EH&S Risk Assessment Matrix

Severity x Likelihood = Risk Determination Number

I. Severity Table

Pt	Severity level	Workplace Safety	Workplace Health	Environment	Fire Damage	Downtime Incurred
5	Critical	Fatality, single or multiple	Acute poisoning, failure of major bodily functions	Environmental release	> $10M damages	> 1 year for full operational status
		Permanent body injury or loss of use for more than 30 days	Infection with no known cure	Infection - outside campus area		
4	Very Serious	Injury requiring 30 days of hospitalization and/or medical leave	Moderate exposure, reversible injury to bodily functions with prolonged recovery	Environmental release	> $1M damages	> 3 months for full operational status
		Temporary body injury or loss of use for more than 10 days but not exceeding 30 days	Infection with known cure, but extensive treatment	Infection - outside building area, but within campus		
3	Serious	Injury requiring 10 days of hospitalization and/or medical leave	Mild exposure, reversible injury to bodily functions with less than 30 days recovery	Spills to outside laboratory/room, but within building	> $100k damages	> 1 month for full operational status
		Temporary body injury or loss of use for up to 10 days	Infection with known cure, but extensive treatment	Infection - outside laboratory area, but within building		
2	Marginal	Injury requiring maximum of 3 days of medical leave only	Very mild exposure, reversible injury to bodily functions with less than 3 days recovery	Spills to outside workplace, but within laboratory	> $10k damages	> 5 days for full operational status
		Temporary body injury or loss of use for 3 days or less	Infection with known cure, but treatment needed	Infection - outside workplace, but within laboratory		
1	Negligible	First aid treatment only	Very mild exposure, reversible injury to bodily functions with less than 3 days recovery	Spills within workplace only	< $5k damages	No significant downtime
		No or superficial injury	No exposure	No infection or infection with no effects within workplace		

II. Likelihood Table

Pt	Likelihood level	Likelihood of Occurrence / Exposure Criteria
5	Frequent	Likely to occur many times per year
4	Moderate	Likely to occur once per year
3	Occasional	Might occur once in three years
2	Remote	Might occur once in five years
1	Unlikely	Might occur once in ten years

III. Risk Determination Table

METRICS		SEVERITY				
		Critical (5)	Very Serious (4)	Serious (3)	Marginal (2)	Negligible (1)
LIKELIHOOD	Frequent (5)	25 Operation Not Recommended	20 Operation Not Recommended	15 High Priority	10 Review at Appropriate Time	5 Risk Acceptable
	Moderate (4)	20 Operation Not Recommended	16 Operation Not Recommended	12 High Priority	8 Review at Appropriate Time	4 Risk Acceptable
	Occasional (3)	15 High Priority	12 High Priority	9 Review at Appropriate Time	6 Risk Acceptable	3 Risk Acceptable
	Remote (2)	10 Review at Appropriate Time	8 Review at Appropriate Time	6 Risk Acceptable	4 Risk Acceptable	2 Risk Acceptable
	Unlikely (1)	5 Risk Acceptable	4 Risk Acceptable	3 Risk Acceptable	2 Risk Acceptable	1 Risk Acceptable

Review the risk assessment records every year or whenever there are changes in processes or personnel, work activities or upon any incident occurrence, whichever is earlier.

IV. Action Table

Color	Score	Risks	Action
	16 - 25	High	**Operation not recommended** Stop operation & review controls. If necessary, terminate experimentation.
	12 - 15	Warning	**High priority remedial action** Proceed with extreme caution with PI present at all times. Implement additional (secondary) controls immediately. Review within 7 days. Emergency control measures should be in place.
	8 -10	Medium	**Take remedial action at appropriate time** Proceed with care. Additional control is advised. Review should be implemented within 30 days.
	1 - 6	Warning	**Risk acceptable: residual risk** If possible, risk reduction should be considered, e.g., severity. There are no imminent dangers. Frequent review should be in place especially changes in procedures, staff, materials or environment.