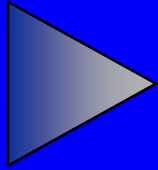


Rossing Uranium

Fatality 3rd March 2005





The People

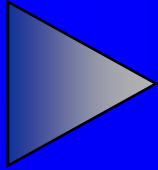
● Gustav Timbo

- ◆ Just less than 25 years service.
- ◆ 10 years as grade 10 electrician (tradesman).
- ◆ 3 years on shift.
- ◆ Authorized to enter High Voltage Cabinets.
- ◆ Passed away 17:06 hrs 8th March 2005.
- ◆ Age 46.

● Clinton Cloete

- ◆ Graduated from NMIT as grade 10 electrician (tradesman).
- ◆ Commence work at Rossing October 2004.
- ◆ Not authorized to enter high Voltage cabinets.
- ◆ On shift for “On the Job Training”.
- ◆ Lost time Injury.
- ◆ Expect full recovery.
- ◆ Age 24.

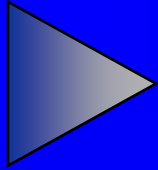




The Place

- Rössing Uranium Mine, Namibia.
- Mine site - Bench 20.
- Overburden Gardner Denver Drill # GD05 machine house electrical cabinet.

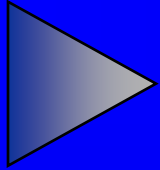




What Happened!

- During the fault finding process an attempt was made to measure incoming 3.3kV with a Multimeter rated at 1,000V AC. This initiated a short circuit between phase connections at the high voltage terminals located at the back of the vacuum contactor resulting in a flash.

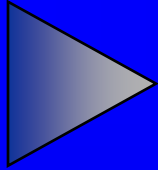




Investigation Technique

- TapRoot system
 - ◆ Interviews (13) – develop individual snap charts.
 - ◆ Development of incident Snap Chart.
 - ◆ Causal factor discovered.
 - ◆ Root causes identified
 - ◆ Remedial actions developed.
 - ◆ Investigation team members consisted of on-site personnel, Richards Bay Minerals and TapRoot trainer.





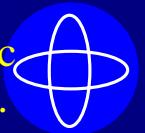
Root Causes and Remedial Actions

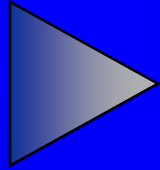
• Root Causes

- ◆ No specific machine training.
- ◆ No specific procedure exists to enter this high voltage cabinet.
- ◆ No evidence of job preparation
- ◆ No labels and/or barriers.
- ◆ Evaluation of appropriateness of the “on the job training” and standards to control this training.
- ◆ No training, no training objective associated with this task.
- ◆ Selection of worker criteria for shift work.
- ◆ Communication issues between staff and trades.

• Remedial Actions

- ◆ Training to be machine and task specific.
- ◆ Evaluate the knowledge, skills and abilities of all pit electricians on machine electrics and test for competency.
- ◆ Identify all high voltage contactors and terminals and affix properly design labels and barriers.
- ◆ Ensure that shift tradesman have the right skill mix to perform the task.
- ◆ Review and compile risk register and specific safe work procedures.
- ◆ Enforce risk assessment.
- ◆ Develop and implement specific high voltage testing procedures.





Further Work

- TapRoot investigation of the medical processes that occurred after Rossing personnel handed over the injured to the medical authorities.
- Questions!!

