

**TASK RISK
ASSESSMENT
Methodology**

Assessment

RISK



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1. RISK MANAGEMENT PROCESS

- Risk assessment (identify hazards, risk analysis, risk value judgment).
- Risk reduction (Tolerate, treat, transfer, terminate).
- Implementation and management of control measures.
- Measurement / Monitoring - Review RA annually or when:
 - Incidents happen or;
 - Changes occur.
- Evaluate results if not satisfactory;
 - Investigate.

ASSOCIATED DOCUMENTS

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1. Task Inventory
 2. Task Risk Assessment & Control measures for Hazards identified
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2. OBJECTIVES

The Task Risk Assessment has the following key objectives:

To provide "Client" with a risk register in terms of risk to:

- Safety and Health of personnel / public / community / contractors
- Environment

For each department:

- Determine the risk.
- Determine the need for further in-depth risk assessment studies.
- Enable the development of risk reduction measures.
- Facilitate the effective and efficient management of risk.

3. DEFINITIONS

3.1 Risk management

A managerial function, aimed at protecting the organization, its resources and profits against the adverse consequences of exposure to pure risk, by reducing the frequency and severity of the adverse consequences to a level that is acceptable to stakeholders.

3.2 Risk Assessment

The systematic identification of undesired events and their causes and the analysis of their likelihood and potential consequences in order to make a valued judgment as to the acceptability or tolerability.

3.3 Hazard

A hazard is defined as anything that has the potential to cause harm. Hazards include substances (objects, materials, chemicals) and sources of energy (electricity, radiation). Hazard identification

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is defined as A systematic process for establishing what can go wrong (cause) and what harm or loss could be caused (consequence).

3.4 Event

An event is an occurrence which produces loss as a direct consequence. Events include accidents, which can be defined as contact with a substance or source of energy above the threshold limit of the body.

3.5 Consequences

Consequence refers to the negative results from events and includes injury, environmental impacts and legal liability.

3.6 Risk

The likelihood that the harm from a particular hazard will occur. "The chance of harm or loss."

3.7 Risk Reduction

The development, implementation, monitoring and upgrading of appropriate levels of control measures for the control of identified and assessed pure risks, aimed at reducing the frequency and consequences of the adverse effects of pure risk.

There are four options that can be applied in controlling risk, which are also known as the four T's:

- Tolerate the risk exposure.
- Transfer the risk exposure.
- Terminate the risk exposure.
- Treat the risk exposure.

3.7.1 Tolerate

Some risks may fall into the category of negligible, or low enough or acceptable not to justify any / further action to reduce the risk and therefore are tolerated. Sometimes, it may be more expensive to control the risk, than the potential loss that may be caused by its exposure.

3.7.2 Transfer

A risk can be transferred to a third party by contracting it out. For example, if a component of the company's product is made from asbestos (a hazardous

substance), the manufacturing of the component can be contracted out and, in the process, the contractor takes over the risks of processing asbestos, delivering the completed component, which is sealed and without risk to health.

3.7.3 Terminate

Although not often possible, the first option that one should consider, after completion of the risk assessment, is whether the risk exposure can be terminated. For example, not purchasing a particularly hazardous substance at all, or discontinuing a particular product, shutting down a production line, plant or even a company, e.g. asbestos mine.

3.7.4 Treat

Most of the time risks are treated. Treating risk implies reducing the risk to a level that would be acceptable; that is to say, reducing the frequency and/or the consequences.

3.8 Incident

An unplanned event which could or can result in harm.

3.9 Accident

An unplanned event which results in harm.

3.10 Near Miss

An unplanned event, which under slightly different circumstances, could have resulted in harm.

3.11 Task Risk Assessment (TRA)

A task risk assessment looks at all the activities performed in the organization. For each activity, hazards are identified by considering the risk that might exist and what might go wrong to cause injury or ill health.

The TRA process requires:

1. Identification of hazards associated with the steps involved in each principal activity.
2. Assessment of the level of risk associated with the identified hazards.
3. Development of risk control strategies to eliminate or reduce the level of risk associated with each principal task.

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3.12 Risk Control Plan

A Risk Control Plan is an action plan that sets out how the Safety, Health and Environmental (SHE) risks identified in a risk assessment will be eliminated or controlled. Risk Control Plans are developed from risk assessments. Risk Control Plans may include a list of:

- Hazards identified.
- Risks associated with the hazards identified.
- Existing risk controls.
- Proposed short-term controls (including proposed completion dates).
- Proposed medium-term controls (including proposed completion dates).
- Proposed long-term controls (including proposed completion dates)
- Person(s) responsible for implementation of controls.
- Resources required for implementation of controls.
- Proposed review date and/or review when changes occur.

4. PROCEDURE

The Practitioner shall identify all tasks associated within the Organization:

- People - Tasks.
- Equipment - Plant and equipment.
- Material – Chemicals, substances, raw materials.
- Energy – Electricity, gas, steam, wind etc.
- Environment – Ground, water, air and waste.
- Legal – All relevant legislation, standards and by-laws.
- The Practitioner will assess the level of risk associated with the identified activities.

The Task risk management process shall occur using the processes, procedures and tools set out below.

The organization shall ensure that all management, supervisors, Health and Safety Representatives and employees involved in identifying the activities and classifying their associated hazards are trained in the Risk Management Training Course.

4.1 Health, Safety and Environmental Risk Management

4.1.1 Local Hazard Identification (ongoing)

Hazards will be identified at the workplace level and reported to the local supervisor by:

- Inspections (workplace inspection checklists).
- Hazard Report form (staff member, contractor or visitor).
- Incident Report form up to 24 months history.
- Audit reports (internal or external).
- Regulator report (verbal report, entry report, improvement notice, prohibition notice).

4.2 Risk Assessment Tools

The Practitioner shall, prior to the risk assessment methodology being used, analyze all activities as per the Task Inventory. After all activities have been analyzed, as per the Task Inventory, a Task Risk Assessment will be conducted on all classified activities.

The Practitioner shall develop and publish a suite of risk factors which must be included when analyzing the activities. These factors include:

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Health – How can this activity affect my health in the worst case scenario?

Safety - How can this activity affect my safety in the worst case scenario?

Environment - What impacts can this activity have on the environment in the worst case scenario?

Fire - Can this activity cause fire in the worst case scenario?

SEVERITY:

Weighting	Impact	Effect
1	Noticeable	Minor cuts and bruises, small loss of containment, small/minor perforations, punctures, lacerations, illness, sprains, strains, muscle fatigue, cuts, dehydration, shock, 1st degree burns, headaches, sinusitis, skin irritation
2	Important	Administration of first aid care and / or equipment and / or off site emission but no damage, minor/noticeable cuts, sprains, strains, electric shock, 2nd degree burns, headaches, illness, respiratory distress, property damage over R100 000, minor environmental impact
3	Serious	Administration of first aid care and/ or equipment and/ or off site emission but no damage, noticeable cuts, sprains, strains, electric shock, 2nd degree burns, respiratory distress. Loss of time (3 days and more) Non-permanent Chronic back and neck injuries, minor fractures, adverse effect on environment or property damage over R500 000.
4	Very Serious	Single fatality, Permanent disability/ ill health , non-permanent damage to environment, loss of limb, permanent noise induced hearing loss, loss of sight, multiple fractures, permanent pelvic/neck/ back injuries, 3rd degree burns, permanent chronic health conditions, loss of time (14 days and more) property damage over R 1 000 000
5	Disaster	Multiple fatalities permanent local damage to environment and eco-system, multiple severe injuries to multiple persons (3rd degree burns, permanent loss of sight, hearing loss, multiple fractures, permanent chronic health effects, loss of limb) loss of time (14 days and more) and property over R10 000 000

PROBABILITY:

Weighting	Impact	Effect
1	Conceivable	Has never happen in years of exposure but is possible (Eg: 1 in 1000)
2	Remotely Possible	A less possible coincidence (Eg: 1 in 100)
3	Unusual but possible	A more possible occurrence (Eg: 1 in 10)
4	Likely	Not unusual, perhaps 50/50 chance of occurrence
5	Almost certain	The most likely outcome if the event occurs

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RISK CATEGORIES:

Risk Category	Risk Rating	Remedial Activities
Critical	25	Intolerable, Implement and Monitor Control Measure, Change Method and or Transfer Risk
High Risk	15-24	Implement and Monitor Control Measure, Change Method and or Mitigate
Substantial Risk	12-14	Implement and Monitor Control Measure, Change Method and or Mitigate
Possible Risk	4-11	Implement and Monitor Control Measure
Low Risk	1-3	Monitor

4.3 The Task Inventory Calculator

The Task Inventory calculator is as follows:

- 1 – 3 (Low Risk) -Monitor.
- 4 – 11 (Possible Risk) -Implement and monitor control measures.
- 12 – 14 (Substantial Risk) - Implement and monitor control measures, change method and / or mitigate.
- 15 – 24 (High risk) - Implement and monitor control measures, change method and / or mitigate.
- 25 (Critical risk) - Intolerable, implement and monitor control measures, change method and or transfer risk.

4.4 Risk Management

Supervisors and/or managers, in consultation, will identify hazards present in all activities and assess the risk of each identified hazard using the Task Risk Assessment.

The supervisor or manager, in consultation, will develop control measures in accordance with the hierarchy of controls. The supervisor or manager shall decide upon the controls to be implemented and undertake one or more of the following actions:

- Eliminate or control the risk by applying established controls from an existing risk assessment.
- Partially control the risk (including isolation) and refer to a more senior manager.
- Request advice from a Practitioner Adviser
- Refer to the local Safety Committee for further assessment.

The supervisor or manager shall ensure that the controls implemented are reviewed and the effectiveness of the risk controls monitored.

The supervisor or manager shall ensure that a record of the identification, assessment and control process is maintained.

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