as per mine standard.

6.12 Explosives (3%)

The area covered in this category of transgressions were:

- poor control of explosives was observed;
- sockets were not plugged;
- shot holes were drilled and marked less than 15 cm from sockets;
- sockets were plugged with unapproved materials; and
- salvage yard employees were not conversant with identification and handling of explosives.

6.13 Emergency Preparedness (1%)

The area covered in this category of transgressions were:

- the mine did not have a first aid room or an area for treatment of an injured person and a suitable stretcher, provided with two blankets and a first aid box;
- poor record keeping of Self-Contained Self-Rescuers was observed.

6.14 COP (Code of Practice) (1%)

The areas covered in this category of transgressions were:

- the mandatory Codes of Practice had not been reviewed according to the baseline risk assessment; and
- a Code of Practice was found inadequate to protect the health or safety of employees.



7. OCCUPATIONAL MEDICINE

7.1 Overall occupational diseases/illness per month

During December 2017 a total of 244 occupational diseases/illness were reported by regions from Health Incident Reports (HIRs), when compared to a total of 209 cases reported during the same period in 2016..

7.2 Occupational diseases by region

There is an overall increase of 16.7% in the total occupational diseases/illness reported by nine regions during December 2017 when compared to the total of cases reported by eight regions during the same period in 2016.

The table and graph below illustrate the progressive performance of each region with regards to the occupational diseases/illness reported on HIRs. The North-West Klerksdorp, Free State Gauteng, North-West Rustenburg reported most occupational diseases, followed by Mpumalanga, Northern Cape, Limpopo and KwaZulu-Natal regions. No occupational diseases were reported from Western Cape region during December month for the current reporting year.

7.3 Analysis of Health Incident Reports per common disease group

7.3.1 Pulmonary tuberculosis (PTB)

Pulmonary tuberculosis (PTB) cases have increased by 24.1% when compared to the same period during the previous year.

7.3.2 Silicosis

Silicosis cases reported have increased by 17.2% 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 80.9% when compared to the same period during the previous year.

7.4 Conclusion

It must be noted that the occupational diseases/illness reported on HIRs are diagnosed amongst employees during the mines' planned programme of medical surveillance, which is not conducted during the same period nationally.



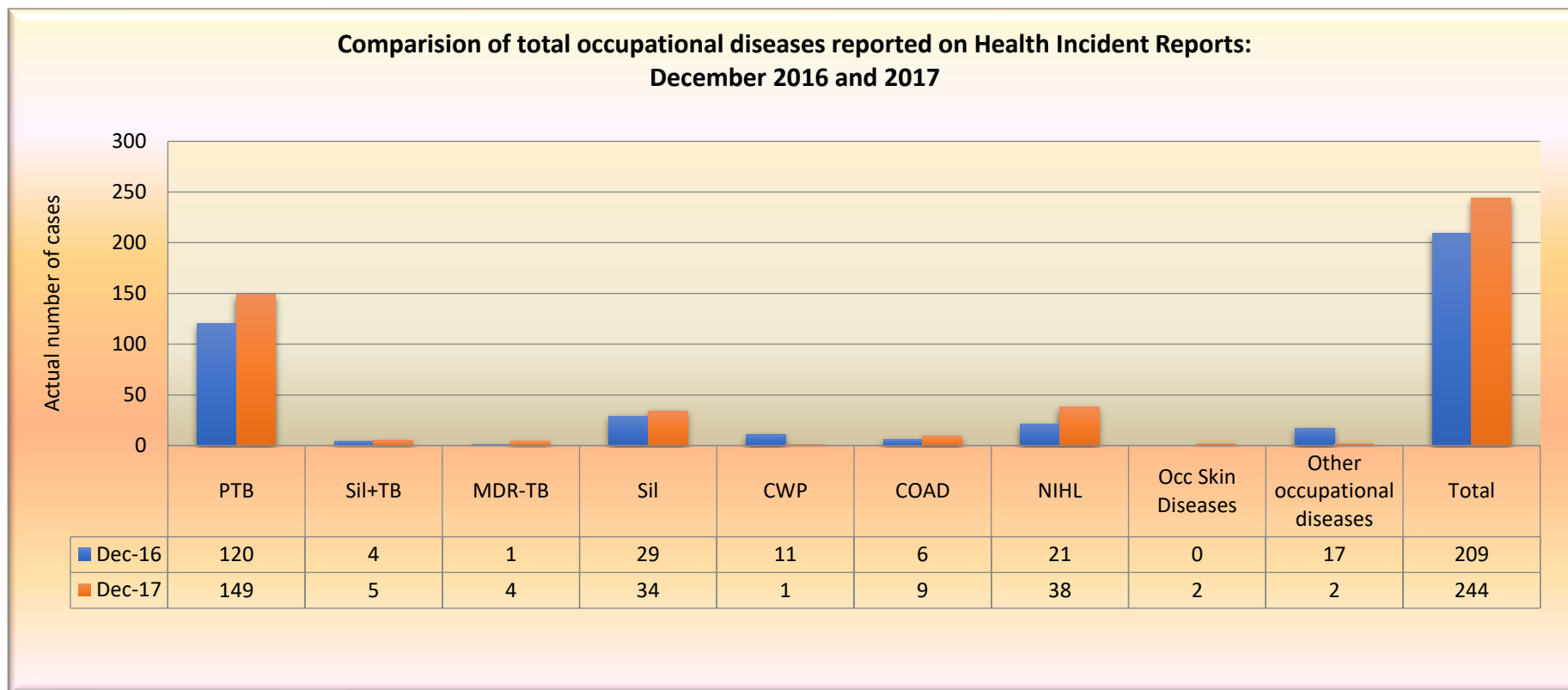
Occupational Health and Safety Report: December 2017

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

| | EC | | FS | | GR | | KZN | | LP | | Mpu | | NC | | NW K | | NW R | | WC | | TOTAL | TOTAL | Percentage Change TOTAL |
|----------------------------|----------|----------|-----------|-----------|-----------|-----------|----------|----------|----------|----------|-----------|-----------|----------|----------|-----------|------------|-----------|-----------|----------|----------|------------|------------|-------------------------|
| | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | 2016 | 2017 | |
| PTB | 0 | 0 | 40 | 24 | 24 | 10 | 0 | 2 | 2 | 2 | 18 | 2 | 4 | 1 | 24 | 87 | 8 | 21 | 0 | 0 | 120 | 149 | 24 |
| Sil+TB | 0 | 0 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 4 | 5 | 25 |
| MDR-TB | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 4 | 300 |
| 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 | 13 | 14 | 3 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 11 | 10 | 3 | 0 | 0 | 29 | 34 | 17 |
| Asb | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CWP | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1 | -91 |
| COAD | 0 | 0 | 2 | 5 | 1 | 3 | 0 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 9 | 50 |
| Occ Asthma | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 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 | 2 | 3 | 2 | 16 | 1 | 0 | 0 | 2 | 5 | 6 | 0 | 6 | 2 | 0 | 8 | 5 | 1 | 0 | 21 | 38 | 81 |
| Occ Skin Diseases | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 200 |
| 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 | 1 | 8 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 6 | 1 | 0 | 0 | 0 | 0 | 17 | 2 | -88 |
| Total | 0 | 0 | 61 | 48 | 38 | 37 | 2 | 2 | 2 | 5 | 38 | 10 | 5 | 7 | 36 | 102 | 26 | 33 | 1 | 0 | 209 | 244 | 17 |



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



Verification source: Health Incident Reports submitted by regions December 2016 and December 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 | Harmony Doornkop Mine | Million (3) | 19/02/2017 | 29/07/2014 |
| 4 | Impala Platinum 14 Shaft | Million (1) | 24/02/2017 | 23/01/2016 |
| 5 | Tweefontein Opencast Colliery | Thousand (3) | 24/02/2017 | 02/10/2011 |
| 6 | Usuto Colliery | Thousand (3) | 07/03/2017 | Never |
| 7 | Mototolo Platinum: Lebowa | Thousand (9) | 08/03/2017 | Never |
| 8 | Thorncliffe Mine | Thousand (10) | 14/03/2017 | 28/11/2007 |
| 9 | Tselentis Colliery | Thousand (16) | 12/04/2017 | 05/09/1991 |
| 10 | Dorstfontein Colliery West | Thousand (4) | 21/04/2017 | 15/03/2012 |
| 11 | Arthur Taylor Colliery Opencast Mine (ATCOM) | Thousand (7) | 24/05/2017 | 31/03/2004 |
| 12 | Ilima Coal Company | Thousand (6) | 26/04/2017 | 06/01/2008 |
| 13 | Impala Platinum 10 Shaft | Million (2) | 05/05/2017 | 07/06/2017 |
| 14 | Harmony Unisel | Million (1) | 20/05/2017 | 04/04/2015 |
| 15 | Impala Platinum 9 Shaft | Million (2) | 05/06/2017 | 02/08/2012 |
| 16 | Vlakvarkfontein Colliery | Thousand (4) | 16/06/2017 | Never |
| 17 | Forzando Colliery South | Thousand (12) | 21/06/2017 | Never |
| 18 | Manungu Colliery | Thousand (2) | 22/06/2017 | Never |
| 19 | Wonderfontein Colliery | Thousand (4) | 22/06/2017 | Never |
| 20 | Khutala Colliery | Million (3) | 28/06/2017 | 12/12/2012 |
| 21 | Zibulo Colliery | Thousand (2) | 05/07/2017 | 21/05/2015 |
| 22 | Impala Platinum 16 Shaft | Million (2) | 07/07/2017 | 04/09/2014 |
| 23 | Weltevreden Colliery | Thousand (5) | 11/07/2017 | Never |
| 24 | Booyensdal Platinum Mine | Million (3) | 17/07/2017 | Never |
| 25 | Dorstfontein Colliery East | Thousand (6) | 20/07/2017 | Never |
| 26 | Tharisa Minerals | Thousand (2) | 27/07/2017 | 28/09/2015 |
| 27 | Dwarsrivier Chrome | Million (4) | 04/08/2017 | 09/01/2009 |
| 28 | Vaalbult Colliery | Thousand (2) | 08/08/2017 | Never |
| 29 | Glencore: Waterval Mine | Thousand (9) | 10/08/2017 | 20/10/2004 |
| 30 | Spitzkop Colliery | Thousand (5) | 11/08/2017 | 12/01/2012 |
| 31 | New Vaal Colliery | Thousand (12) | 15/08/2017 | 09/03/2005 |
| 32 | Two Rivers Platinum | Million (4) | 18/08/2017 | 21/01/2012 |
| 33 | Bafokeng Rasimone Platinum Mine | Million (2) | 03/09/2017 | 12/05/2016 |
| 34 | Impala Platinum 11 Shaft | Million (1) | 05/09/2017 | 27/10/2016 |
| 35 | Forzando Colliery North | Thousand (19) | 06/09/2017 | 15/05/1999 |
| 36 | Harmony Phakisa Mine | Million (1) | 14/09/2017 | 23/09/2016 |
| 37 | Khwezela Colliery | Thousand (6) | 23/09/2017 | 10/01/2012 |
| 38 | Alexkor JV | Thousand (2) | 25/09/2017 | 19/10/2015 |
| 39 | Assmang Iron Ore: Beeshoek | Thousand (16) | 18/10/2017 | 12/03/2003 |
| 40 | Mototolo Platinum: Borwa | Thousand (5) | 07/11/2017 | 18/10/2011 |
| 41 | Glencore Kroondal Chrome Mine | Thousand (4) | 04/12/2017 | 09/04/2014 |



mineral resources
Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Occupational Health and Safety Report:

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| No | Mine | Award | Date recorded | Last fatality |
|----|--------------------------|--------------|---------------|---------------|
| 42 | Zululand Anthracite Mine | Thousand (3) | 29/12/2017 | 14/12/2011 |