



भारत सरकार
Govt. of India
श्रम एवं रोजगार मंत्रालय
Ministry of Labour & Employment
खान सुरक्षा महानिदेशालय
Directorate-General of Mines Safety



No. DGMS (Tech) Circular (MAMID)/ 01

Dhanbad, dated : 10 / 03 / 2014

To

The Owner, Agent and Manager of all Mines

Subject : Campaign on "Risk Calculator"

Analysis of accidents in both coal & non-coal mines during last three decades shows more or less a static trend. With this in view, "Risk Management" as a tool for development of an appropriate health and safety management system had been discussed in detail during 9th Conference on Safety in Mines and it was recommended to prepare "Safety Management Plan(s)" on the basis of risk assessment. In the 10th Conference on Safety in Mines as well, considerable emphasis was given on development of "Safety Management Systems".

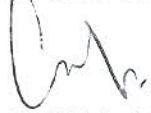
The approach helps in the switch over from "Prescriptive Legislation" to "Self-Regulation" in which the risk creator himself decides the best way to control the risk and thereby avoid the occurrence of any untoward incidents.

The risk based approach lays emphasis on prevention rather than post-incident corrections. In view of this, risk evaluation is an important step for all activities in mines.

In order to understand the "Risk", a handy card has been created which can be used by Managers, Supervisors & work-persons for perception of the "Risk" in any mining operation that they have to undertake. Sample copies of the "Card" are enclosed for wide circulation in mines. The "Card" is also available in DGMS website www.dgmsindia.in or www.dgms.gov.in.

I hope this Card will prove as a milestone/guideline while assessing risk of any operation in a mine.

Yours faithfully,


(Rahul Guha) 10.3.14

Director General of Mines Safety



नापाक व..... विभाग
प्रतिष्ठित सुखदार्थ
को उनको अज्ञानम्ब अविचारिता के दोष
परिचाजन हेतु प्रेषित ।

खान सुरक्षा महानिदेशालय

RISK CALCULATOR



RISK ASSESSMENT MATRIX

Step 3 Calculate the Risk		Consequence				
		1	2	3	4	5
Probability		Catastrophic Death/Massive financial loss	Major Hospitalisation/Large Financial loss	Moderate Medical Treatment/High Financial loss	Minor First Aid Treatment/Medium Financial loss	Negligible No injuries/Minimal Financial loss
A	Almost certain Often Occurs / Once a week	Extreme Risk	Extreme Risk	Extreme Risk	High Risk	High Risk
B	Likely Could easily happen/Once a month	Extreme Risk	Extreme Risk	High Risk	High Risk	Moderate Risk
C	Possible Could happen or known it to	Extreme Risk	Extreme Risk	High Risk	Moderate Risk	Low Risk
D	Unlikely Hasn't happened yet but could/once every 10 years	Extreme Risk	High Risk	Moderate Risk	Low Risk	Low Risk
E	Rare Conceivable but only in extreme circumstances/Once every 100 years	High Risk	High Risk	Moderate Risk	Low Risk	Low Risk

ZERO HARM

RISK CALCULATOR



1. Estimate the probability of the event occurring
2. Estimate the consequences of the event occurring
3. Using your values, calculate the risk level from the matrix

RISK ASSESSMENT INPUTS

Step1 Estimate Probability			Step2- Eliminate Consequences			
			Health	Financial	Operational	Environmental
A	Almost Certain (Often occurs/ Once a week)	1	Catastrophic Death	Catastrophic Massive Financial Loss	Catastrophic Greater than one week of lost production	Catastrophic Severe environmental impact
B	Likely Could easily happen once a month	2	Major Hospitalisation	Major Large financial loss	Major 2 to 7 days of lost production	Major Major environmental impact
C	Possible Could happen or known it to happen/Once a year	3	Moderate Medical treatment	Moderate High financial loss	Moderate 12 hours of lost production	Moderate Moderate environmental impact
D	Unlikely Hasn't happened yet but could/once every 10 years	4	Minor First aid treatment	Minor Medium financial loss	Minor 8 hours of lost production	Minor Minor environmental impact
E	Rare Conceivable but only in extreme circumstances/Once every 100 years	5	Negligible No injuries	Negligible Minimal financial Loss	Negligible 1 hour or loss of lost production	Negligible Negligible environmental impact