



Fall Protection Plan

Learning Unit I

Risk and Hazard Identification and Evaluation Handouts

Likelihood ratings

Likelihood	Description
Almost never Rare 1 - 2	The risk event may occur only in exceptional circumstances, e.g. up to 4% change of occurring in the next 12 months
Unlikely 2 – 3	The risk event could occur at some time e.g. 10% change of occurring in the next 12 months or 1 out of every 10 years
Possible 3 -5	The risk event should occur at some time e.g. 25% change of occurring in the next 12 months or 5 out of every 20 years
Likely 6 -7	The risk event will probably occur in most circumstances, e.g. 55 % change of occurring in the next 12 months or 11 of every 20 years
Almost certain 8 – 9	The risk event is expected to occur in most circumstances

Consequences / Severity ratings

RISK Consequence / Impact	Definitions
Minor (1 -3)	- Financial impact of up to R 25,000.00 in any 12 month period; and/or - Loss or reputation or image that involves local adverse media coverage - Event that involves management time
Moderate (3 – 5)	- Financial impact of up to R 100,000.00 in any 12 month period; and/or - loss of reputation or image that involves widespread, adverse media coverage and/or potentially involves litigation; and/or - event that involves a reasonable amount of management time
Severe (5 – 7)	- Financial impact of up to R 500,000.00 in any 12 month period; and/or - loss of reputation or image that may take up to 1 year to recover and /or - potentially involve litigations; and / or - event that involves significant management and/or Corporate counsel time
Major (7 – 8)	- Financial impact of up to R 1 mil in any 12 month period; and/or - loss of life or serious harm injury; and/or - loss of reputation or image that may take 1 – 3 years to recover and - involves a damaging litigation claim
Catastrophic (9)	- Financial impact of up to R 1 mil or more in any 12 month period; and/or - multiple loss of life; and/or - loss of reputation or image that may take 3 – 5 years to recover

Effectiveness of Controls

Very poor (1)	20 % or less effective
Unsatisfactory (2)	30 % approximately effective
Good (3)	50 % approximately effective
Very good (4)	70 % approximately effective
Excellent (5)	80 % plus, effective

Severity of harm

Likelihood of harm		Slight (1)	Serious (2)	Major (3)	
	LOW (1)	1	2	3	
	MEDIUM (2)	2	4	6	
	HIGH (3)	3	6	9	

Item	Task	Hazard	Risk	S SAFETY	H HEALTH	E ENVIRONMENT	Legisla tion	Exposure (E)	Probability (P)	Severity Judge (\$)	Risk score	Rating	Current Controls (Mitigation)	Residual Risk Score			Risk score
														E	P	S	
Cleaning Mixers (Plant 1 and Plant 2)																	
1	Cleaning Mixers	Electrical - Emergency stop button	Shock	x				6	6	15	540	VERY HIGH RISK	SWP & PM Schedule	6	1	15	90
2		Electrical - Switch box	Shock	x				6	6	15	540	VERY HIGH RISK	SWP & PM Schedule	6	1	15	90
3		Manual handling - removing mud with poker	Back injuries	x				6	6	3	108	SUBSTANTIAL RISK	Train employees	6	3	3	54
4		Entanglement - with screws if they have not stopped	Loss of limbs	x				6	1	15	90	SUBSTANTIAL RISK	SWP & Train Employees in procedures	1	1	15	15
5		Chemical - Carbon black (large quantities - if cover is removed)	Respiratory damage		x			6	10	7	420	VERY HIGH RISK	PPE	6	1	7	42
6		Chemical - Carbon black (large quantities - if cover is removed)	Ground and water pollution			x		6	10	3	180	SUBSTANTIAL RISK	Concrete Floors, Separate drainage system, effluent plant, recycle water	6	3	3	54
7		Tripping hazards - hoses	Injury to employees	x				10	6	3	180	SUBSTANTIAL RISK	Housekeeping	6	1	3	18
8		Slipping hazard - washing screws or area around mixer	Injury to employees	x				6	6	3	108	SUBSTANTIAL RISK	PPE	6	3	3	54

Likelihood Class	Factor L
Might well be expected	10
Quite possible	6
Unusual but possible	3
Only remotely possible	1

Exposure (E): How often is the person exposed to the operation?

Exposure Index	Factor E
Continuously or Inherently Hazardous	10
Daily (few times per day)	6
Weekly (few times per week)	3
Monthly (few times per month)	2
Annually or less often	1

Severity (S): What is the outcome of the event should it occur?

Severity Index	Factor S
Irreversible effect	5
Severely harmful	4
Harmful	3
Slightly harmful	2
Minimal Effect	1

Mitigation Measures

No Effective Mitigation	1
Written Procedure and PPE	2
Training Complete	3
Monitoring & Measurement Conducted	4
Preventative Maintenance Conducted	5
Engineering Method Effective e.g. guarding	6
Project Completed to remove or reduce risk substantially	10

RAW Risk = L (Likelihood) X E (Exposure) X S (Severity) assuming there are no controls in place (current or envisaged).

RESIDUAL RISK = RAW RISK ÷ M (Mitigation) (Consider Mitigation measures already implemented and compliance to controls and procedures).

- **RAW RISK**= L (6) X E (10) X S (4) = 240
- **RESIDUAL RISK**=240/2 = 120

RISK DESCRIPTION	RISK VALUES
Low	< 50
Medium	50 – 99
High	100 – 299
Intolerable	> 300

	Safety	Health
3	First aid	Physical discomfort Irritation Recurrent pain
6	Medical aid	Temporary disablement Illness & time off work
9	Medical aid	Permanent disablement Permanent damage to health
12	Fatality	Terminal illness
15	Multiple fatalities	Multiple persons terminal illness

	Probability (likelihood of the occurrence of a specific outcome, i.e. 'Risk')
4	Rare = almost impossible
8	Unlikely = has happened before in industry
12	Possible = happens regularly in industry
16	Likely = has happened before in this employer
29	Certain = happens regularly in this employer

Rating	Number of persons exposed	Environmental exposure
2	0-20%	Site specific
4	20-40%	Immediate surroundings
6	40-60%	Local community
8	60-80%	Regional
10	80-100%	National