

**SAMRASS**  
**APPENDICES**  
**2013**

# APPENDICES

## Matrix for the reporting of accidents and dangerous occurrences

<b>Appendix 1</b>	Accident or Dangerous Occurrence Report Form (SAMRASS 1)
<b>Appendix 2</b>	Injury Report Form (SAMRASS 2)
<b>Appendix 3</b>	Addendum on rock burst and fall of ground accidents (SAMRASS 3)
<b>Appendix 3A</b>	Rock burst and fall of ground (underground) accidents in tabular hard rock mines
<b>Appendix 3B</b>	Rock burst and fall of ground accidents in opencast mines
<b>Appendix 3C</b>	Rockburst and fall of ground accidents in collieries
<b>Appendix 3D</b>	Rockburst and fall of ground accidents in massive ore bodies
<b>Appendix 4</b>	1-13 day Injuries (SAMRASS 4)
<b>Appendix 5</b>	Addendum on explosives accidents (SAMRASS 5)
<b>Appendix 6</b>	Addendum on fires (SAMRASS 6)
<b>Appendix 7</b>	Addendum on subsidences in mines (SAMRASS 7)
<b>Appendix 8</b>	Addendum on heat stroke/heat exhaustion (SAMRASS 8)
<b>Appendix 8A</b>	Heat exhaustion / heat stroke report - occupational hygiene
<b>Appendix 8B</b>	Heat exhaustion/heat stroke report – occupational medicine

<b>Appendix 9</b>	Report on Date resumed work (SAMRASS 9)
<b>Appendix 10</b>	Addendum on use of self-rescuers/refuge bays (SAMRASS 10)
<b>Appendix 11</b>	Explanation of MISCO codes and the Paterson band job grading system
<b>Appendix 12</b>	Allocated Days Lost
<b>Appendix 13</b>	Significant risk
<b>Appendix 14</b>	Alphabetical cross reference: Class of place
<b>Appendix 15</b>	Numerical Index of Occupations
<b>Appendix 16</b>	Additional notes on incapacitation/unconsciousness

## Matrix for the reporting of accidents and dangerous occurrences

ACCIDENTS/INCIDENTS TO BE REPORTED	SAMRASS FORMS REQUIRED									When	Who	
	1	2	3	4	5	6	7	8	9			
1. Death or Injury												
a) Death of any employee	X	X									Report <b>immediately</b> by the <b>quickest</b> means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
b) An injury, to any employee, likely to be fatal	X	X									Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms.	Manager report immediately, Chief Safety Officer compile forms
i) Unconsciousness, incapacitation from heatstroke or heat exhaustion,	X	X						X			Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
ii) Unconsciousness, incapacitation from oxygen deficiency, inhalation of fumes or poisonous gas, or electric shock or electric burn accidents of or by any employee and which is not reportable in terms of paragraph (d).	X	X									Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
c) An injury which either incapacitates the injured employee from performing that employee's normal or a similar occupation for a period totaling 14 days or more, or which causes the injured employee to suffer the loss of a joint, or a part of a joint, or sustain a permanent disability, ( <b>Reportable accidents</b> )	X	X									Report within 30 days after the accident date on SAMRASS forms	Chief Safety Officer complete forms

ACCIDENTS/INCIDENTS TO BE REPORTED	SAMRASS FORMS REQUIRED									When	Who	
	1	2	3	4	5	6	7	8	9			
an injury, other than injuries referred to in paragraph (d), which incapacitates the injured employee from performing that employee's normal or a similar occupation on the next calendar day ( <b>1-13 day LTI accidents</b> )				X							Report without delay on a monthly basis (5 calendar days after month end)	Chief Safety Officer complete forms
2. All persons previously reported who have not yet returned to work									X		Report all persons having returned to work haven been reportable on a monthly basis (5 calendar days after month end)	Chief Safety Officer complete forms
3. Subsequent death or when a slight injury, which was not reportable, results in the death of the injured employee, or when general sepsis or tetanus develops as a result of an injury	X	X									Amended Form SAMRASS 1 (and 2 if not previously submitted)	Manager report immediately, Chief Safety Officer compile forms
4. Dangerous Occurences	X										Report immediately by the quickest means available	Chief safety Officer
a) Falls of ground / Rockburst Causing death of employee	X	X	X								Report immediately by the quickest means available and must be confirmed within 14 days on SAMRASS 3 form.	Manager report immediately, Chief Safety Officer compile forms
Falls of ground / Rockburst  (i) <b>No injury</b> BUT causing the following damage underground: (ii) At least 10 linear metres of working face has been severely damaged and choked and will require re-establishment and re-supporting, or be abandoned; (iii) At least 25m <sup>2</sup> of working area has been severely damaged and choked rendering support units ineffectual and	X		X								Reported immediately by the quickest means available and must be confirmed without delay on Form SAMRASS 1&3	Manager report immediately, Chief Safety Officer compile forms

ACCIDENTS/INCIDENTS TO BE REPORTED	SAMRASS FORMS REQUIRED									When	Who	
	1	2	3	4	5	6	7	8	9			
<p>(iv) will have to be re-established and re-supported or be abandoned; At least 10 linear metres of gully has been restricted with rock clearly recently displaced from the hanging wall and gully sidewalls;</p> <p>(v) At least 10 linear metres continuous or 30 linear metres cumulative of access ways of tunnel or traveling way has been severely damaged and will require rehabilitation or be abandoned;</p> <p>(vi) At least 10 m<sup>2</sup> of roof or 5m<sup>3</sup> of rock has been displaced from the roof of the mining cavity or excavation;</p> <p>(vii) At least 10m<sup>3</sup> of rock has been freshly displaced from pillars or tunnel sidewalls</p>												
<p>b) Caving</p> <p>Any unplanned or uncontrolled caving, side wall or slope failure or subsidence in the ground or workings, causing damage to the surface, which may pose a significant risk to the safety of persons at a mine.</p>	X										Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
<p>c) Flow of water, broken rock, mud or slimes</p> <p>Any unplanned or uncontrolled flow of water, broken rock, mud or slimes at the mine which may pose a significant risk to the safety of persons.</p>	X										Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
<p>d) Breakdown of any main ventilation fan.</p>	X										Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms

ACCIDENTS/INCIDENTS TO BE REPORTED	SAMRASS FORMS REQUIRED									When	Who	
	1	2	3	4	5	6	7	8	9			
<p>e) Power failure</p> <p>Any power failure occurring in the underground workings of a mine, which poses a significant risk to the health, or safety of persons at a mine.</p>	X										Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
<p>f) Fires and Explosives</p> <p>Any ignition or explosion of gas or dust, or any fire related to mining activities or any indication or recrudescence of fire or spontaneous combustion at or in a mine</p>	X										Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
<p>g) Flammable gas</p> <p>The presence of flammable gas exceeding one comma four parts per hundred by volume in the general atmosphere at a mine, or any portion of a mine:</p> <p>(i) if such flammable gas is detected for the first time; or</p> <p>(ii) the first time such flammable gas is again detected after not having been detected therein for a continuous period of three months.</p>	X										Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
<p>h) Winding plants</p> <p>(i) Running out of control of winding-engine, winding drum or conveyance;</p> <p>(ii) Fracture or failure of any essential part of</p>	X										Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms



ACCIDENTS/INCIDENTS TO BE REPORTED	SAMRASS FORMS REQUIRED									When	Who
	1	2	3	4	5	6	7	8	9		
<p>of any critical parts thereof;</p> <p>(ix) Failure to activate when required of any safety catches and/or arresting devices or activation of any safety catches and/or arresting devices when not required;</p> <p>(x) Failure to activate when required of any over-winding prevention device or activation of such device when not required;</p> <p>(xi) Any over-wind or over-run of the conveyance to an extent which may have endangered persons or may have caused damage to the winding equipment;</p> <p>(xii) Failure of depth indicator.</p>											
<p>(i) Lifts and elevators</p> <p>i). Fracture or failure of any essential part of the driving or operating machinery, fracture or failure of any safety device used in connection with lifts or elevators.</p> <p>ii). Fracture or distortion of the lift or elevator rope, fracture or failure of attachments of such rope.</p> <p>iii). Fracture or failure of any sheave or of the shaft or shaft bearing of such sheave.</p> <p>iv). Jamming of car or counterpoise.</p> <p>v). Fracture or failure of braking system or of any critical parts thereof</p> <p>vi). Failure to activate when required of any safety</p>	X									Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms

ACCIDENTS/INCIDENTS TO BE REPORTED	SAMRASS FORMS REQUIRED									When	Who	
	1	2	3	4	5	6	7	8	9			
catches and/or arresting devices or activation of any safety catches and/or arresting devices when not required												
j) OBJECTS FALLING DOWN SHAFTS  Any object falling down the shaft or any other incident which necessitates the inspection of the shaft	X										Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
k) EMERGENCY OR RESCUE PROCEDURES  i). Any failure of breathing apparatus whilst deployed. ii). The use of emergency escape apparatus, procedures or rescue mechanisms, or the rescue from entrapment, associated with mining or related activities, of any employee	X										Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
l) SELF PROPELLED MOBILE MACHINERY  Any self-propelled mobile machine running out of control which may pose significant risk to the safety of persons at a mine.											Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
m) BOILERS AND PRESSURE VESSELS  Fracture or failure of any part of a boiler or safety device of a boiler or pressure vessel which may have endangered persons											Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
n) CHAIRLIFTS  i). Fracture or failure of any part or safety device of a chairlift installation which may have endangered persons or may have											Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms

ACCIDENTS/INCIDENTS TO BE REPORTED	SAMRASS FORMS REQUIRED									When	Who	
	1	2	3	4	5	6	7	8	9			
caused damage to such chairlift installation. ii). Fracture or failure of any essential part of the driving machinery. iii). Fracture failure or serious distortion of any rope or chain forming part of a chairlift installation.												
o) EXPLOSIVES  Causing death or injury of employee	X	X			X						Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms
Explosives <b>No injury</b> BUT  (i) Any unauthorized or accidental ignition or detonation of explosives. (ii) Any exposure of persons to blasting fumes which is not reportable in terms of regulation 23.1 (death, injury or incapacitation 14 days or more). (iii) Any detonation of explosives which may pose a significant risk to the safety of persons.	X				X						Report immediately by the quickest means available and must be confirmed without delay on SAMRASS forms	Manager report immediately, Chief Safety Officer compile forms



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**SAMRASS 1  
Appendix 1**

**ACCIDENT AND DANGEROUS OCCURRENCE REPORT FORM**

**Regional accident number**

(For DMR use)

Y	Y	Y	Y	R	N	N	N	N
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**DEPARTMENT OF MINERAL RESOURCES**

This form must be completed for reportable accidents in terms of regulations 23.1(a) (b) (c) and (d) and dangerous occurrences in terms of regulation 23.4. Attach forms SAMRASS 2, 3, 5, 6, 7, 8 and 10 where applicable.

**SECTION A: MINE DETAIL**

1. Name of mine								
2. DMR mine code								
3. Main commodity								

**SECTION B: ACCIDENT OR DANGEROUS OCCURRENCE DETAILS**

1. Mine Accident or Dangerous Occurrence Number	YEAR				ACC /DO REF NO					SHAFT		
	Y	Y	Y	Y	N	N	N	N	N	S	S	
2. Number of persons killed												
3. Number of persons totally disabled												
4. Number of persons injured												
5. Date of accident or dangerous occurrence		Y	Y	Y	Y	M	M	D	D			
6. Time of accident or dangerous occurrence								H	H	M	M	
7. Location of accident or dangerous occurrence												
8. Name of working place												
9. Depth below surface (in meter)												m
10. Section												
11. Description of accident or dangerous occurrence in words:	..... ..... ..... ..... .....											
12. Accident classification code												
13. Dangerous Occurrence classification code												

14. Probable cause of accident or dangerous occurrence					
15. Did accident or dangerous occurrence occur during normal working hours or overtime?	Normal			Overtime	
16. Did accident or dangerous occurrence happen at normal workplace?	Y	N			

**SECTION C: RESPONSIBLE PERSONS**

NAME	IDENTITY NUMBER/PASSPORT NUMBER	CERTIFICATE No.	OCCUPATION CODE
1 <sup>st</sup> level supervisor			
2 <sup>nd</sup> level supervisor			
3 <sup>rd</sup> level supervisor			
4 <sup>th</sup> level supervisor			
NAME OF MANAGER	DESIGNATION	SIGNATURE	DATE
			Y Y Y Y M M D D

**SECTION D: FOR USE BY THE DEPARTMENT OF MINERAL RESOURCES**

1. Date reported	Y	Y	Y	Y	M	M	D	D	
2. Type of accident or dangerous occurrence									
3. Accident or dangerous occurrence registered by									
4. Date	Y	Y	Y	Y	M	M	D	D	
4. Inquiry type									
5. Date evaluation form completed	Y	Y	Y	Y	M	M	D	D	
INSPECTORATE DETAILS	NAME <i>(in block letters)</i>	DATE						SIGNATURE	
6. Inspector of mines		Y	Y	Y	Y	M	M	D	D
7. Senior Inspector of Mines (Mining)		Y	Y	Y	Y	M	M	D	D
8. Senior Inspector of Mines (Mining Equipment)		Y	Y	Y	Y	M	M	D	D



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**SAMRASS 2  
Appendix 2**

**EMPLOYEE'S DETAILS**

**Note**

*Complete a separate form for each worker killed or injured*

**Regional accident number**

Y	Y	Y	Y	R	N	N	N	N
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(For DMR use)

SECTION A: DETAILS OF MINE														
1. Name of mine														
2. DMR mine code														
MINE ACCIDENT NUMBER				YEAR				ACC / DO REF NO				SHAFT		
				Y	Y	Y	Y	N	N	N	N	N	S	S
4. Date of accident				Y	Y	Y	Y	M	M	D	D			
SECTION B: EMPLOYEE'S DETAILS														
1. Surname														
2. Full names														
3. Industry number														
4. PF / company number														
5. Identity/passport number														
6. Date of birth														
7. Country of origin														
8. Population group			1		2		3		4					
9. Was the injured a permanent (E), contractor (C) or a casual worker (T)									E		C T			
10. Name of contracting company (if applicable)														
11. Male or female									M		F			
12. Normal occupation at time of accident														
13. Total experience in current occupation									Y Y		M M			
14. Was injured carrying out normal duties at time of accident?									Y		N			
15. Date first employed with current employer			Y	Y	Y	Y	M	M	D	D				
16. Date last shift worked			Y	Y	Y	Y	M	M	D	D				
17. Date resumed work (if available)			Y	Y	Y	Y	M	M	D	D				
18. If fatal. date of death			Y	Y	Y	Y	M	M	D	D				

<b>SECTION C: DETAILS OF INJURY</b>						
1. Task (person[s] injured or killed while performing)						
2. Nature of injury						
3. Part of body injured						
4. Type of accident of individual: fatal (F), totally disabled (T) or injury (I)				F	T	I
5. Allocated days lost						



## ADDENDUM ON ROCKBURST AND FALL OF GROUND (UNDERGROUND) IN TABULAR HARD ROCK MINES

Regional accident number

(For DMR use)

Y	Y	Y	Y	R	N	N	N	N
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SECTION A: DETAIL OF MINE													
1. Name of mine													
2. DMR mine code													
3. Main commodity													
4. Mine Accident or Dangerous Occurrence Number				YEAR			ACC /DO REF NO					SHAFT	
	Y	Y	Y	Y	N	N	N	N	N	S	S		
5. Date of accident/incident						Y	Y	Y	Y	M	M	D	D
6. Casualty classification													
7. Depth below surface (in metres)													
8. Mining method													
9. Mining direction													
UP-DIP													
DOWN-DIP													
SECTION B: DETAIL OF ACCIDENT													
B1: LOCATION													
1. Name of working place													
2. Location as per SAMRASS Codebook													
3. Distance from face (m)													
4. Distance to panel bottom strike gully (m)													
5. Dimensions of stope						Strike span (m)			Dip span (m)			Stoping (m)	
6. Dimensions of other excavations						Height (m)			Width (m)			Length (m)	
7. On reef?						Yes			No				
8. Distance from reef (m)													



5. Comment on effective use (i.e. any damage, missing or inadequate support)									

6. Date of last support test results	Y	Y	Y	Y	M	M	D	D
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7. Classification of working place according to Code of Practice, e.g. zoning of areas									

8. Date of last rock engineer report / visit to area	Y	Y	Y	Y	M	M	D	D
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9. Recommendations of last rock engineer report									

<b>B6: INSTRUMENTATION</b>									
INSTRUMENT						WARNING SIGNAL			
						Yes	No		
						Yes	No		
						Yes	No		
						Yes	No		
						Yes	No		

<b>B7: GEOLOGICAL DETAILS</b>									
1. Main commodity									
2. Reef being mined (description)									
	Rock type	Code				U.C.S Strength			
Immediate hanging wall						MPa			
Immediate foot wall						MPa			
Reef / ore						MPa			

Relevant geological structure							MPa							
3. Shortest distance from scene to disturbance (m)														
4. Comment on distance (geological details)														
5. Measured or estimated field stress rate(MPa) induced fractures								MPa						
<b>B8: FALL OF GROUND</b>														
1. Dimensions of fall														
Height (m)					Width (m)					Length (m)				
2. Estimated mass (kg)														
3. Boundaries of fall														
<b>B9: ROCKBURST</b>														
Total size of affected area (m <sup>2</sup> )						Estimated maximum closure								
<b>Extent of damage</b>														
1. Hanging wall damage (m <sup>2</sup> )														
2. Footwall damage (m <sup>2</sup> )														
3. Sidewall damage (m <sup>2</sup> )														
4. Roof support unit damaged														
5. Suspected bursting mechanism														
6. Suspected mechanism based on														
7. Distance between hypocentre and rock burst damage (m)														
8. Presence of comminuted rock (rock flour)?								Yes		No				
<b>B10: GENERAL MINE LAYOUT</b>														
<i>(comment on mine configuration, general mine design layout and workplace configuration)</i>														
MINE LAYOUT								CONTRIBUTE						
								Yes		No				
								Yes		No				

	Yes	No
	Yes	No
	Yes	No

**C: SEISMIC EVENT DETAIL**

Description of seismic network and availability


1. Reference number									
2. Hypocentre (m)									
3. Location error (m)				M	Location magnitude				
4. Time	H	H	M	M	Seismic moment (Nm)				Nm
5. Energy radiated: P-wave (J)				J	Energy radiated: S-wave (J)				J
6. Source radius (m)				m	Corner frequency (Hz)				Hz
7. Static stress drop (Mpa)				Mpa	Dynamic stress drop (Mpa)				Mpa
8. Peak acceleration (g)				g	Peak velocity (cm/sec)				cm/sec
9. Displacement (cm)				cm	Duration (sec)				sec

**Seismic moment released**

	<b>1 WEEK</b>				<b>1 MONTH</b>				<b>AVERAGE</b>			
1. Per 1 m of face advance (Nm/m)												
2. Per 1 t of rock output within 300m radius												

<b>History detail</b>		<b>&lt;0</b>			<b>0 - 1</b>			<b>1 - 2</b>			<b>&gt;2</b>			<b>TOTAL</b>		
<b>1 day before accident</b>	1. Number of seismic events															
	2. Energy release: P-wave (J)															
	3. S wave (J)															



	4. Seismic moment released (Nm)																
	5. Static stress drop (Mpa)																
	6. Maximum energy index (E-obs / E-expec)																
Name of rock engineer																	
Signature							Date	Y	Y	Y	Y	M	M	D	D		
Name of mine manager																	
Signature							Date	Y	Y	Y	Y	M	M	D	D		



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## Appendix 3 B

### ADDENDUM ON ROCKBURST AND FALL OF GROUND ACCIDENTS IN OPENCAST MINES

Regional accident number

(For DMR use)

Y	Y	Y	Y	R	N	N	N	N
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SECTION A: DETAIL OF MINE																
1. Name of mine																
2. DMR mine code																
3. Main commodity																
4. Mine Accident or Dangerous Occurrence Number				YEAR				ACC /DO REF NO				SHAFT				
	Y	Y	Y	Y	N	N	N	N	N	S	S					
5. Date of accident/incident								Y	Y	Y	Y	M	M	D	D	
SECTION B: DETAIL OF ACCIDENT/INCIDENT																
B1: LOCATION																
1. Name of working place																
2. Location of accident/incident as per <b>SAMRASS Codebook</b>																
3. Classification code as per <b>SAMRASS Codebook</b>																
4. Description of working place																
5. Cause of accident (Elaborate)																
6. Slope exposed face length																
7. Distance from slope crest (m)																
8. Distance from slope toe (m)																
9. Other information (m)																
10. Dimensions of failure																
												Weight				
												Length				
												Height				
												Mass				
B2: SITE AND FAILURE DESCRIPTION																



8. What is the standoff distance at crest?							m	
9. What is the standoff distance at slope base?							m	
10. Describe the evacuation procedure in place at the mine								
11. Is the landscape flat or steep?				Flat		Steep		
12. How is water and storm water control done at the mine? <i>(Elaborate)</i>								
13. How is the pit dewatered? <i>(Elaborate)</i>								
14. Was hydro-geological work done at the mine? <i>(Elaborate)</i>								
<b>B6: GEOLOGICAL DETAILS</b>								
1. Reef being mined		Code				Description		
2. Stratigraphic units				<b>Rock type</b>		<b>Code</b>		<b>U.C.S. strength</b>
3. Tri-axial strength test data results								
4. Tensile strength test data results								

5. Base friction angle strength data results													
6. Describe geological structures (dykes / major faults / shear zones)													
7. Shortest distance from scene to disturbance (m)										m <sup>2</sup>			
8. Measured or estimated fields stress state													
9. Induced fractures													
10. Type and description of failure													
11. Was water involved?								Yes		No			
12. Dimensions/boundaries. <i>Specify</i>													
12. Reference number													
14. Hypocentre (m)													
15. Location error (m)										Location magnitude			
16. Time	H	H	M	M						Seismic moment (Ns)			
<b>B7: FORM COMPLETED BY</b>													
Name					Designation								
Signature					Date	Y	Y	Y	Y	M	M	D	D
Name of mine manager					Designation								
Signature					Date	Y	Y	Y	Y	M	M	D	D

**ADDENDUM ON ROCKBURST AND FALL OF GROUND ACCIDENTS IN COLLIERIES**

**Regional accident number**

(For DMR use)

Y	Y	Y	Y	R	N	N	N	N
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SECTION A: DETAIL OF MINE														
1. Name of mine														
2. DMR mine code														
3. Main commodity														
4. Mine Accident or Dangerous Occurrence Number		YEAR				ACC / DO REF NO					SHAFT			
		Y	Y	Y	Y	N	N	N	N	N	S	S		
5. Date of accident / incident						Y	Y	Y	Y	M	M	D	D	
6. Outcome of accident / incident		Injury to person				Damage to equipment				No harm				
7. Depth below surface (in metres)														
8. Mining method		Bord & pillar development		Pillar extraction on retreat		Wall mining		Bottom/ roof coaling		Rock/ stonework		Other		
9. Number of seams mined		Single number				Multiple number								
		Seam name				Seam name								
SECTION B: DETAIL OF ACCIDENT														
B1: LOCATION														
1. Name of working place														
2. Location of accident/incident		Production section	Outbye area	Shaft area	Belt road	Travelling road	Workshop / Sub-station	Stone-work section	Other					
3. Cause of accident/incident		Support failure	Falls between bolts	Fall on	Geo-logical structure	Beam failure	Stress driven failure	Wea-thering / time dependent failure	Hydrau-lic failure	Coal in roof failure	Burnt coal			
4. Activity		Travel-ling	Operating Equip-ment	Material Handling	Super- vision	Barring / Making safe	Other							
5. Description of working place														
6. Distance from face (m)														

<b>B2: SITE</b>									
	Height (m)			Width (m)			Other		
1. Prescribed excavation dimension	<3	3 to 5	>5	<5	5 to 7.5	>7.5			
2. Actual excavation dimension	<3	3 to 5	>5	<5	5 to 7.5	>7.5			
3. Excavation method	Drill and blast		Cut with CM		Cut with sharer		Other		
<b>B3: FALL OF GROUND</b>									
1. Area of failure				Roof			Sidewall		
2. Type of failure				Supported			Unsupported		
3. Dimension of fall	Height (m)		Width (m)		Length (m)		Area (m <sup>2</sup> )		Volume m <sup>3</sup>
4. Boundaries of fall									
5. Damage to support?							Yes	No	
6. Number of units damaged									
7. Suspected bursting mechanism?							Yes	No	
8. Suspected mechanism based on? (Specify)									
<b>B4: SUPPORT DESCRIPTION</b>									
<b>Temporary support according to Code of Practice</b>									
1. Type of support			Temporary jacks	Hydraulic jacks on roof bolter	Canopy	Timber props	None	Other	
2. Support spacing			<1	1 to 2	2 to 3	>3	N/A		
3. Rows of support			1 row	2 rows	3 rows	>3 rows	N/A		
4. Distance from last line of support (m)			<1	1 to 2	2 to 3	>3	N/A		
<b>Temporary support observed after accident</b>									
1. Type of support			Temporary jacks	Hydraulic jacks on roof bolter	Canopy	Timber props	None	Other	
2. Support spacing			<1	1 to 2	2 to 3	>3	N/A		
3. Rows of support			1 row	2 rows	3 rows	>3 rows	N/A		
4. Distance from last line of support (m)			<1	1 to 2	2 to 3	>3	N/A		
<b>Comments on effective use of temporary support:</b>									

<b>B5: PERMANENT/SYSTEMATIC SUPPORT</b>										
<b>Permanent support according to Code of Practice</b>										
1. Type of support		Bolts		Straps		Long anchors	Area support	Split sets	Other	
2. Type of anchor					Full column (resin / grout)	Resin point anchor	Mechanical point anchor	Other		
3. Tendon length (m)					<1.2	1.2 to 1.8	>1.8	Other		
4. Tendon diameter (mm)					≤16	18 to 20	>20	Other		
5. Spacing between rows of support				≤1		1 to 2	2 to 3	>3	Other	
6. Number of support units per row					<4	4 to 6	>6	Other		
7. Distance from face (m)					<10	10 to 15	>15	Other		
<b>Observed after accident</b>										
1. Type of support		Bolts		Straps		Long anchors	Area support	Split sets	Other	
2. Type of anchor					Full column (resin / grout)	Resin point anchor	Mechanical point anchor	Other		
3. Tendon length (m)					<1.2	1.2 to 1.8	>1.8	Other		
4. Tendon diameter (mm)					≤16	18 to 20	>20	Other		
5. Spacing between rows of support				≤1		1 to 2	2 to 3	>3	Other	
6. Number of support units per row		<4		4 to 6		>6		Other		
7. Distance from face (m)		<10		10 to 15		>15		Other		
8. Comment on effective use of permanent support										
<b>B6: REGIONAL SUPPORT</b>										
<b>According to Code of Practice</b>										
Type of support		BARRIER PILLARS				IN PANEL PILLARS				
Safety factor	<1.6	1.6 to 2	>2	Other	<1.6	1.6 to 2	>2	Other		
1. Safety factor calculated according to Salamon and Munro formula?									Yes	No
2. Formulae: parameters utilized					Other formulae utilized					

Pillar strength:	$\sigma = k \frac{w^{0.46}}{h^{0.66} (w+B)^2}$	Where: <i>w = Pillar width</i> <i>h = Pillar height</i> <i>H = Mining depth</i> <i>B = Bord width</i> <i>K = In situ average strength of m<sup>3</sup> of coal – Seam/area specific</i> <i>- E.g: Vaal Basin coal -4.5MPa &amp; Highveld Coalfields - 7.2MPa</i>
Pillar stress	$L = 0.025H \frac{h^{0.66}}{w^2}$	
Safety factor:	$SF = \frac{\sigma}{L}$	

**Observed after accident**

Type of support	<b>BARRIER PILARS</b>				<b>IN PANEL PILLARS</b>				
Safety factor	<1.6	1.6 to 2	>2	Other	<1.6	1.6 to 2	>2	Other	
1. Safety factor calculated according to Salamon and Munro formula?								Yes	No
2. Comment on pillar condition				Stable	Scaling	Crushing	Other		
3. Comment on the effective use of regional support									

**B7: INSTRUMENTATION**

Tell tale	Present		Warning signal			
	Yes	No	Yes	No		
Feeler gauge	Inspection		GAPS: (de-lamination) identified			
	Yes	No	Yes	No		
Other			Yes	No	Yes	No

**B8: GEOLOGICAL DETAILS**

Seam mined										
1. Immediate roof	Shale	Mud-stone	Silt-stone	Sand-stone	Mixed	Laminated	Mas-sive	Com-petent	Incom-petent	
2. Relative geological structure	Faults / joints / slips			Intrusion		Multiple		Single		
3. Shortest distance from scene to disturbance (m)										m
4. Influence on stability	Low			Moderate			High			
5. Measured estimated field stress state										

<b>B9. GENERAL COMMENTS / SUMMARY</b>									
<b>B10: FORM COMPLETED BY</b>									
<b>Name</b>									
<b>Designation</b>									
<b>Signature</b>	<b>Date</b>	Y	Y	Y	Y	M	M	D	D
<b>Name of mine manager</b>									
<b>Designation</b>									
<b>Signature</b>	<b>Date</b>	Y	Y	Y	Y	M	M	D	D



11. Number of fatalities, injuries and dangerous occurrences at working place during past 12 months													
Fatalities		Injuries		Dangerous occurrences									
12. Geological features which could be related to the accident/incident													
Brow		Fault		Dyke		Joint		B/plane		Other			
13. Short description													
<b>B2: SITE DESCRIPTION. Quality of excavation</b>													
<i>(Comment on mining parameters, pillars, geological features etc.)</i>													
<b>B3: TEMPORARY SUPPORT</b>													
		<b>Mine standard requirements</b>				<b>Observed after accident/incident</b>							
Type of support													
Size of support													
Support pattern													
<b>B4: PERMANENT SUPPORT</b>													
		<b>Mine standard requirements</b>				<b>Observed after accident/incident</b>							
Type of support													
Size of support													
Support pattern													
<b>B5: REGIONAL SUPPORT</b>													
		<b>Mine standard requirements</b>				<b>Observed after accident/incident</b>							
1. Type of support													
2. Additional comments on support (if any)													
3. Date of last support test results						Y	Y	Y	Y	M	M	D	D
4. Classification of working place according to <b>Code of practice e.g. zoning of areas</b>													
5. Date of last rock engineer's report/visit to area						Y	Y	Y	Y	M	M	D	D
6. Recommendations of last rock engineer's report													
<i>(Report to be attached)</i>													

<b>B5: INSTRUMENTATION</b>															
<b>INSTRUMENT</b>						<b>WARNING SIGNAL</b>									
						YES		NO							
						YES		NO							
						YES		NO							
						YES		NO							
						YES		NO							
<b>B7: GEOLOGICAL DETAILS AT SCENE OF ACCIDENT/INCIDENT</b>															
<b>Rock type</b>			<b>Code</b>			<b>U.C.S. strength</b>									
1. Immediate hanging wall						Mpa									
2. Immediate foot wall								Mpa							
3. Reef / ore								Mpa							
4. Relevant geological structure								Mpa							
5. Shortest distance from scene to disturbance															
6. Comment on shortest distance <i>(geological details)</i>															
7. Measured or estimated field stress rate							Mpa								
8. Mining induced fractures							Yes			No					
<b>B8: FALL OF GROUND</b>															
1. Dimensions of fall (m)			Height				Width				Length				
2. Estimated mass (kg)													kg		
3. Boundaries of fall <i>(Comment on presence of dykes, joints, infilling etc.)</i>															

<b>B9: GENERAL MINE LAY-OUT</b>		
Comment on mining configuration, general mine design layout, and workplace configuration.		
<i>Describe with distances, other mining activities in proximity of location of accident/dangerous occurrence which could have influenced the cause of the accident or dangerous occurrence</i>		
<b>Mine lay-out</b>	<b>Contribute</b>	
	Yes	No
	Yes	No
	Yes	No
	Yes	No
	Yes	No

<b>B7: FORM COMPLETED BY</b>										
Name of rock engineer										
Signature	Date	Y	Y	Y	Y	M	M	D	D	
Name of mine manager										
Signature	Date	Y	Y	Y	Y	M	M	D	D	



**ADDENDUM ON EXPLOSIVES**

**Regional accident number**

Y	Y	Y	Y	R	N	N	N	N
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(For DMR use)

SECTION A: DETAIL OF MINE														
1. Name of mine														
2. DMR mine code														
3. Main commodity														
4. Mine Accident or Dangerous Occurrence Number			YEAR				ACC /DO REF NO					SHAFT		
			Y	Y	Y	Y	N	N	N	N	N	S	S	
5. Date of accident/incident							Y	Y	Y	Y	M	M	D	D
SECTION B: DETAIL OF ACCIDENT/INCIDENT														
B1: LOCATION														
1. Name of working place														
2. Location of accident/incident as per SAMRASS Codebook														
3. Classification code as per SAMRASS Codebook														
4. Description of working place														
5. Cause of accident. <i>Elaborate</i>														
B2: TYPE OF EXPLOSIVES														
1. Type of explosive		Mark one or more												
		1. Gunpowder												
		2. Boosters												
		3. Detonating cord												
		4. Cartridged explosives – waterngel or emulsions- nitroglycerin												
		5. Rock breaking cartridges (RBC)												
		6. Bulk emulsion explosives												
		7. ANFEX												
		8. Military grade explosives – TNT etc												
		9. Ecobreak												
		10. Bolderbusters												
		11. Block busters												
		12. Cone/pillow packs												

	13. Spudniks	
	14. Other	
2. Supplier of explosive	Mark one or more	
	1. AEL	
	2. BME	
	3. MAXAM (UEE Dantex)	
	4. SASOL Nitro	
	5. SASOL Dyno Nobel	
	6. DetNet	
	7. Eco-Break	
	8. ImPafa	
	9. Lakho Mining Services	
	10 Master Blaster	
	11. NXCO	
	12. Orica	
	13. Pyrobat Products (Boekooi)	
	14. Denel	
	15. Enzine Pickford	
16. Other		
<b>B3: RELATIVE ENERGY OF EXPLOSIVES USED (VOD)</b>		
<b>Detonation</b>	<b>Centralized delays accidental detonation</b>	
1. Type of accessories	Mark one or more	
	1. Igniter cord	
	2. Shock tube	
	3. Detonating relays	
	4. Igniters	
	5. Hot hole motoring devices	
2. Supplier of accessories	Choose one supplier	
	1. AEL	
	2. BME	
	3. MAXAM (UEE Dantex)	
	4. SASOL Nitro	
	5. SASOL Dyno Nobel	
	6. DetNet	

	7. Eco-Break	
	8. ImPafa	
	9. Lakho Mining Services	
	10 Master Blaster	
	11. NXCO	
	12. Orica	
	13. Pyrobat Products (Boekooi)	
	14. Denel	
	15. Enzine Pickford	
	16. Other	
3. Type of detonator	1. Instantaneous electric detonator	
	2. Statsafe Carrick electric detonator	
	3. Delay electric detonator	
	4. Shock tubes	
	5. Capped fuses	
	6. Vulcan fuse heads	
	7. Elemented setonators	
	8. Pentolite boosters	
	9. Electronic delay detonators	
4. Supplier of detonator	Choose one supplier	
	1. AEL	
	2. BME	
	3. MAXAM (JEE Dantex)	
	4. SASOL Nitro	
	5. SASOL Dyno Nobel	
	6. DetNet	
	7. Eco-Break	
	8. ImPafa	
	9. Lakho Mining Services	
	10 Master Blaster	
	11. NXCO	
	12. Orica	
	13. Pyrobat Products (Boekooi)	
	14. Denel	

	15. Enzine Pickford	
	16. Other	
5. Type of fuse – 6 or 8D		6    8D
6. Supplier of fuse	Choose one supplier	
	1. AEL	
	2. BME	
	3. MAXAM (JEE Dantex)	
	4. SASOL Nitro	
	5. SASOL Dyno Nobel	
	6. DetNet	
	7. Eco-Break	
	8. ImPafa	
	9. Lakho Mining Services	
	10 Master Blaster	
	11. NXCO	
	12. Orica	
	13. Pyrobat Products (Boekooi)	
	14. Denel	
15. Enzine Pickford		
16. Other		

7. Method of priming	Bottom (front)	Double hole lined				
8. Primer cartridge						
9. Length of cartridge						mm
10. Diameter of cartridge						mm
11. Diameter of shothole						mm
12. Method used to detect misfires (Elaborate)						
13. Primary or secondary blasting stemming used.		Primary		Secondary		
14. Secondary blasting method		Mud blast		Drilled holes		
<b>B4: Qualifications of blasters</b>						
<b>1. Miner</b>						
Type of certificate		Number		Date issued		
<b>2. Miners assistant</b>						
Type of certificate		Number		Date issued		

<b>B5: General</b>													
1. Centralised blasting?							Yes		No				
2. Surface blasting?							Yes		No				
3. Fly rock?							Yes		No				
4. Distance of blast from affected structure									m				
5. Ground vibrations measured PPV in mm/s									mm/s				
6. Frequency of blast vibration in Hz									Hz				
7. Air blast (noise pressure) Db A scale													
8. Powder factor. <i>Elaborate</i>													
9. Type of stemming used. <i>Elaborate</i>													
10. Length of stemming used										m			
11. Hole spacing. <i>Elaborate</i>													
12. Burden													
13. Mass per delay										kg			
14. Drilled depth										cm			
15. Measured depth										cm			
16. Charged depth										cm			
<b>B6: Experience of miner in years and months</b>							Y	Y	M	M			
<b>B7: Cause of explosion. <i>Short description</i></b>													
<b>B8: FORM COMPLETED BY</b>													
Name					Designation								
Signature					Date	Y	Y	Y	Y	M	M	D	D
Name of mine manager					Designation								
Signature						Y	Y	Y	Y	M	M	D	D

**ADDENDUM ON FIRES**

**Regional accident number**

Y	Y	Y	Y	R	N	N	N	N
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(For DMR use)

SECTION A: DETAIL OF MINE												
1. Mine name												
2. DMR mine code												
3. Main commodity												
4. Mine Accident or Dangerous Occurrence Number				YEAR				ACC /DO REF NO				SHAFT
	Y	Y	Y	Y	N	N	N	N	N	S	S	
5. Date of accident/incident				Y	Y	Y	Y	M	M	D	D	
SECTION B: DETAIL OF ACCIDENT/INCIDENT												
B1: LOCATION OF FIRE												
1. Name of working place												
2. Location of accident/incident as per <b>SAMRASS Codebook</b>												
3. Classification code as per <b>SAMRASS Codebook</b>												
4. Description of working place												
5. Date fire detected				Y	Y	Y	Y	M	M	D	D	
6. Time fire detected								H	H	S	S	
7. Method of detection		Electronic		Fire patrol	Sight	Smell	Other (Specify)					
		Portable	Fixed position									
B2: REPORT FOLLOWING EXTINGUISHMENT OF THE FIRE												
1. What burnt?												
2. Number of proto teams called out												
3. Number of proto teams sent underground												
4. Was the burning area sealed off?										Yes	No	
5. Time taken to extinguish fire				D	D	:	H	H	:	D	D	
6. Date fire extinguished				Y	Y	Y	Y	M	M	D	D	
7. Cause or probable cause of fire?												
8. Number of reportable casualties		Killed				Disabled				Injured		
9. Did <b>Code of practice</b> cater for prevention of fire?										Yes	No	
10. Was there any negligence?										Yes	No	
11. Were persons endangered?										Yes	No	
12. Were self-contained self-rescuers used?				Yes	No	Number		Make				
If Yes, state number and make and also complete a SAMRASS 10.												
13. Were refuge bays used?										Yes	No	

14. Is prosecution envisaged?										Yes	No		
<b>B3: FORM COMPLETED BY</b>													
Name													
Signature					Date	Y	Y	Y	Y	M	M	D	D
Name of mine manager													
Signature					Date	Y	Y	Y	Y	M	M	D	D

**ADDENDUM ON SUBSIDENCES IN MINES**

**Regional accident number**

(For DMR use)

Y	Y	Y	Y	R	N	N	N	N
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<b>SECTION A: DETAIL OF MINE</b>													
1. Mine name													
2. DMR mine code													
3. Main commodity													
4. Mine Accident or Dangerous Occurrence Number				YEAR				ACC / DO REF NO				SHAFT	
				Y	Y	Y	Y	N	N	N	N	S	S
5. Date of accident/incident				Y	Y	Y	Y	M	M	D	D		
<b>SECTION B: DETAIL OF ACCIDENT/INCIDENT</b>													
<b>B1: LOCATION OF SUBSIDENCE</b>													
1. Name of working place													
2. Location of accident/incident as per <b>SAMRASS Codebook</b>													
3. Classification code as per <b>SAMRASS Codebook</b>													
4. Description of working place													
5. Date subsidence detected				Y	Y	Y	Y	M	M	D	D		
6. Maximum depth of subsidence (m)													
7. Ventilation plan grid reference?						Yes			No				
8. Influence on underground workings													
9. Maximum depth of mining (m)						<240 m			>240 m				
<b>B2: MINING PARAMETERS</b>			<b>PLANNED MINING PARAMETERS</b>				<b>ACTUAL MINING PARAMETERS</b>						
1. Road width													
2. Mining height (m)													
3. Pillar centres (m)													
4. Pillar size (m)													
5. Barrier pillar (m)													
6. Safety factor													
7. Panel width													
8. Panel roads													

9. Percentage over mined (%)														%
10. Geology														
11. Seam/elevation														
12. Influence on structures														
13. Action to be taken														
<b>B3: MINING PARAMETERS</b>					<b>PLANNED MINING PARAMETERS</b>					<b>ACTUAL MINING PARAMETERS</b>				
Fissure width (m)														
Mining depth (m)														
Combined width extracted (m)														
>1.25% of mining depth (m)														
Subsidence expected?														
Mining related sinkhole?														
<b>SECTION C: FORM COMPLETED BY</b>														
Name														
Designation														
Signature					Date		Y	Y	Y	Y	M	M	D	D
Name of mine manager														
Designation														
Signature					Date		Y	Y	Y	Y	M	M	D	D

**ADDENDUM ON HEAT EXHAUSTION/HEAT STROKE (OCCUPATIONAL HYGIENE)**

**Regional accident number**

Y	Y	Y	Y	R	N	N	N	N
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(For DMR use)

<b>SECTION A: DETAIL OF MINE</b>												
1. Mine name												
2. DMR mine code												
3. Main commodity												
4. Mine Accident or Dangerous Occurrence Number				YEAR				ACC /DO REF NO				SHAFT
	Y	Y	Y	Y	N	N	N	N	N	S	S	
5. Date of accident/incident				Y	Y	Y	Y	M	M	D	D	
6. Time of accident								H	H	M	M	
7. Shift of accident/incident				Morning shift			Afternoon shift			Evening shift		
<b>SECTION B: PERSONAL DETAILS OF EMPLOYEE</b>												
1. Surname				Name								
2. ID/passport number												
3. Date of birth				Y	Y	Y	Y	M	M	D	D	
4. Age				Gender				Male		Female		
5. Did the injured have a valid certificate of fitness?								Yes		No		
6. If yes, date of certificate of fitness				Y	Y	Y	Y	M	M	D	D	
<b>SECTION C: WORK EXPERIENCE OF EMPLOYEE (CURRENT AND PREVIOUS TWO OCCUPATIONS)</b>												
CURRENT OCCUPATION												
1. Occupation as per SAMRASS Codebook												
2. Period worked								Y	Y	M	M	
3. Total years experience in current occupation								Y	Y	M	M	
FIRST PREVIOUS OCCUPATION												
1. Name of mine												
2. Period worked								Y	Y	M	M	
3. Occupation as per SAMRASS Codebook												
SECOND PREVIOUS OCCUPATION												
1. Name of mine												
2. Period worked								Y	Y	M	M	
3. Occupation as per SAMRASS Codebook												

4. Are the training records (including induction record) on thermal stress of the injured available?							Yes		No						
5. Miner's record of Wet and Dry bulb temperature readings recorded in the safe declaration book.				WET		°C		DRY		°C					
<b>SECTION D: ENVIRONMENTAL CONDITIONS OF THE WORKING PLACE</b>															
The following measurements must be taken by qualified occupational hygiene personnel, subsequent to the heat exhaustion / heat stroke incident / accident															
<b>ENVIRONMENTAL MEASUREMENTS</b>				Mine standard				Measurement							
1. Date on which the readings were taken:				Y	Y	Y	Y	M	M	D	D				
2. Average Wet Kata reading in mil.cal/cm <sup>2</sup> /s															
3. Average Specific Cooling Power of the Air															
4. Average Wet bulb temperature in °C															
5. Average Dry bulb temperature in °C															
6. Globe Wet bulb temperature in °C															
7. Quantity of Air Volume available in m <sup>3</sup> /s															
8. Stop work Wet bulb temperature in °C															
9. Stop work Dry bulb temperature in °C															
10. Average Face velocity in m/s															
11. Average Face velocity per m <sup>2</sup> in dev ends in m/s															
12. What is the method of ventilation?															
13. Distance of drinking water to the working place in "meters"											m				
14. Travelling time to the working place in "hours and minutes"							H	H	M	M					
15. Travelling distance from the station to the working place in "meters"											m				
16. Mode of transport from the station to working place (underground only)															
17. Name of the occupational hygienist															
18. Was the incident/accident reported to the Principal Inspector of Mines by quickest means available?									Y	N					
19. Date and time the incident/accident was reported to the DMR															
Date		Y	Y	Y	Y	M	M	D	D	Time		H	H	M	M
20. Status of Section 11.5 investigation as required MHSA															
<b>SECTION E: FORM COMPLETED BY</b>															
Name of occupational medical practitioner															
Signature															
Date				Y	Y	Y	Y	M	M	D	D				
Name of mine manager															
Signature		Date		Y	Y	Y	Y	M	M	D	D				

**SAMRASS 8B**  
**Appendix 8B**

**ADDENDUM ON HEAT EXHAUSTION/HEAT STROKE (OCCUPATIONAL MEDICINE)**

**Regional accident number**

Y	Y	Y	Y	R	N	N	N	N
---	---	---	---	---	---	---	---	---

(For DMR use)

<b>SECTION A: DETAIL OF MINE</b>														
1. Mine name														
2. DMR mine code														
3. Main commodity														
4. Mine Accident or Dangerous Occurrence Number				YEAR				ACC / DO REF NO				SHAFT		
				Y	Y	Y	Y	N	N	N	N	N	S	S
5. Date of accident/incident				Y	Y	Y	Y	M	M	D	D			
6. Time of accident								H	H	M	M			
7. Shift of accident/incident				Morning shift			Afternoon shift			Evening shift				
<b>SECTION B: PERSONAL DETAILS OF EMPLOYEE</b>														
1. Surname				Name										
2. ID / passport number														
3. Date of birth				Y	Y	Y	Y	M	M	D	D			
4. Age				Gender				Male		Female				
5. Did the injured have a valid certificate of fitness?								Yes		No				
6. If yes, date of certificate of fitness				Y	Y	Y	Y	M	M	D	D			
<b>SECTION C: WORK EXPERIENCE OF EMPLOYEE (CURRENT AND PREVIOUS TWO OCCUPATIONS)</b>														
CURRENT OCCUPATION														
1. Occupation as per <b>SAMRASS Codebook</b>														
2. Period worked					Y	Y	M	M						
3. Total years experience in current occupation					Y	Y	M	M						
FIRST PREVIOUS OCCUPATION														
1. Name of mine														
2. Period worked					Y	Y	M	M						
3. Occupation as per SAMRASS Codebook														
SECOND PREVIOUS OCCUPATION														
1. Name of mine														
2. Period worked					Y	Y	M	M						

3. Occupation as per SAMRASS Codebook					
4. Are the training records (including induction record) on thermal stress of the injured available?	Yes	No			

**SECTION D: HEAT STRESS MANAGEMENT**

Heat tolerance screening (HTS)									
1. Date of last HTS									
2. At which mine/centre was HTS done?									
3. Did employee pass last HTS at first attempt?	Yes	No							
4. If NO, provide reasons(s)									
5. Oral temperature before HTS									°C
6. Oral temperature after HTS									°C
7. Starting date of HTS	Y	Y	Y	Y	M	M	D	D	
8. Date of official conclusion of HTS	Y	Y	Y	Y	M	M	D	D	
9. Name of supervisor during period of HTS									
10 Occupation of supervisor as per <b>SAMRASS Codebook</b>									
11. Is Heat Stress Standard available?	Yes	No							
12. Are safe work practices in place as per <b>Code of Practice</b> ?	Yes	No							
13. Do work practices cater for zoning of areas?	Yes	No							
14. Do work practices cater for transferring between areas?	Yes	No							
15. Was affected person transferred between zones?	Yes	No							

16. Date of last audit of HTS centre before accident/incident	Y	Y	Y	Y	M	M	D	D	
---	---	---	---	---	---	---	---	---	--

**SECTION E: SIGNS AND SYMPTOMS OF EMPLOYEE AT TIME OF ACCIDENT**

1. Does the employee have any medical conditions?	Yes	No							
2. If YES, specify									
3. Under current medical treatment?	Yes	No							
4. If YES, specify									
5. Body mass index									
6. Name and surname of person who attended to the affected employee									
Name					Surname				
7. Contact details (cell/telephone number)									
8. Does this person have a valid first aid certificate?									
9. Are there paramedic services available on the mine?									
10. Specify the type of primary first aid and treatment given									

	Yes	No
12. List the signs and symptoms that were reported at the time of incident		
13. Body temperature of employee at time of incident		
		°C
14. Was drinking water available at time of incident?	Yes	No
15. Did the affected employee drink water before the incident?	Yes	No
16. Were any nutritional supplements issued?	Yes	No
17. Was the employee confused at the time?	Yes	No
18. Was the employee unconscious at the time?	Yes	No
19. Specify the mode of transport used for the affected employee		
20. Arrival time of transport	H	M
21. Duration of transportation to get to affected employee	H	M
22. Were blood samples taken before or after IV therapy	Before	After
23. If NO, state reasons		
24. If YES, complete date	Y	M
25. Name of person who took blood samples	SURNAME	NAME
Contact details of person (cellular / telephone number)		
26. State blood samples taken		
27. Blood test results:		
<b>Body cramps</b>	<b>Heat exhaustion</b>	<b>Heat stroke</b>
Muscle enzymes	Potassium	ALT
Myoglobin	Chloride	AST
Magnesium	Co2	Chloride
Calcium	Urea	CK
	Sodium	Co2
		Lactose dehydrogenase





**ADDENDUM ON SELF-CONTAINED SELF-RESCUERS AND REFUGE BAYS**

**Regional accident number**

(For DMR use)

Y	Y	Y	Y	R	N	N	N	N
---	---	---	---	---	---	---	---	---

<b>SECTION A: DETAIL OF MINE</b>														
1. Mine name														
2. DMR mine code														
3. Main commodity														
<b>SECTION B: DETAIL OF ACCIDENT/INCIDENT</b>														
4. Mine Accident or Dangerous Occurrence Number				YEAR				ACC /DO REF NO				SHAFT		
				Y	Y	Y	Y	N	N	N	N	N	S	S
5. Date of accident/incident				Y	Y	Y	Y	M	M	D	D			
6. Time of accident								H	H	M	M			
7. Shift of accident/incident				Morning shift		Afternoon shift		Evening shift						
8. Location of accident/incident as per SAMRASS Codebook														

<b>SECTION C: SELF-CONTAINED SELF-RESCUERS</b>													
1. Number of self-contained self-rescuers activated													
2. What prompted persons to deploy self-contained self-rescuers?													
4. Number of self-contained self-rescuers claimed to be defective													
5. Date when employees were last trained in use of self-contained self-rescuers				Y	Y	Y	Y	M	M	D	D		
6. Is the record of the training session available?								Yes		No			
7. Date of last emergency drill performed				Y	Y	Y	Y	M	M	D	D		

**SECTION D: REFUGE BAYS**

AFFECTED AREA	REFUGE BAY NUMBER	DISTANCE FROM AFFECTED AREA				NUMBER OF PERSONS THAT USED REFUGE BAYS

1. Number of persons trapped underground |

2. Protocol followed?

3. Number of persons removed from the refuge bay to safety |

4. How were persons removed from refuge bay to safety?

5. Number of fatalities arising from the use of the refuge bay Yes No

Number of persons that ignored refuge bay	Number of persons that could not reach refuge bay	Number of persons that could not find refuge bay	Other (specify number)

6. Number of fatalities among those who did not use refuge bays |

7. Number of reportable casualties among those that did not use refuge bays |

8. Did visibility impede evacuation? Yes No

9. Did visibility impede recue? Yes No

**SECTION E: FORM COMPLETED BY**

Name										
Designation										
Signature	Date	Y	Y	Y	Y	M	M	D	D	
Name of mine manager										
Designation										
Signature	Date	Y	Y	Y	Y	M	M	D	D	

## APPENDIX 11:

### EXPLANATION OF MISCO CODES

The fundamental principle, on which the MISCO Coding System is based, is that the **type** and **level** of skill of each occupation are cross-tabulated and expressed as two parts of a digital code, rather like longitude and latitude on a map. The **type** of skill is expressed in five digits and the **level** of skill in two digits.

#### Type of skill:

The type of skill consists of a variety of disciplines, each embodying a common core skill. Each discipline has been progressively sub-divided into:

Disciplines (1 digit)  
Sub-disciplines (2 digits)  
Occupations (2 digits)

#### Level:

The level of skill is defined in terms of the Paterson Job Grading System, which is well known in the mining industry.

#### 01 Type of skill

Disciplines (1 digit)  
Sub-disciplines (2 digits)  
Occupations (2 digits)

#### 01(a) Disciplines

All disciplines have been divided into ten broad disciplines.

The basic logic is that an individual is classified according to his major activity e.g. a general manager of a mine who is a qualified mining engineer is classified as a general manager.

\* *It should be noted that the relationship between jobs does not necessarily conform to the reporting structure within an organization.*

#### 1. Generalists

- Generalists such as top management who oversee multiple disciplines, e.g. Company Chairmen, Chief Executives and Mine Managers; and
- General labourers e.g. pool gang workers who have no special skill.

## 2. Administration and Finance

- Includes all administrative occupations such as dealing with accounts, finance, statutory obligations, stores and administration-related occupations such as secretaries, typists, receptionists, postage and telephone switchboard workers and duplicating;
- **Clerks:** to be classified under the discipline in which they do clerical work, e.g. accounts clerks to be classified under accounts; and
- **General clerks:** to be classified under Administration: Clerk (General) (n.e.c).

## 3. Mining production

- Occupations directly related to obtaining ore from the earth by whatever method, underground mining, opencast mining or pumping or dredging from the seabed; and
- Transportation to the processing plant.

## 4. Reduction, beneficiation, manufacturing

- All occupations involved in the treatment of ore to extract the desired mineral;
- The processing and production of the final product e.g. gold bars, uranium oxide, acid graded coal, waste, etc.; and
- Manufacturing activities.

## 5. Engineering support

All supporting engineering activities in support of the production process.

## 6. Scientific and technical support

- Scientific and technical service occupations not classified above; and
- Geological exploration, surveying, assaying, information services, safety/loss control, environmental engineering.

## 7. Humanities

Non-scientific occupations such as personnel, industrial relations, law and public relations.

## 8. Medical and Health Care

All occupations relating to medicine and health care.

## 9. Services

Security, rescue, fire-fighting, accommodation, catering, personal care and transport.

## 10. Agriculture

- All occupations involved in growing things from the land;
- Land rehabilitation, forestry, other crops, livestock including wild game.

**1(b) Sub-disciplines**

Each discipline has been split into **sub-disciplines** using a two-digit code.

**1(c) Reserved codes**

00	Management
92	Project managers/officers
93	Students
94	Draughtsman and related
95	Clerks
96	Consultants
97	Researchers
98	Trainers
99	Unclassified

## APPENDIX 12

### ALLOCATED DAYS LOST

#### NATURE OF INJURY

*In some cases the injured person suffers different types of injuries to different body parts. In such cases the injury resulting in the most days lost must be used, unless it can be classified as multiple to the whole body.*

A	Amputation
B	Abrasion
C	Burn (flame)
D	Burn (chemical)
E	Burn (steam/hot substance)
F	Concussion
G	Crushing (injury)
H	Contusion bruises
I	Dislocation
J	Drowning
K	Dermatitis
L	Burn (electric)
M	Fracture
N	Foreign body/splinter
P	Gassing
Q	Heat exhaustion
R	Heat stroke
S	Hernia
T	Laceration
U	Multiple injury
V	Poisoning
W	Puncture
X	Asphyxiation
Z	Other
Y	Sprain/strain
AB	Blindness

#### PART OF BODY INJURED

##### Head/face and neck

- 1 Skull and scalp (occipital, frontal, maxilla)
- 2 Ear (malleus, otitis, barotrauma)
- 3 Eyes and orbit (eye socket)

\* Where blindness results, use code AB in Nature of Injury (ITEM 3) i.e. AB03= 6000 days lost

- 4 Nose and sinuses
- 5 Face (upper jaw, zygoma [cheekbone])
- 6 Lower jaw (teeth, mandible [lower jaw], ramus)
- 7 Neck (throat)

- 9 Multiple injuries to head, face and neck
- 60 Brain

### **Trunk**

- 10 Thorax (chest - excluding spinal region)
- 11 Thoracic (chest, spinal region, lungs, sternum, ribs)
- 12 Abdomen (including lumbar spine, back, vertebrae)
- 13 Anterior abdominal wall
- 14 Pelvic girdle (sacrum, coccyx, buttocks, hip)
- 15 External genital area (scrotum)
- 18 Other (specify)
- 19 Multiple injuries to trunk
- 20 Scapula (shoulder blade)
- 21 Collar bone (clavicle)
- 22 Shoulder (acromion)

### **Arms and hands**

- 23 Forearm (ulna, radius, extensor [muscle], indicis)
- 24 Elbow
- 25 Arm
- 26 Both arms
- 29 Multiple injuries to one arm only
- 30 Wrist (scaphoid, flexor, carpus [muscle], colles)
- 31 Palm (thenar)
- 32 Back of hand (including metacarpal bones, dorsum)
- 33 Thumb
- 34 Single finger
- 35 Thumb plus one or more fingers
- 36 Two or more fingers (excluding thumb)
- 37 Both hands injured
- 39 Multiple injuries to one hand (hand general)

### **Legs and feet**

- 40 Thigh (femur)
- 41 Knee joint (including patella)
- 42 Leg injured below the knee (fibula, tibia, shin)
- 43 Ankle (cuneiform, calcaneus, talus, cuboid, heel)
- 44 Foot (including toes)
- 45 Foot (excluding toes), metatarsal
- 46 Toes (one or more)
- 47 Whole of lower limb (whole leg)
- 48 Both feet
- 49 Both lower limbs (legs)

## Multiple

- 50 Multiple injuries to head, face, neck and trunk
- 51 Multiple injuries to head, face, neck and limbs
- 52 Multiple injuries to the entire body
- 53 Multiple injuries to the trunk and upper limb(s)
- 54 Multiple injuries to the trunk and lower limb(s)
- 55 Multiple injuries to the upper and lower limb(s)
- 56 Multiple injuries to the trunk, lower limbs and upper limbs
- 99 UNSPECIFIED

## Allocated days lost

The allocated days lost must be completed according to the nature of injury and body part injured, as reflected in the table in Appendix 9, e.g. a fracture (M) to the leg (42) is attributed 160 days lost.

A02 = 600	B01 = 31	C01 = 14	D01 = 14	E01 = 14	F60 = 51	G01 = 152	H01 = 31	I01 = 24
A04 = 600	B02 = 31	C02 = 14	D02 = 14	E02 = 14		G02 = 152	H02 = 31	I03 = 1800
A09 = 6000	B03 = 22	C03 = 48	D03 = 48	E03 = 48		G03 = 1800	H03 = 22	I04 = 24
A15 = 600	B04 = 31	C04 = 14	D04 = 14	E04 = 14		G04 = 152	H04 = 31	I05 = 24
A22 = 5000	B05 = 31	C05 = 14	D05 = 14	E05 = 14		G05 = 152	H05 = 31	I06 = 24
A23 = 3600	B06 = 31	C06 = 14	D06 = 14	E06 = 14		G06 = 152	H06 = 31	I07 = 24
A24 = 3600	B07 = 31	C07 = 14	D07 = 14	E07 = 14		G07 = 152	H07 = 31	I09 = 24
A25 = 4500	B09 = 31	C09 = 14	D09 = 14	E09 = 14		G09 = 152	H09 = 31	I11 = 27
A30 = 3000	B10 = 14	C10 = 14	D10 = 14	E10 = 14		G10 = 22	H10 = 14	I12 = 151
A33 = 600	B11 = 16	C11 = 21	D11 = 21	E11 = 21		G11 = 62	H11 = 16	I14 = 31
A34 = 300	B12 = 86	C12 = 21	D12 = 21	E12 = 21		G12 = 374	H12 = 86	I18 = 60
A35 = 1500	B13 = 16	C13 = 22	D13 = 22	E13 = 22		G13 = 200	H13 = 16	I19 = 60
A36 = 1200	B14 = 19	C14 = 21	D14 = 21	E14 = 21		G14 = 469	H14 = 19	I21 = 60
A37 = 6000	B15 = 16	C15 = 22	D15 = 22	E15 = 22		G15 = 200	H15 = 16	I22 = 266
A39 = 3000	B18 = 31	C18 = 48	D18 = 48	E18 = 48		G18 = 186	H18 = 31	I23 = 14
A40 = 4500	B19 = 31	C19 = 48	D19 = 48	E19 = 48		G19 = 186	H19 = 31	I24 = 16
A41 = 3000	B20 = 16	C20 = 21	D20 = 21	E20 = 21		G20 = 62	H20 = 16	I25 = 16
A42 = 2400	B21 = 31	C21 = 48	D21 = 48	E21 = 48		G21 = 186	H21 = 31	I26 = 266
A43 = 2400	B22 = 15	C22 = 16	D22 = 16	E22 = 16		G22 = 269	H22 = 15	I29 = 266
A44 = 2400	B23 = 14	C23 = 14	D23 = 14	E23 = 14		G23 = 127	H23 = 14	I30 = 14
A46 = 300	B24 = 14	C24 = 651	D24 = 651	E24 = 651		G24 = 246	H24 = 14	I32 = 16
A47 = 3000	B25 = 14	C25 = 651	D25 = 651	E25 = 651		G25 = 246	H25 = 14	I33 = 16
A48 = 6000	B26 = 15	C26 = 651	D26 = 651	E26 = 651		G26 = 269	H26 = 15	I34 = 16
A49 = 6000	B29 = 15	C29 = 651	D29 = 651	E29 = 651		G29 = 269	H29 = 15	I35 = 16
A53 = 6000	B30 = 14	C30 = 14	D30 = 14	E30 = 14		G30 = 127	H30 = 14	I36 = 16
A54 = 6000	B31 = 14	C31 = 86	D31 = 86	E31 = 86		G31 = 63	H31 = 14	I37 = 16
A55 = 6000	B32 = 14	C32 = 86	D32 = 86	E32 = 86		G32 = 63	H32 = 14	I39 = 16
A56 = 6000	B33 = 14	C33 = 86	D33 = 86	E33 = 86		G33 = 63	H33 = 14	I40 = 31
A99 = 1000	B34 = 14	C34 = 86	D34 = 86	E34 = 86		G34 = 63	H34 = 14	I41 = 31
AB03=6000	B35 = 14	C35 = 86	D35 = 86	E35 = 86		G35 = 63	H35 = 14	I43 = 83
	B36 = 14	C36 = 86	D36 = 86	E36 = 86		G36 = 63	H36 = 14	I44 = 14

	B37 = 14	C37 = 86	D37 = 86	E37 = 86		G37 = 63	H37 = 14	I45 = 14
	B39 = 14	C39 = 86	D39 = 86	E39 = 86		G39 = 63	H39 = 14	I46 = 14
	B40 = 14	C40 = 14	D40 = 14	E40 = 14		G40 = 469	H40 = 14	I48 = 14
	B41 = 14	C41 = 14	D41 = 14	E41 = 14		G41 = 469	H41 = 14	I99 = 103
	B42 = 14	C42 = 25	D42 = 25	E42 = 25		G42 = 160	H42 = 14	
	B43 = 14	C43 = 25	D43 = 25	E43 = 25		G43 = 160	H43 = 14	
	B44 = 14	C44 = 17	D44 = 17	E44 = 17		G44 = 50	H44 = 14	
	B45 = 14	C45 = 17	D45 = 17	E45 = 17		G45 = 50	H45 = 14	
	B46 = 14	C46 = 17	D46 = 17	E46 = 17		G46 = 50	H46 = 14	
	B47 = 17	C47 = 25	D47 = 25	E47 = 25		G47 = 469	H47 = 17	
	B48 = 14	C48 = 17	D48 = 17	E48 = 17		G48 = 50	H48 = 14	
	B49 = 17	C49 = 25	D49 = 25	E49 = 25		G49 = 469	H49 = 17	
	B50 = 31	C50 = 48	D50 = 48	E50 = 48		G50 = 186	H50 = 31	
	B51 = 31	C51 = 651	D51 = 651	E51 = 651		G51 = 469	H51 = 31	
	B52 = 31	C52 = 651	D52 = 651	E52 = 651		G52 = 469	H52 = 31	
	B53 = 31	C53 = 651	D53 = 651	E53 = 651		G53 = 269	H53 = 31	
	B55 = 17	C54 = 48	D54 = 48	E54 = 48		G54 = 469	H54 = 31	
	B56 = 31	C55 = 651	D55 = 651	E55 = 651		G55 = 469	H55 = 17	
	B60 = 152	C56 = 651	D56 = 651	E56 = 651		G56 = 469	H56 = 31	
	B99 = 20	C99 = 82	D99 = 82	E99 = 82		G60 = 152	H60 = 51	
						G99 = 583	H99 = 20	

J99 = 6000	K01 = 50	L01 = 14	M01 = 152	N01 = 14	P99 = 500	Q99 = 30	R99 = 2000	S10 = 39
	K02 = 50	L02 = 14	M02 = 152	N02 = 14				S11 = 39
	K03 = 50	L03 = 48	M03 = 1800	N03 = 191				S12 = 39
	K04 = 50	L04 = 14	M04 = 152	N04 = 14				S13 = 39
	K05 = 50	L05 = 14	M05 = 152	N05 = 14				S15 = 39
	K06 = 50	L06 = 14	M06 = 152	N06 = 14				S18 = 39
	K07 = 50	L07 = 14	M07 = 152	N07 = 14				S19 = 411
	K09 = 50	L09 = 14	M09 = 152	N09 = 14				S60 = 152
	K10 = 50	L10 = 14	M10 = 22	N10 = 17				
	K11 = 50	L11 = 21	M11 = 62	N11 = 17				
	K12 = 50	L12 = 21	M12 = 374	N12 = 16				
	K13 = 50	L13 = 22	M14 = 469	N13 = 175				
	K14 = 50	L14 = 21	M18 = 186	N14 = 23				
	K15 = 50	L15 = 22	M19 = 186	N15 = 175				

	K18 = 50	L18 = 48	M20 = 62	N18 = 14				
	K19 = 50	L19 = 48	M21 = 186	N19 = 14				
	K20 = 50	L20 = 21	M22 = 269	N20 = 14				
	K21 = 50	L21 = 48	M23 = 127	N21 = 14				
	K22 = 50	L22 = 16	M24 = 246	N22 = 23				
	K23 = 50	L23 = 14	M25 = 246	N23 = 14				
	K24 = 50	L24 = 651	M26 = 269	N24 = 14				
	K25 = 50	L25 = 651	M29 = 269	N25 = 14				
	K26 = 50	L26 = 651	M30 = 127	N26 = 23				
	K29 = 50	L29 = 651	M31 = 63	N29 = 23				
	K30 = 50	L30 = 14	M32 = 63	N30 = 14				
	K31 = 50	L31 = 86	M33 = 63	N31 = 17				
	K32 = 50	L32 = 86	M34 = 63	N32 = 17				
	K33 = 50	L33 = 86	M35 = 63	N33 = 17				
	K34 = 50	L34 = 86	M36 = 63	N34 = 17				
	K35 = 50	L35 = 86	M37 = 63	N35 = 17				
	K36 = 50	L36 = 86	M39 = 63	N36 = 17				
	K37 = 50	L37 = 86	M40 = 469	N37 = 17				
	K39 = 50	L39 = 86	M41 = 469	N39 = 17				
	K40 = 50	L40 = 14	M42 = 160	N40 = 23				
	K41 = 50	L41 = 14	M43 = 160	N41 = 23				
	K42 = 50	L42 = 25	M44 = 50	N42 = 14				
	K43 = 50	L43 = 25	M45 = 50	N43 = 14				
	K44 = 50	L44 = 17	M46 = 50	N44 = 14				
	K45 = 50	L45 = 17	M47 = 469	N45 = 14				
	K46 = 50	L46 = 17	M48 = 50	N46 = 14				
	K47 = 50	L47 = 25	M49 = 469	N47 = 23				
	K48 = 50	L48 = 17	M50 = 186	N48 = 14				
	K49 = 50	L49 = 25	M51 = 469	N49 = 23				
	K50 = 50	L50 = 48	M52 = 469	N50 = 14				
	K51 = 50	L51 = 651	M53 = 269	N51 = 23				
	K52 = 50	L52 = 651	M54 = 469	N52 = 23				
	K53 = 50	L53 = 651	M55 = 469	N53 = 23				
	K54 = 50	L54 = 48	M56 = 469	N54 = 23				
	K55 = 50	L55 = 651	M99 = 583	N55 = 23				
	K56 = 50	L56 = 651		N56 = 23				

	K99 = 50	L99 = 82		N60 = 51			
				N99 = 14			

T01 = 14	U01 = 152	V99 = 50	W01 = 14	X99 = 6000	Y07 = 19	Z01 = 34
T02 = 14	U02 = 152		W02 = 14		Y09 = 19	Z02 = 34
T03 = 164	U03 = 1800		W03 = 191		Y10 = 14	Z03 = 42
T04 = 14	U04 = 152		W04 = 14		Y11 = 23	Z04 = 34
T05 = 14	U05 = 152		W05 = 14		Y12 = 82	Z05 = 34
T06 = 14	U06 = 152		W06 = 14		Y13 = 39	Z06 = 34
T07 = 14	U07 = 152		W07 = 14		Y14 = 23	Z07 = 34
T09 = 14	U09 = 152		W09 = 14		Y18 = 22	Z09 = 34
T10 = 306	U10 = 22		W10 = 17		Y19 = 22	Z10 = 14
T11 = 21	U11 = 62		W11 = 17		Y20 = 23	Z11 = 14
T12 = 21	U12 = 374		W12 = 16		Y21 = 22	Z12 = 56
T13 = 35	U13 = 200		W13 = 175		Y22 = 36	Z13 = 210
T14 = 22	U14 = 469		W14 = 23		Y23 = 18	Z14 = 128
T15 = 35	U15 = 200		W15 = 175		Y24 = 14	Z15 = 210
T18 = 14	U18 = 186		W18 = 14		Y25 = 14	Z18 = 14
T19 = 14	U19 = 186		W19 = 14		Y26 = 36	Z19 = 14
T22 = 14	U20 = 62		W20 = 14		Y29 = 36	Z20 = 14
T23 = 35	U21 = 186		W21 = 14		Y30 = 18	Z21 = 14
T24 = 16	U22 = 269		W22 = 23		Y31 = 15	Z22 = 18
T25 = 16	U23 = 127		W23 = 14		Y32 = 15	Z23 = 14
T26 = 16	U24 = 246		W24 = 14		Y33 = 15	Z24 = 14
T29 = 16	U25 = 246		W25 = 14		Y34 = 15	Z25 = 14
T30 = 35	U26 = 269		W26 = 23		Y35 = 15	Z26 = 18
T31 = 33	U29 = 269		W29 = 23		Y36 = 15	Z29 = 18
T32 = 33	U30 = 127		W30 = 14		Y37 = 15	Z30 = 14
T33 = 33	U31 = 63		W31 = 17		Y39 = 15	Z31 = 19
T34 = 33	U32 = 63		W32 = 17		Y40 = 17	Z32 = 19
T35 = 33	U33 = 63		W33 = 17		Y41 = 17	Z33 = 19
T36 = 33	U34 = 63		W34 = 17		Y42 = 14	Z34 = 19
T37 = 33	U35 = 63		W35 = 17		Y43 = 14	Z35 = 19
T39 = 33	U36 = 63		W36 = 17		Y44 = 18	Z36 = 19
T40 = 22	U37 = 63		W37 = 17		Y45 = 18	Z37 = 19
T41 = 22	U39 = 63		W39 = 17		Y46 = 18	Z39 = 19

T42 = 41	U40 = 469		W40 = 23	Y47 = 38	Z40 = 128
T43 = 41	U41 = 469		W41 = 23	Y48 = 18	Z41 = 128
T44 = 20	U42 = 160		W42 = 14	Y49 = 38	Z42 = 14
T45 = 20	U43 = 160		W43 = 14	Y50 = 22	Z43 = 14
T46 = 20	U44 = 50		W44 = 14	Y51 = 38	Z44 = 14
T47 = 41	U45 = 50		W45 = 14	Y52 = 38	Z45 = 14
T48 = 20	U46 = 50		W46 = 14	Y53 = 36	Z46 = 14
T49 = 41	U47 = 469		W47 = 23	Y54 = 38	Z47 = 128
T50 = 14	U48 = 50		W48 = 14	Y55 = 38	Z48 = 14
T51 = 41	U49 = 469		W49 = 23	Y56 = 38	Z49 = 128
T52 = 41	U50 = 186		W50 = 14	Y99 = 16	Z50 = 34
T53 = 35	U51 = 469		W51 = 23		Z51 = 128
T54 = 41	U52 = 469		W52 = 23		Z52 = 128
T55 = 41	U53 = 269		W53 = 23		Z53 = 18
T56 = 41	U54 = 469		W54 = 23		Z54 = 128
T60 = 152	U55 = 469		W55 = 23		Z55 = 128
T99 = 14	U56 = 469		W56 = 23		Z56 = 128
	U60 = 152		W60 = 14		Z60 = 51
	U99 = 583		W99 = 14		Z99 = 19

## APPENDIX 13

### SIGNIFICANT RISK

Section 11 of the Mine Health and Safety Act (MHSA) requires the *employer* to assess and respond to risk.

11 (1) Every *employer* must-

- a) identify the *hazards* to *health* or *safety* to which employees may be exposed while they are at work;
- b) assess the *risk* to *health* and *safety* to which employees may be exposed while they are at work;
- c) *record* the significant *hazards* identified and *risks* assessed; and
- d) make these records available for inspection by employees.

Section 102 of the MHSA defines the terms *hazard* and *risk* as follows:

"*Hazard*" means a source of or exposure to danger

"*risk*" means the likelihood that occupational injury or harm to persons will occur

The term "Significant" is defined in the Oxford Dictionary as being "noteworthy, of considerable amount or considerable effect or considerable importance"

Several of the dangerous occurrences refer to an incident occurring "which may pose significant risk to the safety of persons at a mine."

It is not possible to legislate the definition of significant risk, as this will invariably differ from mine to mine, commodity to commodity or even operation to operation. It is therefore the duty of every *employer* to conduct a risk assessment as required in terms of Section 11 of the MHSA to determine the significant risks to the safety of persons at that particular mine.

For example, a runaway vehicle may pose a significant risk to a large opencast mine, but will in all likelihood be an insignificant risk at a small salt mine. Similarly a diamond mine may be exposed to the significant risk of an inrush of water while a small quarry would not be faced with that particular problem. It is often possible that an incident could occur where no persons are present, thereby not posing any risk at all. Under slightly different circumstances such as at a later time, or when persons are nearby, the same incident could occur and persons are injured or exposed to significant risk.

It is therefore the duty of the *employer* to ensure that he has identified all the hazards on that mine which may pose a significant risk to the health and/or safety of persons at that mine, and to ensure that any dangerous occurrences that occur are reported in terms of this regulation.

APPENDIX 14

ALPHABETICAL CROSS REFERENCE: CLASS OF PLACE

Place	Code	
Acclimatisation area		021101
Adit		020609
At sea		050001
Backfill dams	Underground	020801
Battery charging stations		021015
Berm		030101
Blacksmith shop	Underground	021001
Block caving/sub-level caving/sub-level stoping		020124
Boilermaking or welding shop	Underground	021002
Bord and pillar (Continuous Miner)		020103
Boxhole or orepass/muckbay (Mineral Excavation)		020111
Boxhole or orepass (Mine Development)		020201
Boxhole or orepass (Shaft Area)		020601
Bunker		020806
Cage/skip/conveyance		020720
Carpenter shop	Underground	021003
Centre gully		020112
Chairlift		020901
Compressed air plant		020401
Conveyor belt roadway		020902
Conveyor discharge point	Underground	020903
Conveyor discharge point	Opencast	030201
Conveyor loading point	Underground	020904
Conveyor loading point	Opencast	030202
Conveyor transfer point	Opencast	030203
Conveyor transfer point (belt to belt)	Underground	020905
Crosscut		020906
Crosscut or drawpoint crosscut		020202
Cut and fill		020122
Dam or sump	Underground	020802
Dam reclamation		040101
Development or reef drive		020203
Diving vessels	Aquatic	050003
Dredges	Aquatic	0500070
Drill sharpening shop	Underground	021004

Electrical reticulation network		020301
Electrical shop	Underground	021005
Endless rope haulage	Underground	020907
Explosives store/magazine	Underground	020803
First aid station		020602
Fitting shop	Underground	021006
Floating process vessels	Aquatic	050004
Garage (motor vehicles)	Underground	021007
Goaf		020104
Haul road	Opencast	030204
Haul road/travelling Way	Underground	020908
Haulage (Mine Development)		020204
Haulage (Transport Systems)		020909
Headgear tipping point (vertical/inclined)		020701
Hoist chamber		020402
Inclined shaft headgear	Underground	020704
Inclined shaft loading box		020705
Ledging stope		020113
Loading box/muckbay	Underground	020910
Loading station		020706
Loco shed or repair bay	Underground	021008
Longwall		020105
Maintenance/service bay		030301
Mono winch way		020911
Open stopes		020123
Opencast		030102
Other workshops (not repair bays)	Underground	021013
Overland conveyor way	Opencast	030205
Pit bottom		030103
Plumber shop	Underground	021010
Pumpstation	Underground	020403
Railway line	Underground	020912
Railway line		030206
Raise (incl. Poleway)		020205
Raise borer (shaft)		020707
Raisebore hole (excl. shafts)		020206
Refrigeration/chilled ice	Underground	020501
Refuelling bays		021014
Refuge chamber (Shaft Area)		020604
Refuge chamber (Other Areas)		021102
Residue deposition (ashfilling/backfilling)		020804

Return Airway (Mineral Excavation)		020110
Return Airway (Mine Development)		020207
Rib pillar		020106
Ringtunnel		020208
River mining		050006
Service bay	Underground	021011
Shaft station		020708
Shaft station tip		020605
Shortwall		020107
Siding	Opencast	030207
Sinking shaft		020709
Sinking stage		020714
Stooping		020108
Stope entrance/travelling way		020114
Stope reclamation area		020115
Stope worked out area		020117
Stope working face (panel)		020116
Stores	Underground	020805
Strike gully or cutting		020118
Substation	Underground	020302
Surface operations		01
Surface working/processing		040102
Tip	Mineral excavation	020119
Tips	Transport system	
		020913
Tips/ore passes/chutes		030208
Underground crusher		020404
Training area		021103
Travelling road		020109
Travelling way (stope proper)		020120
Updip stope		020121
Vehicle maintenance	Underground	021012
Vertical shaft		020715
Waiting place (Mineral Excavation)		020125
Waiting place (Shaft Area)		020608
Waste dump reclamation		040103
Water purification	Underground	020502
Winze		020209

APPENDIX 15

NUMERICAL INDEX FOR OCCUPATIONS

MISCO CODE	OCCUPATION	
00000	Chairman (group)	
00000	Chief executive	
00000	Executive director (n.e.c.)	
00101	General manager (mine)	
00101	Mine manager	
00101	Offshore Installation manager (Ocean)	
00102	General manager (company)	
00199	General management (n.e.c.)	
00200	Strategic planning management	
00201	Strategic planning analyst	
00295	Clerk (strategic planning)	
00299	Strategic planning worker (n.e.c.)	
09801	Pool gang worker	
09992	Project manager/officer (general management n.e.c.)	
09996	Consultant (general management n.e.c.)	
09997	Researcher (general management n.e.c.)	
09998	Trainer (general management n.e.c.)	
09999	Unclassified occupation (unknown/no specific skill)	
10000	Administrative/financial management (multi-disciplinary)	
10000	Financial/administrative management (multi-disciplinary)	
10001	Business management	
10099	Administrative/financial management (n.e.c.)	
10100	Auditing management	
10101	Auditor (internal and external)	
10102	Auditor (computer/systems)	
10195	Clerk (auditing)	
10199	Auditing worker (n.e.c.)	
10200	Accounting/financial management	
10200	Financial/accounting management	
10201	Financial analyst	
10202	Financial engineer	
10203	Management accountant	
10203	Systems accountant	
10204	Financial accountant	
10205	Cost accountant	
10205	Cost controller	
10205	Economy controller	
10206	Accountant (n.e.c.)	
10207	Credit controller	
10208	Bookkeeper	
10209	Cashier	
10295	Clerk (accounts/finance)	

10299	Accounting/financial worker (n.e.c.)	
10300	Purchasing/stores management	
10300	Stores/purchasing management	
10310	Stores controller	
10311	Standards officer	
10312	Buyer/purchaser	
10312	Purchaser/buyer	
10313	Receiver (stores)	
10313	Stores receiver	
10314	Storekeeper	
10315	Inventory controller	
10316	Issuer (stores, non-explosive)	
10316	Stores issuer (non-explosive)	
10317	Explosives issuer	
10317	Issuer (explosives)	
10317	Magazine master	
10318	Yard supervisor	
10319	Salvage yard aide	
10320	Salvage and reclamation worker (surface)	
10321	Yard worker (n.e.c.)	
10395	Checker	
10395	Clerk (stores)	
10395	Weighbridge attendant	
10399	Stores worker (n.e.c.)	
10400	Payroll management	
10401	Payroll controller	
10402	Payroll administrator	
10403	Timekeeper	
10404	Paymaster	
10495	Clerk (payrole/timekeeping)	
10499	Payroll worker (n.e.c.)	
10500	Insurance management	
10510	Valuator	
10511	Assessor	
10595	Clerk (insurance)	
10596	Insurance adviser	
10599	Insurance worker (n.e.c.)	
10600	Property/mining rights management	
10601	Property broker	
10602	Property/mining rights officer	
10695	Clerk (property/mining rights)	
10699	Property/mining rights worker (n.e.c.)	
10700	Economics management	
10701	Financial economist	
10702	Economist (n.e.c.)	
10703	Economics assistant	
10795	Clerk (economics)	
10799	Economics worker (n.e.c.)	

10800	Marketing and sales management	
10810	Marketing officer	
10811	Sales representative	
10812	Marketing assistant	
10895	Clerk (marketing/sales)	
10899	Marketing/sales worker (n.e.c.)	
10900	Administration/secretarial management	
10900	Company secretary (administrative)	
10900	Mine secretary (administrative)	
10900	Secretarial/administration management	
10901	Corporate secretary (administrative)	
10902	Hospital secretary	
10903	Administrative officer	
10904	Filing/records officer	
10904	Records/filing officer	
10905	Personal assistant/secretary	
10905	Secretary/personal assistant	
10906	Receptionist/typist/word processor operator	
10906	Typist/word processor operator/receptionist	
10906	Word processor operator/typist/receptionist	
10907	Duplicator	
10995	Clerk (filing, general n.e.c.)	
10999	Secretarial/administrative worker (n.e.c.)	
11010	Messenger/postal worker	
11010	Postal worker/messenger	
11011	Telephonist	
11012	Radio operator	
11099	Telecommunications worker (n.e.c.)	
11100	Banking/investment management	
11110	Stockbroker	
11111	Share transfer officer	
11112	Securities officer	
11113	Money market dealer	
11114	Banking Officer	
11195	Clerk (banking/investment)	
11199	Banking/investment worker (n.e.c.)	
11295	Clerk (tax)	
11296	Consultant (tax)	
19910	Encoder	
19992	Project manager (administrative/financial n.e.c.)	
19993	Student (administrative/financial n.e.c.)	
19996	Consultant (administrative/financial n.e.c.)	
19998	Trainer (administrative/financial n.e.c.)	
19999	Administrative/financial/business worker (n.e.c.)	
20000	Consulting engineer (mining)	
20001	Production/section/underground manager	
20001	Section/production/underground manager	
20001	Underground/production/section manager	

20002	Mine overseer	516B
20099	Mine production management (n.e.c.)	
20100	Planning management (mining)	
20101	Mine planning/valuation engineer	
20102	Planning officer	
20103	Critical path scheduler	
20104	Planning observer	
20195	Clerk (mining planning)	
20199	Planning worker mining (n.e.c.)	
20201	Mining engineer (n.e.c.)	239A
20202	Learner official (mining)	
20210	Mining technician (n.e.c.)	
20211	Technical assistant (mining n.e.c.)	
20299	Conveyer worker (n.e.c.)	
20299	Mining technical worker (n.e.c.)	
20301	Shaft foreman	515A
20302	Shift boss	
20303	Developer	
20304	Stoper	
20305	General miner	513D
20305	Miner (general)	
20306	Blaster (supervisory)	
20307	Quarryman	
20308	Night shift cleaner	
20309	Learner miner	
20310	Development team leader/supervisor	
20311	Stope team leader/supervisor	
20312	Team leader/supervisor (other mining production)	
20312	Tool pusher (Ocean)	
20313	Deck leader (Ocean)	
20314	Shift foreman	
20399	Mine production supervisor (n.e.c.)	
20401	Drill rig operator (jumbo)	
20402	Rockdrill operator/driller: hand percussion/jackhammer	
20403	Driller: hand (coal)	
20404	Driller: opencast/large diameter	
20405	Driller's assistant	
20406	Wireline operator (Ocean)	
20499	Drilling worker (n.e.c.)	
20501	Blaster: underground metal (non-supervisory)	
20502	Blaster: opencast/quarry (non-supervisory)	
20503	Blaster: surface works (e.g. smelter) (non-supervisory)	
20504	Miner's assistant (cheesa)	513A
20599	Blasting worker (n.e.c.)	
20601	Coal cutter operator	
20602	Continuous miner driver	879B
20603	Longwall sheerer operator	879K
20604	Coal auger operator	

20605	Coal plough operator	
20606	Raise/tunnel borer supervisor	
20607	Raise/tunnel borer operator	
20699	Mechanical rockbreaking worker (n.e.c.)	
20701	Development team worker	511C
20702	Stope team worker	
20703	Pit worker	
20799	Rock breaking worker (n.e.c.)	
20801	Hydraulic prop teamleader/supervisor	
20802	Hydraulic prop worker	
20803	Meshing and lacing team leader/supervisor	
20804	Meshing and lacing worker	
20804	Shotcrete worker	
20805	Backfill worker	
20806	Roof bolt machine operator	
20807	Roof bolt worker	
20899	Rock support worker (n.e.c.)	
20901	Scraper winch driver	
20902	Scraper winch bell operator	
20999	Scraping worker (n.e.c.)	
21001	Haulage team leader/supervisor	
21002	Loco driver (underground)	
21003	Loco guard (underground)	
21004	Loader driver (rail)	
21099	Haulage/underground rail transport worker (n.e.c.)	
21101	Dragline supervisor	
21101	Trackless machine team leader/supervisor	
21102	Dragline operator	
21103	Driver: bulldozer	
21104	Loader driver (trackless)	
21105	Shovel operator	
21106	Load haul dump driver	
21107	Self-propelled machine driver (n.e.c.)	
21108	Shuttlecar driver	879I
21109	Driver: haul truck (underground and opencast)	
21198	Trackless machine trainer (e.g. dragline)	
21199	Trackless machine worker (n.e.c.)	
21201	Conveyer belt team leader/supervisor	
21202	Conveyer belt attendant	857E
21301	Winding engine driver (licensed)	
21302	Hoist driver	818D
21303	Skipman	
21304	Banksman/onsetter	
21304	Onsetter/banksman	519B
21305	Bell signaller	
21306	Lift operator	
21307	Chairlift operator	
21308	Monorail winch operator	

21309	Monorope winch operator	
21310	Monorope worker	
21399	Hoisting worker (n.e.c.)	
21401	Grab operator	
21402	Stacker operator	
21403	Reeler	
21404	Box/orepass controller	
21404	Rockpass/Orepass/box controller	
21405	Tip team leader/supervisor	
21406	Aquajet operator	879L
21406	Tip worker	
21499	Mine transport worker (n.e.c.)	
21501	Shaft sinker	515B
21502	Shaft timberman/timberman	
21503	Shaft timberman worker	518D
21504	Equipper	
21504	Handyman (mining)	792C
21505	Pipes and tracks team leader/supervisor	
21506	Pipes and tracks worker	518B
21507	Air and water services team leader/supervisor	
21508	Air and water services worker	
21509	Stage worker	
21510	Mine construction team leader/supervisor (n.e.c.)	
21511	Tip attendant	
21599	Mine construction worker (n.e.c.)	
21601	Cementation supervisor	
21602	Cementation driller/injector	
21699	Cementation worker (n.e.c.)	
21699	Cementers (Ocean)	
29901	Section leader	
29902	Supervisor's assistant (underground)	
29903	Sweeper/vamper	
29904	Stone packer	
29905	Lasher/loader (n.e.c.)	753D
29906	Drains cleaner	759A
29907	Salvage/reclamation worker (underground)	
29908	Day pusher (Ocean)	
29908	Night pusher (Ocean)	
29909	Assistant driller (Ocean)	
29909	Roughneck (Ocean)	
29910	Deck attendant (Ocean)	
29911	Diver (Ocean)	
29992	Project manager/officer (mining, n.e.c.)	
29993	Student (mining production n.e.c.)	
29994	Draughtsperson (mining production n.e.c.)	
29995	Clerk (mining) (n.e.c.)	
29996	Consultant (mining production n.e.c.)	
29997	Researcher (mining production n.e.c.)	

29998	Trainer (mining production n.e.c.)	
29999	Mine production worker (n.e.c.)	
30000	Metallurgical/plant management	
30001	Metallurgical/plant superintendent	
30002	Metallurgical/plant supervisor	
30003	Consulting metallurgist	
30099	Reduction/beneficiation/manufacturing management (n.e.c.)	
30101	Metallurgist	232F
30102	Metallurgy technician (extractive)	
30103	Metallurgical official (n.e.c.)	
30104	Pupil metallurgist	
30105	Learner official (metallurgy)	
30110	Amalgamator	
30199	Metallurgical worker (n.e.c.)	
30201	Plant/reduction official	
30201	Reduction/plant official	
30202	Control room operator	
30203	Process controller	
30204	Plant team leader/supervisor	
30205	Beltsman	857C
30206	Sorter	
30207	Crusher attendant	
30208	Milling worker	
30209	Screensman	
30210	Grinderman/pulveriser	
30210	Pulveriser/grinderman	
30211	Coal preparation worker	
30212	Crusher supervisor	
30299	Plant worker (n.e.c.)	
30301	Filter team leader/supervisor	
30302	Filter operator/worker	
30399	Concentration/flotation worker (n.e.c.)	
30401	Uranium plant official	
30402	Acid plant official	
30403	Cyanidation team leader/supervisor	
30404	Acid plant worker	
30405	Cyanidation worker	
30406	Dryerman	
30407	Leaching worker	
30408	Stripper operator	
30409	Uranium plant worker	
30410	Ventilation/construction team leader	
30411	Ventilation/construction worker	
30499	Chemical process worker (n.e.c.)	
30501	Smelter	
30502	Smelter team leader/supervisor	
30503	Smelter worker	
30504	Kilnman	

30505	Cupolaman	
30506	Ladleman	
30507	Caster	
30508	Calcinating worker	
30509	Coking plant attendant	
30599	Furnace worker (n.e.c.)	
30601	Refiner	
30699	Refining worker (n.e.c.)	
30701	Dumpsman	
30702	Dump team leader/supervisor	
30703	Dump worker	
30704	Slimes dam team leader/supervisor	
30705	Slimes dam worker	
30799	Slimes dam/dump worker (n.e.c.)	
34510	Tailor	
35010	Butcher	
35020	Baker	
35110	Beer maker	
35710	Sawyer	
35900	Paper manufacturing management	
35910	Assopulp worker	
35911	Paper maker	
35912	Paper tester	
35913	Wrapper	
35999	Timber, pulp and paper worker (n.e.c.)	
36000	Printing management	
36001	Printing supervisor	
36010	Lithographer	
36011	Printer (n.e.c.)	
36012	Printing machine operator	
36013	Guillotine operator	
36014	Collator	
36015	Book binder	
36095	Clerk (printing)	
36099	Printing worker (n.e.c.)	
36710	Brick maker	
39992	Project manager/officer (reduction/beneficiation/manufacturing)	
39993	Student (metallurgy/beneficiation/manufacturing n.e.c.)	
39995	Clerk (metallurgical plant)	
39996	Consultant(metallurgy/beneficiation/manufacturing n.e.c.)	
39997	Researcher (metallurgy/beneficiation/manufacturing n.e.c.)	
39998	Trainer (metallurgy/beneficiation/manufacturing n.e.c.)	
39999	Reduction/beneficiation/manufacturing worker (n.e.c.)	
40000	Consulting engineer (engineering support)	
40001	Engineering management (multi-disciplinary)	
40002	General engineering supervisor	
40003	Planned maintenance foreman	
40004	Engineering foreman (n.e.c.)	

40099	Engineering management (n.e.c.)	
40100	Planning management (engineering)	
40101	Planning officer (engineering)	
40102	Designer (engineering)	
40103	Model maker	
40104	Estimator/calculator	
40195	Clerk (engineering planning)	
40199	Planning worker: engineering (n.e.c.)	
40201	Engineer (n.e.c.)	
40202	Engineering inspector	
40203	Engineering technician (n.e.c.)	
40204	Technical assistant (engineering) (n.e.c.)	
40205	Engineering assistant (n.e.c.)	
40206	Learner official (engineering, n.e.c.)	
40208	Learner operative	
40299	Engineering technical worker (n.e.c.)	
40300	Electrical engineering management	
40301	Electrical engineer	
40302	Junior engineer (electrical engineering)	
40303	Learner official (electrical engineering)	
40310	Electrical technician	429A
40311	Electronic technician	
40312	Electrician: foreman	
40313	Electrician: chargehand	
40314	Electrician	425A
40315	Electrician: apprentice	425Y
40316	Electrician: underground/ground section	
40317	Electrician: aide	425Z
40318	Electrician: worker (n.e.c.)	
40319	Auto electrician	
40320	Armature winder	
40321	Instrument engineer	
40322	Instrument technician	
40323	Instrument mechanician (industrial): foreman	
40324	Instrument mechanician (industrial): chargehand	
40325	Instrument mechanician (industrial)	
40326	Instrument mechanician (industrial): apprentice	
40327	Radio mechanician	
40340	Electrical foreman (other n.e.c.)	
40341	Electrical chargehand (other, n.e.c.)	
40342	Electrical tradesman (other n.e.c.)	
40343	Cable joiner	
40344	Fan attendant	
40345	Lampsman	755B
40346	Lamp room team leader /supervisor	
40347	Lamp room worker	
40394	Draughtsperson (electrical engineering)	
40398	Trainer (electrical engineering)	

40399	Electrical engineering worker (n.e.c.)	
40400	Mechanical engineering management	
40401	Mechanical engineer	
40402	Junior engineer (mechanical engineering)	
40403	Learner official (mechanical engineering)	
40407	Junior engineer (n.e.c)	
40410	Mechanical technician	439B
40410	Mechanic (Ocean)	
40411	Hydraulic technician	
40412	Air conditioning/refrigeration engineer	
40412	Refrigeration/air conditioning engineer	
40413	Air conditioning/refrigeration mechanic	
40413	Refrigeration/air conditioning mechanic	
40414	Refrigeration plant team leader/supervisor	
40415	Refrigeration plant operator	
40420	Blacksmith: foreman	
40421	Blacksmith: chargehand	
40422	Blacksmith	430B
40423	Blacksmith: operative	
40424	Blacksmith: apprentice	430A
40425	Blacksmith: worker (n.e.c.)	
40426	Fitter and turner: foreman	
40427	Fitter and turner: chargehand	
40428	Fitter and turner	433B
40429	Fitter and turner: apprentice	433Y
40430	Fitter (including machining) foreman	
40431	Fitter (including machining): chargehand	
40432	Fitter (including machining)	
40433	Fitter apprentice (including machining)	
40434	Fitter: operative (Grade 1)	
40435	Fitter: operative aide (Grade 2)	
40436	Fitter: worker (n.e.c.)	
40437	Electro mechanic/millwright/minewright	
40437	Millwright/electro mechanic/minewright	434Y
40445	Plater/boilermaker: foreman	
40446	Plater/boilermaker: chargehand	
40447	Plater/boilermaker	
40448	Plater	
40449	Plater/boilermaker: apprentice	
40450	Boilermaker: operative (Grade 1)	431A
40451	Boilermaker aide: operative (Grade 2)	
40452	Plater/boilermaker: worker (n.e.c.)	
40453	Plater/welder: foreman	
40454	Plater/welder: chargehand	
40455	Plater/welder	
40456	Welder	438C
40457	Plater/welder: apprentice	
40458	Plater/welder: worker (n.e.c.)	

40459	Sheetmetal worker	
40470	Panelbeater	547B
40471	Motor mechanic: foreman	
40472	Motor mechanic: chargehand	
40473	Motor mechanic	
40474	Motor mechanic: apprentice	
40475	Diesel mechanic: foreman	
40476	Diesel mechanic: chargehand	
40477	Diesel mechanic	
40478	Diesel mechanic: apprentice	
40479	Motor/diesel mechanic: operative	
40480	Garage mechanic: aide	
40481	Garage serviceman	
40482	Garage worker (n.e.c.)	
40501	Diecaster	
40502	Forger	
40503	Patternmaker	
40504	Moulder	
40505	Founder	
40506	Rigger and ropeman: foreman	
40507	Rigger and ropeman: chargehand	
40508	Rigger and ropeman	
40509	Rigger and ropeman: apprentice	435Y
40510	Rigger: aide	
40511	Rigger and ropeman: worker (n.e.c.)	
40512	Toolmaker	
40520	Mechanical foreman (other, n.e.c.)	
40521	Mechanical charge hand	
40522	Mechanical tradesman (other, n.e.c.)	
40523	Rubber reliner	
40524	Winch transporter/erector	
40525	Winch transporter team leader	
40526	Shot blast operator	
40527	Drillsmith	
40528	Drill sharpener	430C
40529	Press operator	663A
40530	Power hammer operator	
40531	Pump team leader/supervisor	
40532	Pump worker	
40540	Saw doctor	
40541	Sawmill mechanic	
40542	Saw sharpener	
40543	Motorman (Ocean)	
40594	Draughtsperson (mechanical engineering)	
40598	Trainer (mechanical engineering)	
40599	Mechanical engineering worker (n.e.c.)	
40600	Civil engineering management	
40601	Civil engineer	

40602	Junior engineer (civil engineering)	
40610	Civil engineering technician	
40611	Clerk of works	
40612	Town planner	
40613	Quantity surveyor	
40614	Bricklayer	470A
40615	Builder	
40616	Building worker: operative	
40617	Bricklayer: aide	470Z
40618	Building worker (n.e.c.)	
40619	Carpenter and joiner: foreman	
40620	Carpenter and joiner: chargehand	
40621	Carpenter	411A
40622	Carpenter and joiner	
40623	Carpenter and joiner: apprentice	
40624	Carpenter: aide	411Z
40625	Carpenter: worker (n.e.c.)	
40626	Mason	
40627	Mason aide	
40628	Plasterer	475A
40629	Paver	
40630	Plumber: foreman	
40631	Plumber: chargehand	
40632	Plumber	544C
40633	Plumber: apprentice	
40634	Plumber: operative	
40635	Plumber: aide	
40636	Plumber: worker (n.e.c.)	
40637	Painter and decorator	534A
40638	Painter and decorator: worker (n.e.c.)	
40639	Signwriter	
40650	Civil/building foreman (other n.e.c.)	
40651	Civil/building chargehand (other, n.e.c.)	
40652	Civil/building tradesman (other, n.e.c.)	
40653	Maintenance supervisor	
40654	Handyman (maintenance)	
40655	Road builder	
40656	Ganger/plate/tracklayer (main line)	751A
40656	Plate/track layer/ganger (main line)	
40656	Track/plate layer/ganger (main line)	
40694	Draughtsperson (civil engineering)	
40698	Trainer (civil engineering)	
40699	Civil engineering worker (n.e.c.)	
40700	Chemical engineering management	
40701	Chemical engineer	
40794	Draughtsperson (chemical engineering)	
40798	Trainer (chemical engineering)	
40799	Chemical engineering worker (n.e.c.)	

40800	Energy systems management	
40801	Energy systems team leader/supervisor	
40802	Electricity generator worker	
40803	Boiler attendant	431Y
40804	Compressor attendant	
40805	Energy systems officer	
40899	Energy systems worker (n.e.c.)	
40900	Water, effluent and sanitation management	
40901	Water, effluent and sanitation team Leader/supervisor	
40902	Water treatment operator	
40903	Sewage plant operator	
40904	Sanitation worker	
40905	Disinfestation worker	
40906	Refuse collector	
40907	Water, effluent and sanitation officer	
40999	Hygiene services worker (n.e.c.)	
49901	Engineering team leader (n.e.c.)	
49902	Contractor (outside)	
49903	Cutter	
49992	Project manager/officer (engineering n.e.c.)	
49993	Student (engineering n.e.c.)	
49994	Draughting technician	
49994	Draughtsperson (n.e.c.)	
49994	Tracer (n.e.c.)	
49995	Clerk (engineering)	
49996	Consultant (engineering n.e.c.)	
49997	Researcher (engineering n.e.c.)	
49998	Trainer (general engineering n.e.c.)	
49999	General engineering worker (n.e.c.)	
50000	Scientific/technical management (multi-disciplinary)	
50001	Technical services management	
50099	Scientific/technical management (n.e.c.)	
50100	Geological management	
50101	Geologist	240A
50102	Geophysicist	
50103	Geochemist	
50104	Mineralogist	
50105	Sedimentologist	
50106	Magnetometer specialist	
50107	Prospector	
50108	Geology technician	
50109	Geological observer/field assistant	
50110	Diamond driller	
50111	Diamond drill team leader/supervisor	
50112	Diamond drill worker	
50113	Learner official (geology)	
50193	Student (geology)	
50194	Draughtsperson (geological)	

50195	Clerk (geology)	
50199	Geological worker (n.e.c.)	
50200	Survey management	
50201	Surveyor (land)	
50202	Surveyor (mine)	
50203	Sampler	
50204	Sample worker	
50205	Model maker (survey)	
50206	Sandblaster	
50294	Draughtsperson (survey)	
50295	Clerk (survey)	
50299	Survey worker (n.e.c.)	
50300	Rock mechanics management	
50301	Rock mechanics engineer	
50302	Rock mechanics officer	
50303	Strata control officer	
50304	Strata control observer	
50305	Seismologist	
50306	Seismic network technician	
50395	Clerk (rock mechanics)	
50397	Researcher (rock mechanics)	
50399	Rock mechanics worker (n.e.c.)	
50400	Laboratory manager/superintendent	
50401	Assayer	232D
50402	Chemist	
50403	Assay technician	
50404	Chemist technician	
50405	Laboratory technician	
50406	Laboratory assistant	249A
50407	Spectrographer	
50408	Grade officer	673A
50409	Learner official (assay/chemistry)	
50499	Assay/chemistry/laboratory worker (n.e.c.)	232C
50500	Information services management	
50501	Development management (hardware)	
50502	Development management (software)	
50503	Business analyst (computers)	
50504	Systems analyst	
50505	Computer programmer	
50506	Facilities management (computers)	
50507	Operations/network operator (computers)	
50508	Computer operator	
50509	Data controller (computers)	
50510	Data capture supervisor	
50511	Data capture typist	
50512	Systems/network programmer	
50513	Database administrator	
50514	Database technician	

50515	Network technician (computers)	
50516	Information centre management (computers)	
50517	PC programmer/product specialist	
50518	User support (computers)	
50598	Trainer (computers)	
50599	Info services/computer worker (n.e.c.)	
50600	Statistics management	
50601	Statistician	
50602	Statistical officer	
50695	Clerk (statistics)	
50699	Statistical worker (n.e.c.)	
50700	Industrial engineering management	
50701	Industrial engineer	
50702	Industrial engineering technician	
50703	Operations research officer	
50704	Industrial engineering officer	
50705	Productivity officer	
50706	Work study officer	
50707	Work study observer/assistant	
50795	Clerk (industrial engineering)	
50799	Industrial engineering worker (n.e.c.)	
50800	Safety/loss control management	
50801	Safety/loss control officer	
50802	Safety/loss control auditor	
50803	Safety/loss control observer/assistant	
50895	Clerk (safety/loss control)	
50898	Trainer (safety/loss control)	
50899	Safety/loss control worker (n.e.c.)	
50900	Architectural management	
50901	Architect	
50902	Architectural assistant	
50994	Draughtsperson (architectural)	
50995	Clerk (architectural)	
50999	Architectural worker (n.e.c.)	
51000	Environmental engineering management	
51001	Environmental engineer	
51002	Environmental superintendent	
51003	Environmental officer	
51004	Environmental assistant	
51005	Environmental observer	
51006	Microscopist	
51007	Environmental construction supervisor	
51008	Environmental construction worker	
51095	Clerk (environmental)	
51099	Environmental worker (n.e.c.)	
59901	Technical services department (TSD) officer (n.e.c.)	
59992	Project manager/officer (scientific/technical n.e.c.)	
59993	Student (scientific/technical, n.e.c.)	

59994	Draughtsperson (technical services)	
59996	Consultant (scientific/technical, n.e.c.)	
59997	Researcher (scientific/technical, n.e.c.)	
59998	Trainer (scientific/technical, n.e.c.)	
59999	Scientific/technical worker (n.e.c.)	
60000	Humanities management (multi-disciplinary)	
60099	Humanities management (n.e.c.)	
60100	Personnel management	
60101	Personnel officer/practitioner	
60102	Personnel assistant/masiza	
60103	Labour controller	
60104	Psychologist (industrial)	
60105	Aptitude testing supervisor	
60106	Aptitude tester	
60195	Clerk (personnel)	
60199	Personnel worker (n.e.c.)	
60200	Industrial relations management	
60201	Industrial relations practitioner	
60202	Industrial relations assistant	
60203	Induna/tribal representative	
60203	Tribal representative/induna	
60295	Clerk (industrial relations)	
60299	Industrial relations worker (n.e.c.)	
60300	Training management	
60301	Training officer (n.e.c.)	
60302	Training assistant	
60395	Clerk (training)	
60398	Trainer/instructor (n.e.c.)	
60399	Training worker (n.e.c.)	
60400	Educational management	
60401	School principal	
60402	Teacher (secondary education)	
60403	Teacher (primary education)	
60404	Play school supervisor	
60404	Teacher (nursery education)	
60495	Clerk (school)	
60499	Educational/school worker (n.e.c.)	
60500	Employee assistance programme management	
60501	Psychologist (clinical)	
60502	Social worker	
60503	Welfare officer	
60504	Welfare assistant	
60595	Clerk (welfare)	
60599	Welfare worker (n.e.c.)	
60600	Legal management	
60601	Advocate/barrister	
60601	Barrister/advocate	
60602	Attorney/solicitor/conveyancer	

60602	Conveyancer/attorney/solicitor	
60602	Solicitor/attorney/conveyancer	
60603	Legal assistant	
60695	Clerk (legal)	
60699	Legal worker (n.e.c.)	
60700	Library management	
60701	Librarian	
60702	Library assistant	
60795	Clerk (library)	
60799	Library worker (n.e.c.)	
60800	Public relations management	
60801	Public relations officer	
60802	Diplomatic/political liaison officer	
60803	Public relations assistant	
60804	Tour guide	
60805	Cinema/video operator	
60895	Clerk (public relations)	
60899	Public relations worker (n.e.c.)	
60900	Producer/director (creative arts)	
60901	Editor	
60902	Journalist/writer	
60902	Writer/journalist	
60903	Translator	
60904	Graphic artist	
60905	Entertainer	
60905	Musician	
60905	Performing artist	
60906	Photographer	
60907	Television cameraman	
60908	Media technician	
60995	Clerk (creative arts)	
60999	Creative worker (n.e.c.)	
61000	Sports/recreation management	
61001	Sports/recreation officer	
61002	Sports/recreation assistant	
61095	Clerk (sports/recreation)	
61099	Sports worker (n.e.c.)	
69992	Project manager/officer (humanities n.e.c.)	
69993	Student (humanities n.e.c.)	
69996	Consultant (humanities n.e.c.)	
69997	Researcher (humanities n.e.c.)	
69998	Trainer (humanities n.e.c.)	
69999	Humanities worker (n.e.c.)	
70000	Medical/health care management (multi-disciplinary)	
70001	Medical advisor	
70002	Hospital superintendent	
70099	Medical/health care management (n.e.c.)	
70101	Anaesthetist	

70102	Biokineticist	
70103	Dermatologist	
70104	Ear, nose and throat specialist	
70105	Gynaecologist	
70106	Industrial physician	
70107	Internist/specialist physician	
70108	Neurologist	
70109	Neurosurgeon	
70110	Ophthalmologist	
70111	Orthopaedic surgeon	
70112	Pathologist (medical)	
70113	Paediatrician	
70114	Plastic surgeon	
70115	Psychiatrist	
70116	Radiologist	
70117	Surgeon (general)	
70118	Thoracic surgeon	
70119	Urologist	
70120	Occupational health physician	
70121	Occupational hygienist assistant/observer	
70199	Medical specialist (n.e.c.)	
70201	General practitioner	
70201	Medical officer	
70202	Clinical assistant	
70202	Registrar (medical)	
70301	Acclimatisation supervisor	
70302	Acclimatisation worker	
70303	Audio visual tester	
70304	Bio medical engineer	
70305	Dietician	
70306	EEG technician	
70307	Health/food inspector	
70308	Masseur/masseuse	
70309	Medical orthotist/prosthetist	
70309	Prosthetist/medical orthotist	
70310	Medical physicist	
70311	Medical technician	
70312	Medical technologist	
70313	Mortuary attendant	
70314	Occupational therapist	
70315	Optician/optometrist	
70316	Optical dispenser	
70317	Orthoptist	
70318	Physiologist	
70319	Physiotherapist	
70320	Chiropodist/podiatrist	
70320	Podiatrist/chiropodist	
70321	Radiographer	

70322	Audiologist/speech therapist	
70322	Speech therapist/audiologist	
70323	Audiometrist	
70324	Hospital worker/orderly	
70324	Orderly/hospital worker	
70399	Supplementary medical worker (n.e.c.)	
70401	Dental surgeon/dentist	
70402	Maxillo-facial and oral surgeon	
70403	Orthodontist	
70404	Perodontist	
70405	Prosthodontist	
70499	Dental specialist n.e.c. (e.g. oral pathologist)	
70501	Oral hygienist	
70502	Dental therapist	
70503	Dental mechanic	
70504	Dental assistant	
70599	Dental worker (n.e.c.)	
70600	Matron/nursing services management	
70600	Nursing services management/matron	
70601	Nurse: charge/senior sister	
70602	Nurse: registered (all categories n.e.c.)	
70603	Nurse: enrolled/staff	
70604	Nursing assistant	
70698	Nursing instructor	
70698	Trainer (nursing)	
70699	Nursing worker (n.e.c.)	
70701	Pharmacist	
70799	Pharmaceutical worker (n.e.c.)	
70800	First aid management/medical station superintendent	
70800	Medical station superintendent/first aid management	
70801	First aid team leader/supervisor	
70802	First aid attendant	
70803	Ambulance officer	
70895	Clerk (first aid)	
70898	First aid trainer	
70898	First aid training superintendent	
70898	Trainer (first aid)	
70899	First aid worker (n.e.c.)	
79901	Hospital cleaner	
79901	Medical labourer	
79992	Project manager/officer (medical/health n.e.c.)	
79993	Student (medical)	
79995	Clerk (medical)	
79996	Consultant (medical, n.e.c.)	
79997	Researcher (medical, n.e.c.)	
79998	Trainer (medical, n.e.c.)	
79999	Medical worker (n.e.c.)	
79999	Radiologic (Ocean	

80000	Services management (multi-disciplinary)	
80099	Services management (n.e.c.)	
80100	Security management	
80101	Security inspector/officer	
80102	Security supervisor (e.g. sergeant)	
80103	Mine police/security guard	
80103	Security guard/mine police	
80104	Detective	
80105	Dog handler	
80195	Clerk (security)	
80198	Trainer (security)	
80199	Security worker (n.e.c.)	
80200	Rescue training service management	
80201	Firemaster	
80202	Fire fighting/rescue officer	
80202	Rescue/fire fighting officer	
80203	Fire fighting/rescue team leader/supervisor	
80203	Rescue/fire fighting team leader/supervisor	
80298	Fire fighting/rescue trainer	
80298	Rescue/fire fighting trainer	
80298	Trainer (fire fighting/rescue)	
80299	Fire fighting/rescue worker (n.e.c.)	
80299	Rescue/fire fighting worker (n.e.c.)	
80300	Estate/township management	
80301	Estate/township officer	
80302	Estate/township team leader/supervisor	
80395	Clerk (estate/township)	
80399	Estate/township worker (n.e.c.)	
80400	Building services management	
80401	Commissionaire (offices)	
80402	Cleaner (office)/tea maker	
80402	Tea maker/office cleaner	
80499	Building service worker (n.e.c.)	
80500	Guest house/quarters management	
80501	Caretaker/housekeeper	
80501	Housekeeper/caretaker	
80502	Commissionaire (residential accommodation)	
80503	Laundry supervisor	
80504	Laundry worker	
80505	Hostel management	
80506	Hostel official	
80507	Hostel team leader/supervisor	
80595	Clerk (hostel/quarters).	
80599	Accommodation worker (residential n.e.c.)	
80600	Club management	
80601	Club secretary	
80602	Club team leader	
80603	Club worker	

80604	Changehouse team leader/supervisor	
80605	Changehouse worker	300A
80695	Clerk (club)	
80699	Accommodation worker	
80700	Catering management	
80701	Canteen supervisor	
80702	Chef/cook	
80702	Cook/chef	
80703	Canteen worker	
80703	Kitchen worker	
80704	Waiter/waitress	
80705	Beerhall supervisor	
80705	Liquor outlet supervisor	
80706	Barman	
80795	Clerk (catering)	
80799	Catering worker (n.e.c.)	
80801	Domestic servant	
80802	Child minder	
80803	Barber/hairdresser	
80803	Hairdresser/barber	
80899	Personal care worker (n.e.c.)	
80900	Road transport management	
80901	Road transport officer	
80902	Road transport team leader	
80903	Driver: motorcycle (code 01-04)	
80904	Driver: tractor (code 05)	
80905	Driver: forklift	
80906	Driver: mobile industrial./agricultural/equipment (code 07)	
80907	Driver: light motor vehicle/car (code 08)	
80908	Driver: ambulance (code 08)	
80909	Driver: heavy motor vehicle (code 10) (including bus/ambulance)	
80910	Driver: extra heavy motor vehicle, including buses (code 11)	
80911	Driver: heavy motor vehicle (code 13)	
80912	Driver: extra heavy motor vehicle (code 14)	
80995	Clerk (road transport)	
80998	Driving instructor	
80998	Trainer (road driving)	
80999	Road transport worker (n.e.c.)	
81000	Rail transport management	
81001	Rail transport officer	
81002	Rail transport team leader	
81003	Loco driver (main line - TRANSNET)	
81004	Loco driver (not main line)	
81005	Fireman/stoker	854A
81005	Stoker/fireman	
81006	Train guard	
81007	Shunter	
81008	Signaller	

81009	Crossing attendant	
81095	Clerk (rail transport)	
81099	Rail transport worker (n.e.c.)	
81100	Air transport management	
81101	Air transport officer	
81102	Airport controller	
81103	Pilot (aircraft)	
81195	Clerk (air transport)	
81199	Air transport worker (n.e.c.)	
81201	Stevedore	
81201	Roustabout	
81202	Bargemaster \ Bosun (Ocean)	
81299	Sea transport worker (n.e.c.)	
81301	Crane driver	811A
81398	Crane driver trainer	
81398	Trainer (crane driving)	
81399	Transport worker (n.e.c.)	
89992	Project manager/officer (services n.e.c.)	
89993	Student (service occupation n.e.c.)	
89996	Consultant (service occupation n.e.c.)	
89997	Researcher (service occupation n.e.c.)	
89998	Trainer (service occupation n.e.c.)	
89999	Service worker (n.e.c.)	
90000	Agricultural management (multi-disciplinary)	
90001	Farm manager	
90099	Agricultural management (n.e.c.)	
90101	Horticulturist	
90102	Garden supervisor/groundsman	
90102	Groundsman/garden supervisor	
90199	Garden worker	
90200	Land rehabilitation engineer	
90201	Land rehabilitation supervisor	
90299	Land rehabilitation worker	
90300	Forestry engineer	
90301	Forester	
90399	Forestry worker	
90400	Irrigation engineer	
90499	Crop worker	
90501	Game ranger	
90502	Herdsman/stable hand	
90502	Stable hand/herdsman	
90503	Kennel worker	
90599	Livestock worker (n.e.c.)	
99992	Project manager/officer (agriculture n.e.c.)	
99993	Student (agriculture n.e.c.)	
99995	Clerk (agriculture n.e.c.)	
99996	Consultant (agriculture n.e.c.)	

99997	Researcher (agriculture n.e.c.)	
99998	Trainer (agriculture n.e.c.)	

## APPENDIX 16

### REPORTING OF ACCIDENTS: REGULATION 23.1(c):

#### UNCONSCIOUSNESS OR INCAPACITATION

There appears to be some misunderstanding regarding the implementation of the requirements of regulation 23.1(c) which states:

23.1 The employer must report to the Principal Inspector of Mines in the manner prescribed in this chapter any accident at the mine that results in:

- (c) “unconsciousness, incapacitation from heatstroke or heat exhaustion, oxygen deficiency, the inhalation of fumes or poisonous gas, or electric shock or electric burn accidents of or by any employee and which is not reportable in terms of paragraph (d).”

The intent of the regulation is that the employee must have been either unconscious or incapacitated from heatstroke or heat exhaustion, oxygen deficiency, the inhalation of fumes or poisonous gas, or electric shock or electric burn accidents of or by any employee and which is not reportable in terms of paragraph (d).

Unconsciousness is easily identified and should not result in any problems with interpretation.

Incapacitation is a bit more difficult. The previous regulation Minerals Act 25.1.1(d) states:

“incapacitation from heatstroke, heat exhaustion, electric shock or the inhalation of fumes or poisonous gas which will prevent the affected person from resuming his normal or similar occupation within 48 hours...”

The incapacitation was linked to a period of time (48 hours or more). The intention of the new regulation 23.1(c) is not the same, in that the employee need not have been incapacitated, i.e. unable to perform his work, for a minimum period of time.

If an employee is subject to heatstroke, heat exhaustion, electric shock or the inhalation of fumes or poisonous gas, it may not necessarily follow that he is incapacitated. Only if the employee is unable immediately to continue or resume his normal duties, should he be regarded as having been incapacitated. *This will include cases of heat exhaustion where medical intervention takes place and a patient is admitted in a casualty department and needs rehydration and a recovery period, such a case will be regarded as a reportable case.*

If the employee is able to continue working without interruption, it follows that the incident is not a reportable accident.

The one exception to the above is when explosives are involved and the employee is exposed to blasting fumes (inhalation) but is not incapacitated (preventing him from continuing his work), it must be reported in terms of regulation 23.4(o)(ii) as a dangerous occurrence. If he is however incapacitated and cannot return to work/continue to work, the incident becomes reportable in terms of Regulation 23.1(c).