energy INSTITUTE

Hearts AND Minds

The Risk Assessment Matrix

"Bringing it to life"

Risk Assessment Matrix

SEVERITY	CONSEQUENCES				INCREASING LIKELIHOOD				
	People	Assets	Environment	Reputation	A	B	C	D	E
					Never heard of in the Industry	Heard of in the Industry	Has happened in our Organisation or more than once per year in the Industry	Has happened at the Location or more than once per year in our Organisation	Has happened more than once per year at the Location
0	No injury or health effect	No damage	No effect	No impact					
1	Slight injury or health effect	Slight damage	Slight effect	Slight impact					
2	Minor injury or health effect	Minor damage	Minor effect	Minor impact					
3	Major injury or health effect	Moderate damage	Moderate effect	Moderate impact					
4	PTD* or up to 3 fatalities	Major damage	Major effect	Major impact					
5	More than 3 fatalities	Massive damage	Massive effect	Massive impact					

* Permanent Total Disability

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Purpose

A good appreciation of the HSE risks in your area of responsibility helps to correctly direct resources for improvement. The Risk Assessment Matrix (RAM) is a tool to rank and assess the risks. This brochure describes a short workshop that will help you and your colleagues to:

- apply the RAM properly and frequently as a natural way to communicate and plan for HSE improvement
- better appreciate your personal role in managing the HSE risk in your area of responsibility
- come to a good understanding of your role in demonstrating that risk is managed to ALARP levels.

Risk Assessment Matrix Description

The RAM standardises qualitative risk assessment and facilitates the categorisation of health, safety, environment and reputation risks. The matrix axes are Consequences and Likelihood.

Assessing the risk of a particular scenario should be done in sequence, i.e. first the potential consequences are estimated and only thereafter the likelihood of such consequences occurring are assigned.

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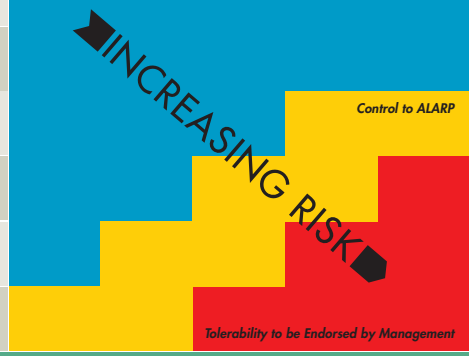

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Consequences

A scale of consequences from "0" to "5" is used to indicate increasing severity. The consequences are those of credible scenarios (taking the prevailing circumstances into consideration) that can develop from a hazard. The **potential** consequences, rather than the actual ones, are used. These can be thought of as the consequences that could have resulted from the hazard if things went out of control.

Likelihood

After assessing the consequences, the likelihood on the horizontal axis is estimated on the basis of historical evidence or experience that such consequences have materialised within the industry, your organisation or a smaller unit. Note that this should not be confused with the likelihood that the hazard is released: it is the likelihood of the estimated consequences occurring. For example, a hazard has been identified that several times of year creates a situation whereby people could be killed. However, in the history of the organisation it has never resulted in a fatality. The likelihood is "B" rather than "D".

Guidance

Estimation of likelihood and consequences is not an exact science. The consequence estimates are based on envisaged scenarios of what "might happen" and likelihood estimates are based on historical information that such a scenario has happened under similar conditions, knowing full well that circumstances will never be exactly the same.

For more information please visit
www.energyinst.org.uk/heartsandminds

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