
Electrical 6,6 kV Flash Incident

LONMIN

Date Of Incident : 10 March 2009
Actual Severity : Level 4

Presented By: KL Willemse



PERSONAL DETAILS



LONMIN

- **FULL NAMES** : **Lorenzo Joseppe**
- **SURNAME** : **Myburgh**
- **OCCUPATION** : **Electrical apprentice**
- **INJURY** : **80 % Electrical Burn Wounds
of the Body**

DESCRIPTION OF INCIDENT



On 10th March 2009 Mr Lorenzo Myburgh was busy tracing & marking cables inside the 31 level sub-station.

During this action he came in to contact with an open ended \ un-guarded 6,6kV electrical cable which caused an electric flash.

The result of the flash led to 80% burn wounds to his body.

PHOTO'S

LONMIN



“Legally privileged information”

Sequence of Events (What Happened?)

Date	Approx. Time	What happened?
10 March 2009	06h15	Site Manager instructed the injured and his team to trace and label all cables on 31 level
	06 h45	The team proceed UG to perform the work allocated
	07h00	The injured unlocked the 31 level sub-station outside doors (LT side) and the team started with the tracing and labeling of the cables from the PLC cubicle
	07h10	The injured gave the electrical aide an instruction to break the lock on the gate of the HT sub-station. The aide broke the locking pin with a pinch bar
	07h15	The injured and the aide start tracing cables inside the HT sub-station area.
	08h00	The injured screamed and on investigation it was found by the eyewitnesses that the injured was burning after an electric flash caused by an open \ un-guarded 6,6kV cable lying on the footwall
	08h05	The two eyewitnesses extinguished the fire (the burning injured person)
	08h10	The injured was treated and placed on a stretcher and sent out of the mine
	08h15	The injured arrived on surface and placed in the on-shaft medical station
	08h45	The 911 medical ambulance and rescue team arrived to take over the medical treatment of the injured

Sequence Of Events (What Happened?)

Date	Approx. Time	What happened?
10 March 2009	09h00	An investigation team proceeded underground for in loco investigation
	09h50	The injured person was airlifted to the Milpark hospital burn unit
	10h00	The DME was notified
	15h00	The Manager issued an instruction to stop all underground operations until declared safe
11 March 2009	07h00	Incident update given to the DME
	07h30	The DME proceeded underground with the legally appointed management team and other related employees to do the in loco investigation
	11h00	DME issued a Section 54 to stop all electrical related work and stopped 31 level in total until a presentation of remedial action are presented to the Principle Inspector of mines

IDENTIFIED AREAS OF CONCERNS

The following deviations were observed at 31 Level HT Sub Station:

- **Broken lock pin of entrance gate to HT Sub Station.**
- **Open/un-guarded 6.6kV Cable.**
- **Evidence of fire at scene of accident.**
- **Burned clothes, hard hat, SCSR & cap lamp on the station.**
- **Used fire extinguisher.**

IMMEDIATE CAUSES

Unsafe Acts

1. Isolation procedure was not adhered to. (both cable ends were not removed)
2. Un-authorized entry into the HT sub-station
3. Breaking of a locking device (locking pin)
4. Temporary HT feeds during shaft sinking not updated on reticulation drawings nor isolated properly

Unsafe Condition

1. Live open ended \ un-guarded 6,6kV electrical cable lying on footwall.
2. Live open ended \ un-guarded 6,6kV electrical cable not isolated on 30 level sub-station

IMMEDIATE ACTION TAKEN

- **Notified DME – Inspector of Machinery.**
- **The open/un-guarded 6.6kV feeder to 31 level was isolated on 30 level.**
- **All underground work stopped until the shaft electrical reticulation was declared safe by appointed Engineer.**
- **Immediate census and action of all open cables ends bolted together and taped closed.**
- **Communicated incident.**
- **Re-training of all Electrical employees (Foremen, Electricians and Electrical Aids) on:**
 - ❑ **HT Switchgear, Lockouts ,Isolation Procedure and Restricted Areas – HT Sub Stations & Switchgear**

ANY QUESTIONS