



**M O D I K W A**  
P L A T I N U M M I N E

# Improved Underground Workplace Visibility

**05-07-2024**



# Agenda

1. Mine Background
2. Current Safety Performance
3. FOG Safety Performance
4. Current Underground Lighting
5. IUMV Adoption
6. Project Adoption



# Mine Background

## Brief Description

Modikwa Platinum Mine is a Platinum Group Metals mining company, formed by a joint venture between Anglo Platinum and African Rainbow Minerals. It is situated some 20Km from Burgersfort in Mpumalanga, on route to Polokwane in the Limpopo Province. The Mine consists of three decline shafts mining UG2 and one decline shaft mining Merensky, Onverwacht Hill and Concentrator Plants.

## Commodities Produced

Platinum Group Minerals (Platinum, Palladium, Rhodium, Iridium, Ruthenium), base metals (Copper, Nickel and Cobalt), chromic oxide concentrate and gold.

## Mining Methods

- Mining methods practiced are conventional in stopes, winzes and raises, while principal development is solely on trackless mechanization.
- Drilling and blasting takes place and the broken ore is loaded and hauled to the underground tips. Conveyor belt systems are utilized to transport the broken rock to the concentrator plant.
- Ventilation systems are designed taking in consideration heat flow from rock and heat from machinery especially in the trackless areas.
- The concentrator plant makes use of crushing and milling to liberate the valuable metals in the concentrate which is extracted and cleaned to the desired grade before it is dried through a filter press and dispatched to the smelter off site.

## Mine Specific Address

292KT Onverwacht Hill  
Private Bag X9120  
Driekop 1129  
Limpopo province  
GPS Coordinates:  
S 240 38. 226' E 300 7.727

# Current Safety Performance

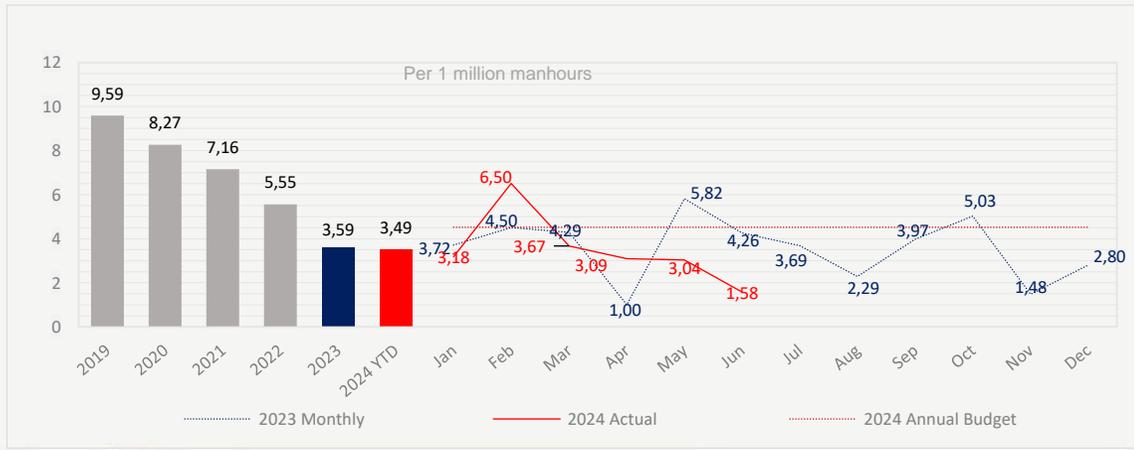
## Total Recordable Injuries Comparison



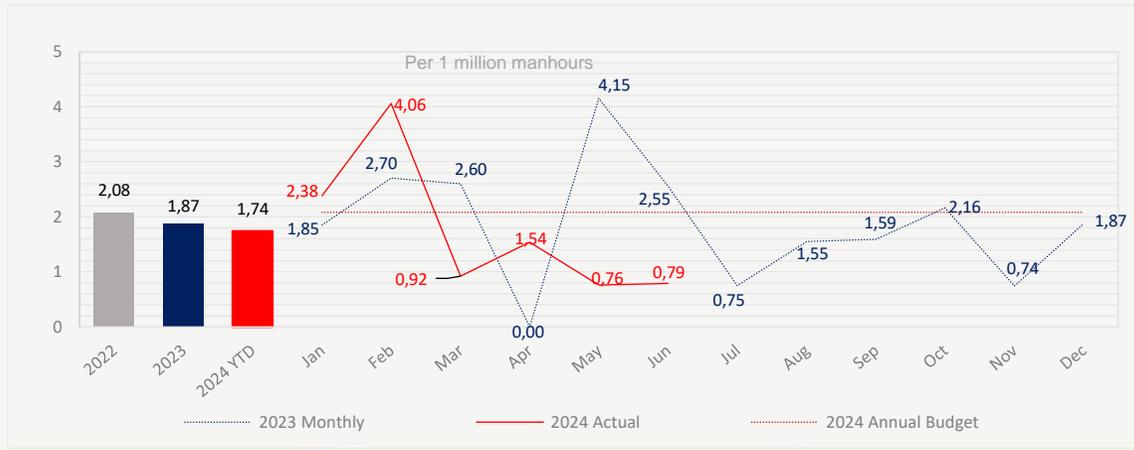
## Lost Time Injuries Comparison



## Total Recordable Injury Frequency Rate



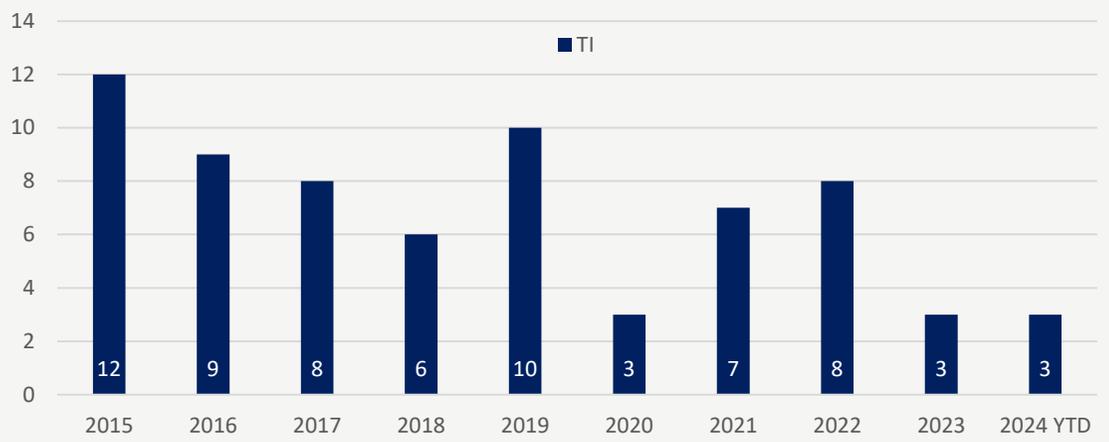
## Lost Time Injury Frequency Rate



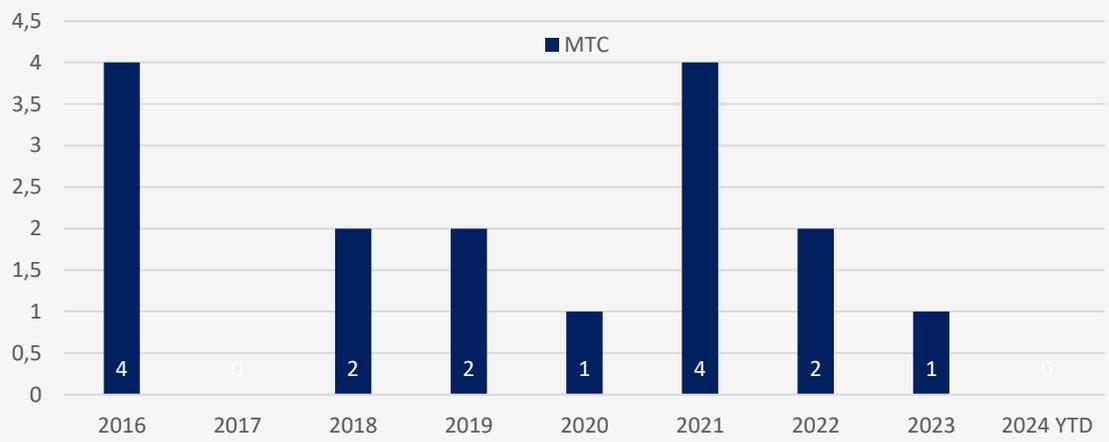
**ALWAYS SAFE**

# FOG Safety Performance

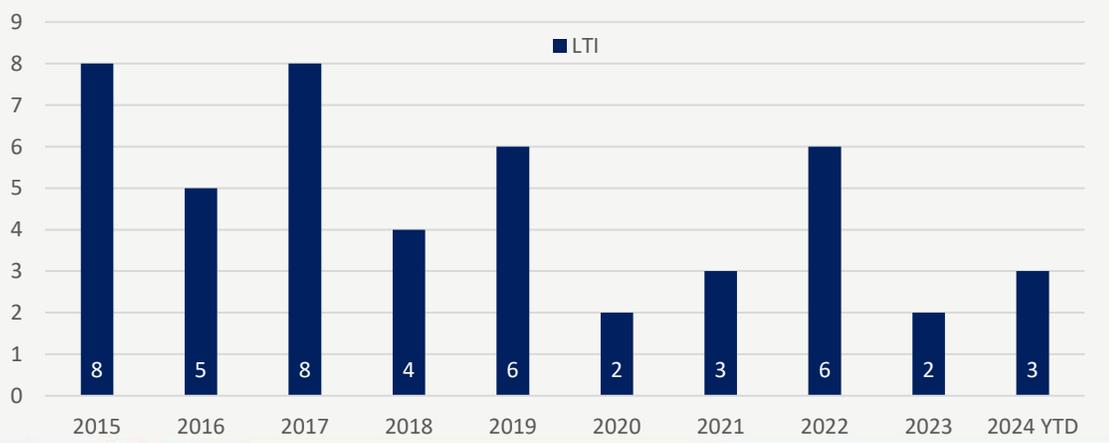
### Total Injuries



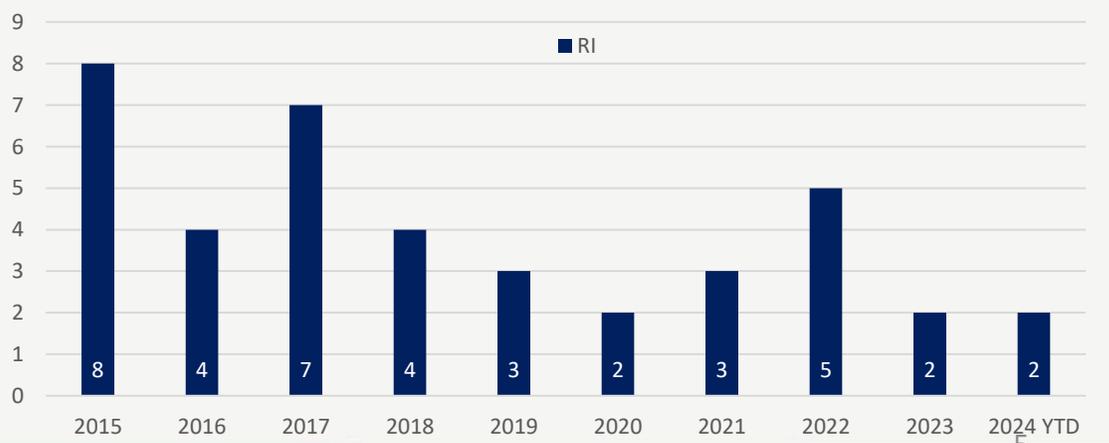
### Medical Treatment



### Lost Time Injuries



### Reportable Injuries



ALWAYS SAFE

# Current Underground Lighting

## Declines and Haulages



## Conventional Stope: Center gully and ASG



## Current Underground Lighting – Bord & Pillar



### WL4020 SPECIFICATIONS

Floodlight	Super bright COB LED ,1100/2200/4300 lumens
CRI	80 CRI+
CCT	6500K
Power Bank Output	Max 5V 2A
Battery Type & Spec	High quality 11.1V 5200mAh Li-ion battery
Lighting Duration(Floodlight)	6h / 3h / 1h 30mins
Charging Time	4h 30mins
Weather Proof	IP65
Anti-impact	IK07
Size	266*236.6*59 mm
N.W.	1355g





SL6 LIGHT

**CONVENTIONAL STOPE FACE  
AND DEVELOPMENT END FACE  
IUMV ADOPTION**



# SL-6 LIGHT (Conventional Stope and Development end Face)



## BATTERY PERFORMANCE

Brightness [in %]	Runtime [in h]				
					
50	11h30m	18h	23h	37h	38h30m
33	4h	6h36m	8h30m	13h30m	20h30m
66	2h	3h30m	4h30m	7h	10h
100	1h30m	2h30m	3h	5h	<b>7h30m</b>

# Project Adoption

- Select a Risk Assessment team/ Project Champions ( Engineering, Rock Engineering, Safety and VOHE Department)
- Test Run with Hilti Team at North shaft (TM3 and Stoping Section) (15-07-2024)
- Acquire SL6 Lights as per the Risk Assessment Team recommendations
- Schedule the Roll-out Plan.



End

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