RIIBEF402D
Supervise On Site Operations

Learner Guide Instructions

Who is this document for?
> The learner.

What is in this document?
- Course information that matches the PowerPoint presentation.
- Review questions.
- Practical assessment instructions for learners.

What do you need to do before you use it for the first time?
1. Rebrand the document.
2. Review the document as part of your validation process.
3. Set the reading and test time limits that are highlighted in pink at the end of the document.

See the 'Read Me First' document for a complete set of instructions on how to use these resources.

LEARNER GUIDE

RIIBEF402D Supervise On-Site Operations

Learner Name:	
Learner ID:	
Learner Contact Number:	
Learner Email Address:	
Date Training Commenced:	

This Book Contains:

☐ Course Information.

☐ Review Questions.

☐ Practical Assessment overview and instructions.

Table of Contents

1.1 Introduction

These training materials are based on the national unit of competency **RIIBEF402D Supervise On-Site Operations**.

You will learn about:

- ◆ Managing on-site safety.

- ◆ Communicating regularly with others.

- ◆ Diagnosing and solving routine and non-routine problems.

- ◆ Controlling work programs to ensure objectives are met.

- ◆ Coordinating work.

- ◆ Maintaining operating records.

1.2 Site Documentation and Compliance

Documentation is essential to all aspects of every worksite. From safety plans and environmental protection requirements through to workplace procedures and policies, documentation exists that outlines what to do, when to do it and how it is to be done.

As a supervisor on a mining or civil construction site it is your responsibility to ensure all compliance documentation is used correctly. This will help to guide and support all activities on the site.

Compliance documentation is the name given to the documents that require you to undertake tasks in a particular way or to meet a given standard.

You must know, understand and use the compliance documentation at all times. You must be able to access the documentation and pass on and explain information to others who require it in an appropriate manner.

You also need to be able to monitor the use and implementation of the instructions in the compliance documentation by members of the team you are supervising.

If you don't know where to get your documents or you can't understand them, you can ask your boss or supervisor. They will tell you where to find compliance information and explain what it means.

1.2.1 Types of Compliance Documentation

Compliance documentation may include:

- ◆ Legislation.

- ◆ Regulations.

- ◆ Codes of practice.

- ◆ Standards.

- ◆ Company policies and procedures.

- ◆ Manufacturer's guidelines and specifications.

Some of these will apply to every aspect of the organisation and work, such as health and safety rules, while others will relate to specific tasks or sequences of work.

Review Questions

1.	What is compliance documentation?	☐

1.3 Risk and Hazard Management

A **RISK** is the chance of a hazard hurting you or somebody else or causing some damage.

A **HAZARD** is the thing or situation that causes injury, harm or damage.

RISK MANAGEMENT is the process of eliminating or controlling hazards to reduce the risks that people and equipment are exposed to at work.

The risk management process is made up of 3 main stages:

1. Hazard Identification.

2. Risk Assessment.
   a) Risk Analysis.
   b) Risk Evaluation.

3. Hazard Control.
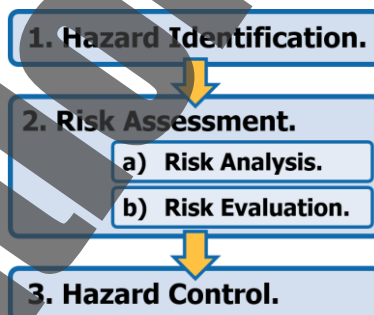
Risk Management Stage	Action
1. **Hazard Identification**	This is where you identify all the possible events and situations in the workplace where people may be exposed to injury, illness or disease.
2. **Risk Assessment**	Which includes: a) **Risk Analysis** – You determine the likelihood of a hazard causing harm and the consequence or outcome of that hazard causing harm. This gives you a risk level. b) **Risk Evaluation** – Using the risk level you have worked out you can determine if the risk is unacceptable and if action needs to be taken, as well as what kind of action to take.
3. **Hazard Control**	This is where you choose one or more options for controlling hazards in an effort to reduce the risks associated with them.

1.3.1 Hazard Identification

Each worksite has its own hazards and risks. You will need to identify hazards on site and document them in writing.

Hazards may involve:

◆   People.

◆   The work environment.

◆   Equipment and materials.

◆   Methods, plans and work systems.

◆   Process failures.

◆   Cascading causes (triggered by outside processes).

All worksites have hazards, specific areas, jobs, equipment or materials that have risks associated with them. In order to effectively manage them, the work area and work conditions need to be inspected and analysed on a regular basis.

Inspecting and analysing your work area conditions regularly to identify potential hazards is crucial in maintaining a safe workplace.

To identify possible hazards on site, take a walk around the work area and check:

◆   **Up High** – Obstructions, power lines, trees, scaffolding, cranes.

◆   **At Eye Level** – Other workers, equipment, machines, hazardous materials, obstructions.

◆   **Down Low** – Surface condition, spills, debris, underground services, weight-bearing ability.

Worksite hazards can also be identified by analysing a situation or the way a job is carried out by other workers, looking at the equipment being used, checking records of injuries and incidents, checking safety tags, reading Safety Data Sheets (SDS) or talking to other workers.

Hazards can have various health impacts, such as:

◆   **Long Term Impacts** – More difficult to identify, as consequences may not show up immediately. For example, blue asbestos can have fatal effects later in life, often after the people have long since left the industry.

◆   **Medium Term Impacts** – Can be those that cause damage through exposure over time. For example, working with radiation can cause health issues as exposure to the radiation accumulates over time until a point where the person can no longer work in the area at all.

◆   **Short Term Impacts** – Normally fairly easy to identify because human systems are built to look for immediate dangers and to project consequences in the short term. For example, an impact hazard may cause a spinal injury or death in personnel.

◆   **Impacts in more than one of these areas.**

Any hazard may evolve into long-term consequence due to trauma or psychological factors.

1.3.1.1 Common Hazards in Resources and Infrastructure Workplaces

Hazards that you may identify on a worksite can normally be split into 5 different categories:

Hazard Category	Examples	
Environmental Hazards	◆ Spills to water – stormwater. ◆ Spills to land – contamination. ◆ Wasteful resource use (e.g. water materials). ◆ Wasteful electricity use or the production of greenhouse gas. ◆ Waste generation. ◆ Spreading of weeds and pests. ◆ Potential for fire. ◆ Release of emissions to air. ◆ Noise or vibrations (offsite impacts). ◆ Disturbance to plants or animals. ◆ Removal of vegetation. ◆ Disturb cultural heritage sites. ◆ Disposal of wastes from site.	◆ Transport of wastes from site. ◆ Use of pesticides or insecticides. ◆ Poor lighting, ventilation, air quality. ◆ Excessively loud and prolonged noise or vibration. ◆ Heat and cold. ◆ Radiation. ◆ Excavations. ◆ Floors. ◆ Stairs. ◆ Work platforms. ◆ Ladders. ◆ Falling objects. ◆ Slippery surfaces.
Mechanical or Electrical Hazards	◆ Electricity. ◆ Machinery. ◆ Plant. ◆ Pressure vessels. ◆ Dangerous goods.	◆ Forklifts, cranes and hoists. ◆ Driving. ◆ Manual handling. ◆ Working at heights. ◆ Confined spaces.
Chemical Hazards	◆ Chemical substances, e.g. acids or poisons, others that could lead to fire or explosion. ◆ Cleaning agents.	◆ Dusts and fumes from various processes such as welding. ◆ Occupational gas releases. ◆ Inhalation of chemicals.
Biological Hazards	◆ Bacteria. ◆ Viruses. ◆ Mould, mildew.	◆ Insects, vermin, animals. ◆ Asbestos. ◆ Other microbiological organisms.
Psychosocial Hazards	◆ Events. ◆ Cultural heritage and standards. ◆ Impact on the community. ◆ Systems of work. ◆ Work pressure.	◆ Human factors i.e. competency, training, fitness, etc. ◆ Other circumstances that have the potential to lead to psychological and associated illness, e.g. work-related stress, bullying, workplace violence and work-related fatigue.

1.3.2 Assess the Risks

Risk Assessment is the next stage of the risk management process and involves finding the risk level associated with the identified hazards, then working out what actions you need to take.

A Risk analysis helps you to work out the 'risk level'. You can work out the risk level by looking at 2 factors:

Risk Analysis Inputs	Questions to Ask
Likelihood	◆ What is the chance of the event occurring? ◆ Has the event happened before? ◆ Is it likely to happen again?
Consequence	◆ What would be the outcome of the event occurring? ◆ How severe would the outcome be?

To work out what you should do after getting the risk level you will need to carry out a 'risk evaluation'. This is where you compare the risk level you have identified with workplace rules policies and procedures to find out if it is an unacceptable level of risk, and what you need to do about it.

1.3.2.1 Risk Analysis

During a risk analysis of the identified hazards, you will need to consider the likelihood and consequence of the hazards causing harm.

Likelihood

This is 'the chance of something happening'. Typical questions to ask to determine likelihood are:

◆ How often does a hazard have the potential to cause harm? A risk may exist all of the time or it may only exist intermittently.

◆ How effective are current controls in reducing risk?

◆ Can risks become more likely to cause harm because of the working environment (e.g. poor lighting, exposure to weather)?

◆ How long might people be exposed to the harm? The longer someone is exposed to a risk, the greater the likelihood that harm may result.

◆ Could the way people act and behave affect the likelihood of a hazard causing harm (e.g. fatigue or stress)?

◆ Do the differences between individuals in the workplace make it more likely for harm to occur (e.g. new workers, older workers)?

Likelihood can be rated as one of the following:

Almost Certain

Likely

Possible

**Unlikely**

Rare (Highly Unlikely)

Consequence

The consequence is the level of harm resulting from a hazard. The consequence level will influence decisions about how much effort is needed to control the risks.

You need to consider the following factors when evaluating and determining the consequence if the event should occur:

- What harm can occur?

- What factors could influence the severity of an injury?

- How many people could be harmed?

- Are there circumstances that could magnify the severity of an injury or incident?

Consequences may be rated as:

- Insignificant
- Minor
- Moderate
- Major
- Severe
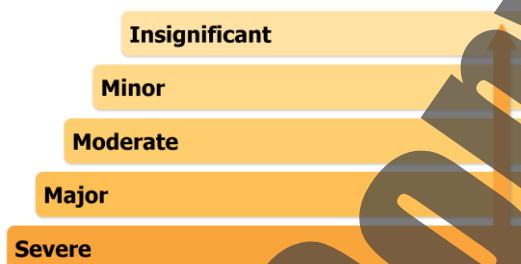
1.3.2.2 Risk Evaluation

The next step is to determine the risk level by evaluating the risks posed by the hazard. The risk level is the combination of likelihood and consequence.

Using a table similar to the one below you can work out how high the risk level is:

Likelihood	Consequence				
	1. Insignificant	**2. Minor** First Aid Required	**3. Moderate** Medical Attention and Time Off Work	**4. Major** Long Term Illness or Serious Injury	**5. Catastrophic** Kill or Cause Permanent Disability or Illness
1. Rare	Low	Low	Moderate	Moderate	Moderate
2. Unlikely	Low	Low	Moderate	Moderate	High
3. Possible	Low	Moderate	High	High	Extreme
4. Likely	Moderate	Moderate	High	High	Extreme
5. Almost Certain	Moderate	High	High	Extreme	Extreme

It is important to rate the realistic worst-case scenario, which is the worst-case level of risk considering both consequences and likelihood.
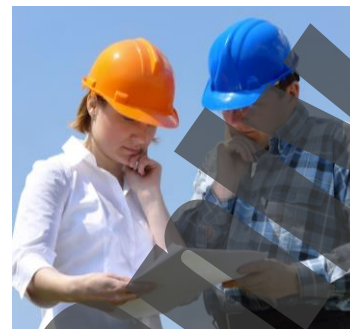
Where there are multiple ratings for a risk, the highest combination of consequence and likelihood is taken as the final rating. The risks level can then be evaluated for deciding on what treatments need to be implemented.

Risk Evaluation is based upon the outcomes and results of the risk analysis. It involves making decisions about which risks need to be treated, and the order in which they should be treated.

A risk evaluation should take into consideration the:

◆ Context of the risks in relation to the organisation and the worksite.

◆ Relevant laws and regulations.

◆ Other policies, procedures and requirements.

The table below is a useful tool in risk evaluation:

Risk Level	Action
Extreme	**This is an unacceptable risk level** The task, process or activity **must not proceed**.
High	**This is an unacceptable risk level** The proposed activity can only proceed, provided that: 1. The risk level has been reduced to as low as reasonably practicable using the hierarchy of risk controls. 2. The risk controls must include those identified in legislation, Australian Standards, Codes of Practice etc. 3. The risk assessment has been reviewed and approved by the Supervisor. 4. A Safe Working Procedure or Work Method Statement has been prepared. The supervisor must review and document the effectiveness of the implemented risk controls.
Moderate	**This is an unacceptable risk level** The proposed activity can only proceed, provided that: 1. The risk level has been reduced to as low as reasonably practicable using the hierarchy of risk controls. 2. The risk assessment has been reviewed and approved by the Supervisor. 3. A Safe Working Procedure or Work Method Statement has been prepared.
Low	The proposed task or process needs to be managed by documented routine procedures, which must include application of the hierarchy of controls.

1.3.3 Control Hazards Using Existing Procedures

Once you have a list of workplace risks and hazards, you will need to access and apply any existing risk management procedures that relate to them. This will allow you to identify and eliminate those hazardous situations already covered by procedures.

Existing risk management procedures you may find already applied on your site can include:

- ◆ Personal safety, e.g. personal protective equipment (PPE), medical standards, drug and alcohol use, stress management and evacuation.

- ◆ Equipment and machinery isolation.

- ◆ Protection and guarding.

- ◆ Hazard identification and monitoring.

- ◆ Chemical safety.

- ◆ Fire safety.

- ◆ Other potential emergency-related circumstances.

- ◆ Uncontrolled energy.

- ◆ Shift or project changeover or handover.

Where control strategies are already in place, it is your job to check whether they are right for the situation and manage the hazards well. For example, are they based on existing Regulations, Codes of Practice and current standards?

Existing control measures and risk treatments are not necessarily right just because an incident hasn't occurred. This particularly applies where the existing control measures are only administrative controls (e.g. training, safety procedures, safety signs) or PPE.

If an existing risk management procedure is right for the situation and manages the hazard well it should be applied. Once a hazard control has been put into place it should be regularly checked to make sure the risk level meets both legislative and organisational requirements at all times.

If an existing procedure is not suitable, you will need to identify appropriate risk treatments and apply them.

1.3.4 Identify and Implement Controls for Potential Hazards

Controlling or preventing potential hazard may be achieved by a whole range of possible solutions. You will need to work out which is the best option for the situation.

Risk control involves choosing one or more options (risk treatments) to lower the risk level, and then implementing the selected options. Once an option has been implemented it is called a 'control'.

You can work out the best way to control a hazard by:

1. Identifying the options for controls – a control option may be a single control or it may be made up of a number of different controls that together provide protection against a risk.

2. Looking at all identified control options and choosing the best option that most effectively eliminates or reduces risk in the circumstances.

3. Implementing the selected option.

All possible options should be identified when you start looking at ways to manage hazards.

1.3.4.1 Use the Hierarchy of Hazard Controls

The Hierarchy of Hazard Control is the name for a range of control methods used to eliminate or control hazards and risks in the workplace.

This table shows you the 6 different types of controls in order from best to worst:

Hierarchy Level	Action	Example Controls
1. Elimination	Completely remove the hazard. This is the best kind of hazard control.	◆ Repair damaged equipment promptly. ◆ Remove trip hazards in a cluttered corridor. ◆ Dispose of unwanted chemicals. ◆ Eliminate hazardous plant or processes.
2. Substitution	Swap a dangerous work method or situation for one that is less dangerous.	◆ Substitute manual handling for appropriate plant and equipment to move materials. ◆ Substitute a hazardous chemical with a less dangerous one.
3. Isolation	Isolate or restrict access to the hazard.	◆ Isolate and store chemicals properly by using a fume cupboard. ◆ Isolate copying equipment and other machinery in soundproof rooms to reduce fumes and noise. ◆ Use security measures to protect staff. ◆ Incorporate appropriate exclusion zones when operating plant and machinery.
4. Engineering Controls	Use equipment to lower the risk level.	◆ Ensure proper machine guarding is in place. ◆ Use anti-glare screens on computer VDUs. ◆ Use mechanical aids to minimise manual handling injuries. ◆ Use wetting down techniques to minimise dust levels. ◆ Change bench heights to reduce bending. ◆ Redesign plant to reduce noise levels. ◆ Install forced ventilation to remove vapours.
5. Administrative Controls	Site rules and policies attempt to control a hazard.	◆ Training. ◆ Job rotation. ◆ Redesigning of jobs. ◆ Maintenance of plant and equipment. ◆ Limitation of exposure time. ◆ Provision of written work procedures.
6. Personal Protective Equipment	The least effective control. Use PPE while you carry out your work.	◆ Protective clothing. ◆ Breathing apparatus. ◆ Ear and eye protection.

1.3.4.2 Analyse All Control Options

It is important to consider all of the options available when deciding on the best course of action. Not all options are feasible or possible under the circumstances.

You may need to use a number of control measures together to reduce the risk to an acceptable level.

You will also need to analyse the controls to determine which ones are feasible (realistic and practical).

For a control option to be feasible it must be:

Available	The control, or its parts, must be available for purchase, made to suit or be put in place.
Suitable	It must be suitable for the circumstances of the site. It must also work properly given the conditions, work processes and people involved in the work, as well as having the least impact on the delivery of the goods/services.
Highest Level Possible	The control must provide the highest possible (and practical) level of protection and also be the most reliable. These will be the controls at the top of the Hierarchy.

The thing to remember is that the controls need to provide the highest level of protection possible in the circumstances, while still being realistic and practical.

1.3.4.3 Select the Most Appropriate Control

Selecting the most appropriate hazard control involves balancing the costs and efforts of implementation against the benefits or outcome.

Essential things to consider are the legal, regulatory and other requirements such as social responsibility and the protection of the natural environment.

Selections should also take into account the risks whose control is not justifiable on economic grounds, e.g. severe (high negative consequence) but rare (low likelihood) risks.

Under the WHS legislation you are required to introduce treatments or control measures to eliminate the risk, or if that is not possible, to reduce the risk so far as is reasonably practicable.

You must be able to show consideration of all the above factors in selecting the most appropriate control with regard to the legislation and the organisation.

1.3.4.4 Implement or Facilitate Controls

Once the control measure has been chosen, planned for and approved by higher level management, the next step is to implement (or facilitate the implementation of) the procedures to control the identified hazards.

If the implementation of the action is being completed by other personnel you will need to:

- ◆ Brief them on the course of action.

- ◆ Train them in the implementation.

- ◆ Monitor their implementation.

- ◆ Ensure the details are recorded and documented.

- ◆ Use feedback to streamline the system or process.

- ◆ Acknowledge differences in opinion, education and experience and make appropriate allowances.

- ◆ Be flexible to make changes as necessary.

It is extremely important that all procedures are applied correctly and according to organisational policies.

Speak with any workers who are responsible for implementing controls to make sure they are aware of what they need to do, when they should do it and how they should do it.

Monitor the progress of the implementation of the hazard controls to make sure you can address any unexpected issues quickly. Keep a record of any deviation from the plan during the implementation of the controls.

Facilitating ongoing reviews of the application of risk controls should be a regular activity. This may mean running the review or simply providing guidelines for an onsite evaluation.

If during the review process you determine the implementation or application of the risk control is not working, you will need to investigate why the control is inadequate and develop a strategy for increasing the effectiveness of the control method.

1.3.5 Complete Hazard and Risk Documentation

Completing and retaining the hazard and risk management documentation in writing is important to ensure the correct decisions have been made for the right reasons and by the appropriate people.

It is also essential so there is an audit trail – the process can be followed through later to determine where things were done right and where things were missed.

Hazard and risk management documentation and reports could include:

- Objectives documents.

- Parameters of the risk assessment strategies.

- Parameters of the Risk Management tasks.

- Preferred methodology.

- Results and recommendations.

- Risk assessment forms.

- Action planning documentation.

- Notes, interviews, plans and draft documents.

The methods used for the documentation and reporting will vary between sites and organisations. It is important that you are aware of the different systems used on the site you are currently working on.

Most systems are now computerised, which allows for easy access to the required information from any terminal or access point within the mine site.

Adequate training in the system being used on your site is essential to getting the best out of the recording and documenting system being used by your organisation.

Documents will also need to be maintained correctly to enable their effective use. This maintaining could include:

- Adding to forms or other documents.

- Filing the documents correctly for your site.

- Monitoring the use of the documents.

- Using the documents for decision-making purposes.

- Update systems and other documents regularly.

Often relevant records and documents are not known to be relevant until they are needed but they are out of date, unavailable or have been discarded. To avoid this situation, if you are discarding documentation, scan and maintain the documents in a digital format that is searchable and archive the electronic version.