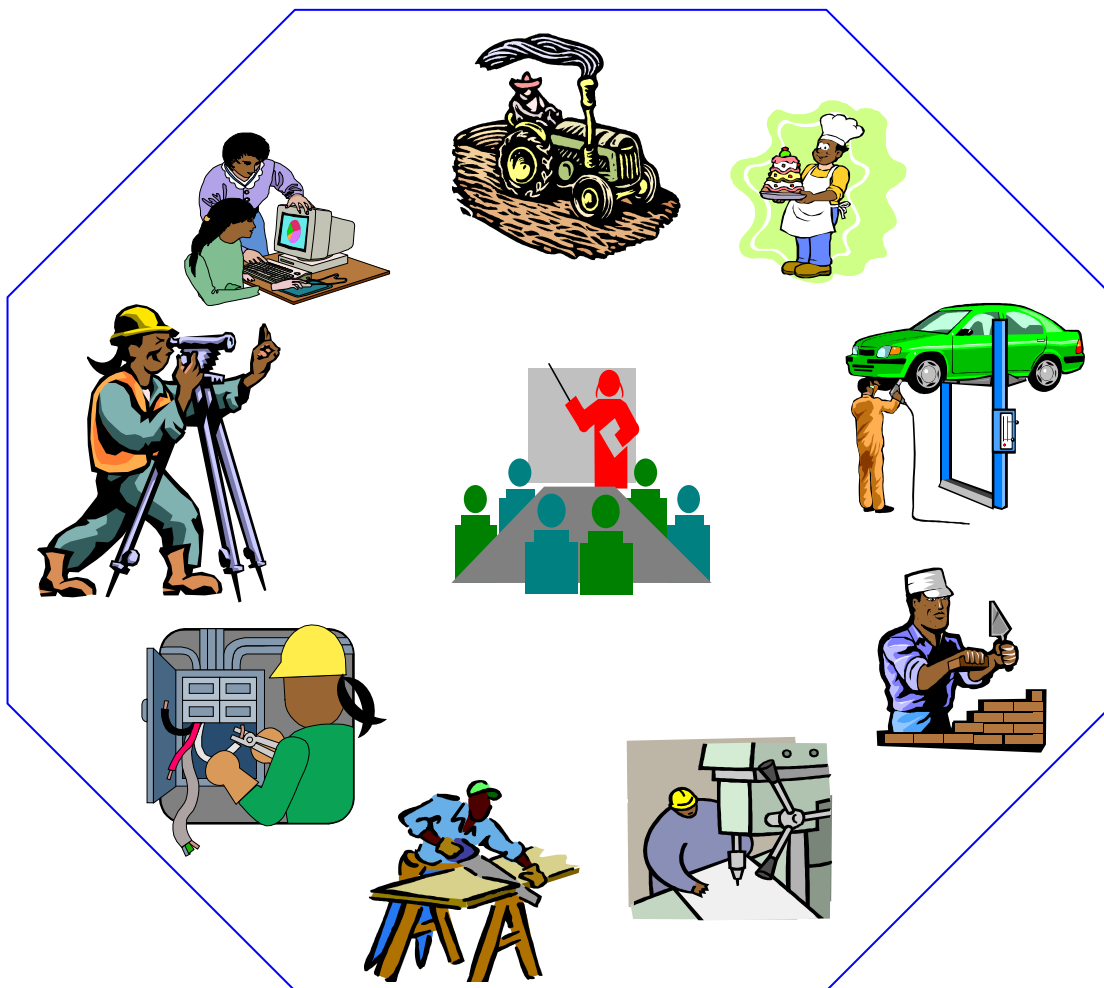




Federal Democratic Republic of Ethiopia
OCCUPATIONAL STANDARD
MINERAL RESOURCES
INFRASTRUCTURE WORK
NTQF Level I



*Ministry of Education
January 2014*

Introduction

Ethiopia has embarked on a process of reforming its TVET-System. Within the policies and strategies of the Ethiopian Government, technology transformation – by using international standards and international best practices as the basis, and, adopting, adapting and verifying them in the Ethiopian context – is a pivotal element. TVET is given an important role with regard to technology transfer. The new paradigm in the outcome-based TVET system is the orientation at the current and anticipated future demand of the economy and the labor market.

The Ethiopia Occupational Standards (EOS) is the core element of the Ethiopian National TVET-Strategy and an important factor within the context of the National TVET-Qualification Framework (NTQF). They are national Ethiopia standards, which define the occupational requirements and expected outcome related to a specific occupation without taking TVET delivery into account.

This document details the mandatory format, sequencing, wording and layout for the Ethiopia Occupational Standard which comprised of Units of Competence.

A Unit of Competence describes a distinct work activity. It is documented in a standard format that comprises:

- Occupational title, NTQF level
- Unit code
- Unit title
- Unit descriptor
- Elements and Performance criteria
- Variables and Range statement
- Evidence guide

Together all the parts of a Unit of Competence guide the assessor in determining whether the candidate is competent.

The ensuing sections of this EOS document comprise a description of the respective occupation with all the key components of a Unit of Competence -

- chart with an overview of all Units of Competence for the respective level including the Unit Codes and Unit of Titles
- contents of each Unit of Competence (competence standard)
- occupational map providing the Technical and Vocational Education and Training (TVET) providers with information and important requirements to consider when designing training programs for this standards, and for the individual, a career path

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UNIT OF COMPETENCE CHART

Occupational Standard: Mineral Resources Infrastructure Work		
Occupational Code: MIN MRI		
NTQF Level I		
<p><u>MIN MRI1 01 0114</u> Read and Interpret Laboratory Procedures and Specifications</p>	<p><u>MIN MRI1 02 0114</u> Use Hand and Power Tools</p>	<p><u>MIN MRI1 03 0114</u> Carryout Measurements and Calculations</p>
<p><u>MIN MRI1 04 0114</u> Handle Resources and Infrastructure Materials and Safely Dispose of Non-toxic Materials</p>	<p><u>MIN MRI1 05 0114</u> Operate Laboratory Machine and Equipment</p>	<p><u>MIN MRI1 06 0114</u> Conduct Local Risk Control</p>
<p><u>MIN MRI1 07 0114</u> Apply First Aid</p>	<p><u>MIN MRI1 08 0114</u> Use Personal Computer</p>	<p><u>MIN MRI1 09 0114</u> Apply Quality Standards</p>
<p><u>MIN MRI1 10 0114</u> Work with Others</p>	<p><u>MIN MRI1 11 0114</u> Receive and Respond to Workplace Communication</p>	<p><u>MIN MRI1 12 0114</u> Demonstrate Work Values</p>
<p><u>MIN MRI1 13 0114</u> Develop Understanding of Entrepreneurship</p>	<p><u>MIN MRI1 14 0114</u> Apply 3S</p>	

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Read and Interpret Laboratory Procedures and Specifications
Unit Code	<u>MIN MRI1 01 0114</u>
Unit Descriptor	This unit covers the reading and interpreting of Laboratory procedures and specifications in Geosciences' Laboratory. It includes: identifying types of procedures and their functions; recognising amendments and commonly used symbols and abbreviations; locating and identifying key features on procedures; and reading and interpreting job specifications.

Elements	Performance Criteria
1. Identify types of procedures and their functions	1.1. The main types of standard operating procedures used in the Geosciences' Laboratory are identified. 1.2. The key functions of each type of procedures are identified. 1.3. Quality requirements of company operations are recognised and adhered to. 1.4. Environmental controls are identified from the job plans, specifications and environmental plan.
2. Recognize amendments	2.1. Title panel is checked to verify latest amendments to Procedures. 2.2. Amendments to specifications are checked to ensure currency of information.
3. Recognize commonly used symbols and abbreviations	3.1. Laboratory symbols and abbreviations are recognised. 3.2. Legend on procedures symbols and abbreviations is located and correctly interpreted.
4. Locate and identify key features on Geosciences' Laboratory	4.1. Orientation of the procedures with the laboratory is achieved. 4.2. Key features of the laboratory are identified and located. 4.3. Access to laboratory is gained and services, main features and datum are identified.
5. Read and interpret job specifications	5.1. Job specifications are identified from procedures, notes and descriptions. 5.2. Standards of work, finishes and tolerances are identified from the Laboratory specifications. 5.3. Material attributes are identified from specifications.

Variable	Range
Standard operating procedures	May include but not limited to: <ul style="list-style-type: none"> • all relevant organizational requirements

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	<ul style="list-style-type: none"> • instructions • departmental procedures • codes of practice • organizational regulations • in house procedures • specifications
Specifications	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • materials and quality of work • quality assurance • provision of Laboratory facilities • details relating to performance including: <ul style="list-style-type: none"> ➤ standards of work ➤ tolerances ➤ characteristics ➤ treatments and finishes
Key features	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • type of service • quantities • characteristics • Quality • compatibility

Evidence Guide	
Critical aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for reading and interpreting of procedures and specifications • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of the reading and interpreting of procedures and specifications • working with others to undertake and complete the reading and interpreting of procedures and specifications that meet all of the required outcomes • consistent timely completion of the reading and interpreting of procedures and specifications that safely, effectively and efficiently meets the required outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • features of procedures and specifications including Measurement unit , symbols and abbreviations, safety precautions • commonly used Laboratory symbols and abbreviations • the processes for application of Laboratory equipment's in procedures preparation/interpretation • techniques for orienting/confirming the orientation of a procedures key features of formal job specifications

	<ul style="list-style-type: none"> • site and equipment safety requirements • project quality requirements • basic calculations of weight, volumes &percentage • Laboratory terminology • Safe work method statement
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • apply legislative, organisation and site requirements and procedures • speaking clearly and directly, listening carefully to instructions and information • apply teamwork to a range of situations, particularly in a safety context • solve problems such as recognising clear discrepancies between the documents (procedures, specifications) and the Laboratory practical works and taking action to correct these • show initiative in adapting to changing work conditions or contexts particularly when working across a variety of work areas • manage time, particularly in organising priorities and planning work • take responsibility for self-organisation of work priorities • apply mathematical skills, including basic calculations of weight, volumes and Percentage • show a willingness to learn and to use a range of mediums to learn • use workplace technology including the use of communication systems and the reporting/recording of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Use Hand and Power Tools
Unit Code	<u>MIN MRI1 02 0114</u>
Unit Descriptor	This unit covers the use of hand and power tools in resources and infrastructure industries. It includes planning and preparing for work, selecting and using hand tools and power tools, and cleaning up.

Elements	Performance Criteria
1. Plan and prepare	<p>1.1 Compliance documentation relevant to the use of hand and power tools is accessed, interpreted and applied.</p> <p>1.2 Work instructions for the allotted task are obtained, confirmed and applied.</p> <p>1.3 Safety requirements from the site safety plan and organisational policies and procedures relevant to the allotted task are obtained, confirmed and applied.</p> <p>1.4 Environmental protection requirements for the allotted task from the project environmental management plan are identified, confirmed and applied.</p>
2. Select and use hand tools	<p>2.1 Hand tools are selected consistent with needs of the job.</p> <p>2.2 Tools are checked for serviceability and safety, and report faults.</p> <p>2.3 Materials are clamped or fixed in position.</p> <p>2.4 Hand tools are used safely and effectively according to their intended use.</p> <p>2.5 Hand tools are safely located when not in immediate use.</p>
3. Select and use power tools	<p>3.1 Power tools and equipment consistent with needs of job and in accordance with standard work practice are selected, and any faults reported.</p> <p>3.2 Tools are checked for serviceability and safety, and faults reported.</p> <p>3.3 Power leads/hoses are visually checked for serviceability/safety in accordance with the site safety plan.</p> <p>3.4 Route is cleared for safe placement and connection of leads/hoses.</p> <p>3.5 Material is clamped or fixed in position for power tool application where applicable.</p> <p>3.6 Power tools are used safely and effectively in application</p>

	<p>processes.</p> <p>3.7 Power tools are located safely when not in use.</p>
4. Clean up	<p>4.1 Work area is cleared and materials are disposed of or recycled in accordance with project environmental management plan.</p> <p>4.2 Machinery, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer's recommendations and standard work practices.</p>

Variable	Range
Relevant compliance documentation	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Ethiopian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Work instructions	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, Materials Safety Data Sheets (MSDS) and diagrams or sketches • plans and specifications • quality requirements, including: dimensions and tolerances, standards of work and material standards • safe work procedures or equivalent related to using hand and power tools
Safety requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tools and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • use of First Aid equipment • hazard control • hazardous materials and substances • personal protective equipment • emergency procedures related to equipment operation which may include • emergency shutdown and stopping • extinguishing equipment fires • organisational First Aid requirements and

	<ul style="list-style-type: none"> • evacuation
Environmental protection requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • organisational/project environmental management plan • waste management • water quality protection • noise • vibration • dust and • clean-up management
Hand tools will	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • clamps • vices • adjustable spanners • crow bars • pinch bars • bolt cutters • chisels • hacksaws • handsaws • hammers • measuring tapes • axes • rakes • hand augers • picks • mattocks • pliers • shovels • spades • sledge hammers • spanners • wrenches • spirit levels and • wire cutters • file • screwdriver • retractable cutters
Checking tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • checking of electrical safety/inspection tag for currency • equipment defect identification • assessment of conditions and hazards and determination of work requirements

Materials	<p>May include but not limited to:</p> <ul style="list-style-type: none"> to include those associated with the use of hand and power tools such as: timber, rock, concrete, metals, plastics
Power tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> 240 volt electricity compressed air battery driven and hydraulics kanga hammers cut off saws drills screwdrivers angle grinders pneumatic wrenches impact hammers tampers rotary hammers/drills circular saws planers sanders and scalers
Equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> power leads and safety switches and air hoses

Evidence Guide	
Critical aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> knowledge of the requirements, procedures and instructions for the use of hand and power tools implementation of requirements, procedures and techniques for the safe, effective and efficient use of hand and power tools working with others to undertake the use of hand and power tools that meets all of the required outcomes consistent timely use of hand and power tools that safely, effectively and efficiently meets the required outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> site and equipment safety requirements hand tools and their application portable power tools and their application energy/power sources materials associated with use in the industry equipment types, characteristics, technical capabilities and

	<p>limitations</p> <ul style="list-style-type: none"> operational, maintenance and basic diagnostic procedures Materials Safety Data Sheets (MSDS) and materials handling methods project quality requirements industry and worksite terminology electrical, hydraulic and compressed air safety JSA's/safe work method statement
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> apply legislative, organisation and site requirements and procedures speak clearly and directly, listening carefully to instructions and information interpret and understand the information required for the preparation and application of hand and power tools, including work instructions, quality assurance procedures, manufacturer's instructions, materials safety data sheets and equipment apply teamwork to a range of situations, particularly in a safety context solve problems particularly in teams and in dealing practically with safety issues show initiative in adapting to changing work conditions or contexts particularly when working across a variety of work placements manage time, particularly in organising priorities and planning work including the scheduling and use of equipment, materials and tools to avoid back tracking and re work take responsibility for self organisation of work priorities show a willingness to learn and to use a range of mediums to learn use technology related to determining requirements, the planning and application of hand and power tools, including the use of calculations, mechanical equipment and the reporting/recording of results
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> Interview / Written Test Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Carryout Measurements and Calculations
Unit Code	MIN MRI1 03 0114
Unit Descriptor	This unit covers carrying out measurements and calculations in the civil construction industry. It includes: planning and preparation; performing measurements and calculations; and estimating approximate quantities.

Elements	Performance Criteria
1. Plan and prepare	<p>1.1 Compliance documentation relevant to the work activity is accessed, interpreted and applied.</p> <p>1.2 Work instructions are confirmed and applied.</p> <p>1.3 Measuring and calculating equipment is selected to carry out tasks that are consistent with the requirements of the job, and checked for serviceability.</p> <p>1.4 Any faults are rectified or faults reported.</p>
2. Perform measurements	<p>2.1. Method of obtaining the measurement is selected and applied.</p> <p>2.2. Measurements are obtained using a rule or tape, accurate to 1mm.</p> <p>2.3. Measurements are confirmed and recorded.</p>
3. Perform calculations	<p>3.1. Appropriate calculation method is selected for achieving the required result.</p> <p>3.2. Material quantities are correctly calculated for the project using the appropriate factors.</p> <p>3.3. Results are confirmed and recorded.</p>
4. Estimate approximate quantities	<p>4.1. Calculations are taken for determining material requirements.</p> <p>4.2. Appropriate formulas are selected for calculating quantities.</p> <p>4.3. Quantities are estimated from the calculations taken.</p> <p>4.4. Material quantities are calculated, confirmed and recorded for the project within enterprise tolerances.</p>

Variable	Range
Relevant compliance documentation	<p>May include but not limited to:</p> <ul style="list-style-type: none"> legislative, organisational and site requirements and procedures manufacturer's guidelines and specifications

	<ul style="list-style-type: none"> • Ethiopian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Measurement	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • length, area, weight, height, width, depth, volume, mass, scales, perimeters, quantities, numbers, grade
Calculations	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • addition, subtraction, multiplication and division • length, perimeter, circumference, area, volume, number, ratio, percentage • conversions, such as of metres to millimetres and millimetres to metres

Evidence Guide	
Critical aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions for carrying out measurements and calculations • implementation of requirements, procedures and techniques for the safe, effective and efficient carrying out measurements and calculations • working with others to undertake and complete measurements and calculations that meet all of the required outcomes • consistent timely completion of measurements and calculations that safely, effectively and efficiently meets the required outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • site and equipment safety requirements • measuring, calculating, geometry and determination of quantities • tolerances • calculators • company procedures • project quality requirements • communication devices • processes for care of measuring equipment • civil construction terminology
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • locate, interpret and apply relevant information • comply with site safety plan, OHS regulations and State/Territory legislation applicable to workplace operations • comply with organisational policies and procedures including

	<p>quality requirements</p> <ul style="list-style-type: none"> • complete measurements, calculations and determination of quantities for at least three different projects of varying complexity • calculate each of the following using a realistic civil construction task for example: <ul style="list-style-type: none"> ➤ length ➤ perimeter ➤ circumference ➤ area ➤ volume ➤ number ➤ ratio ➤ percentage ➤ conversion of metres to millimetres and millimetres to metres ➤ measure using a rule or tape measure five separate tasks within 1mm accuracy • use operational tools and equipment safely and effectively • communicate and work effectively and safely with others
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Handle Resources and Infrastructure Materials and Safely Dispose of Non-toxic Materials
Unit Code	MIN MRI1 04 0114
Unit Descriptor	This unit covers the handling of materials and safely dispose of non-toxic materials in resources and infrastructure Laboratory. It includes planning and preparing for work; handling and removing waste; and cleaning up.

Elements	Performance Criteria
1. Plan and prepare	<p>1.1. Compliance documentation relevant to the work activity is accessed, interpreted and applied.</p> <p>1.2. Work instructions, quality requirements and operational details relevant to the allotted task are obtained, confirmed and applied.</p> <p>1.3. Safety requirements are obtained, confirmed and applied from the laboratory safety plan and organisational policies and procedures, relevant to the allotted task.</p> <p>1.4. The signage requirements are identified, obtained and implemented from the laboratory traffic management plan.</p> <p>1.5. Tools and equipment are rectified to carry out tasks that are consistent with the requirements of the job and checked for serviceability and or any faults reported.</p> <p>1.6. Environmental protection requirements from the project environmental management plan to the allotted task are identified, confirmed and applied.</p>
2. Handle and remove waste	<p>2.1. Materials safety data sheets and requirements of regulatory authorities are complied.</p> <p>2.2. Hazardous materials are identified for separate handling.</p> <p>2.3. Correct procedures are used to remove non-toxic materials.</p> <p>2.4. Dust suppression procedures are used to minimise health risks to work personnel and others materials from workplace traffic or access.</p>
3. Clean Up	<p>3.1. Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and standard work practices.</p> <p>3.2. Unused materials are safely stored/stacked for future use.</p> <p>3.3. Work area is cleared and materials are disposed of or recycled in accordance with Laboratory environmental management plan.</p>

Variable	Range
Relevant compliance documentation	May include but not limited to: <ul style="list-style-type: none"> • legislative, organisation and Laboratory requirements and procedures • manufacturer's guidelines and specifications • Ethiopia standards • code of practice • Employment and workplace relations • Equal Employment Opportunity, Disability Discrimination
Work instructions	May include but not limited to: <ul style="list-style-type: none"> • verbal or written and graphical instructions • plans and specifications • work bulletins • control charts • memos • Materials Safety Data Sheets (MSDS) • organisation's work specifications and requirements • instructions issued by authorised organisational or external personnel
Quality Requirements	May include but not limited to: <ul style="list-style-type: none"> • tolerances • standards of work • material standards as detailed in: <ul style="list-style-type: none"> • the project drawings, • specifications and • project documentation to meet client satisfaction
Safety requirements	May include but not limited to: <ul style="list-style-type: none"> • protective clothing and equipment and is include that prescribed under: <ul style="list-style-type: none"> ➤ legislation ➤ regulation and ➤ workplace policies and practices ➤ use of tools and equipment ➤ workplace environment and safety ➤ handling of materials ➤ use of fire fighting equipment ➤ use of First Aid equipment ➤ hazard control and ➤ hazardous materials and substances • emergency procedures related to equipment operation which are to include but may not be limited to: <ul style="list-style-type: none"> ➤ emergency shutdown and stopping ➤ extinguishing equipment fires
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	<ul style="list-style-type: none"> ➤ organisational First Aid requirements ➤ evacuation
Tools and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • brooms • hoses • shovels • rakes • wet and dry industrial vacuum cleaners • wheelbarrows • pallet trolley • materials hoists • forklifts
Environmental protection requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • organisational/project environmental management plan • waste management • water quality protection • noise • vibration • dust • clean-up management
Hazardous materials	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • those materials that pose a health risk to humans and animals or cause irreversible damage to the environment and may include toxic chemicals, asbestos and radioactive materials
Non toxic materials	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • those materials that do not pose a health risk through poisoning to humans and animals and may include excavated material that exceeds requirements and off cuts of construction materials such as timber
Dust suppression procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • spraying with water • covering and • use of vacuum cleaners

Evidence Guide	
Critical aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions to handle resources and infrastructure materials and safely dispose of non toxic materials • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of handling of resources and infrastructure materials and safe disposal of non toxic materials • working with others to undertake and complete the handling

	<p>of resources and infrastructure materials and safe disposal of non toxic materials that meets all of the required outcomes</p> <ul style="list-style-type: none"> • consistent timely completion of handling of resources and infrastructure materials and disposal of non toxic materials that safely, effectively and efficiently meets the required outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • the most commonly encountered waste materials on worksites • environmental management requirements • hazardous goods handling in accordance with company procedures • systems for packing and securing materials for movement • systems and equipments or materials for the short term protection of stacked/stored materials • methods of dust suppression • site and equipment safety requirements • site isolation and traffic control responsibilities and authorities • project quality requirements • industry and worksite terminology • JSA's/Safe work method statement
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • apply legislative, organisation and site requirements and procedures • apply teamwork to a range of situations, particularly in a safety context • solve problems particularly in teams and in dealing practically with safety issues • show initiative in adapting to changing work conditions or contexts particularly when working across a variety of work placements • manage time, particularly in organising priorities and planning work • take responsibility for self organisation of work priorities • show a willingness to learn and to use a range of mediums to learn
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Operate Laboratory Machine and Equipment
Unit Code	MIN MRI1 05 0114
Unit Descriptor	This unit covers the operating of a range of small plant and equipment in resources and infrastructure industries. It includes the planning and preparation for work, the conducting of pre-operational checks, the use of the plant and/or equipment, and carrying out operator maintenance and cleaning up.

Elements	Performance Criteria
1. Plan and prepare	<p>1.1. Compliance documentation relevant to operate small plant and equipment is accessed, interpreted and applied.</p> <p>1.2. Work instructions are obtained, confirmed and applied for the allotted task.</p> <p>1.3. The site safety plan and organisational policies and procedures are obtained, confirmed and applied to the allotted task safety requirements.</p> <p>1.4. Plant, tools and equipment are selected to carry out tasks are consistent with the requirements of the job.</p> <p>1.5. The project environmental management plan is identified, confirmed and applied to the allotted task environmental protection requirements.</p>
2. Conduct pre-operational checks	<p>2.1. Fuel and lubricants are selected according to manufacturer's specifications.</p> <p>2.2. Fuel, oil, hydraulic fluid and water levels are checked and adjusted according to manufacturer's manual.</p> <p>2.3. Bolts, nuts, guards and attachment couplings are secured/tightened and maintained in accordance with manufacturer's instructions.</p> <p>2.4. Function of controls and gauges is checked and adjusted where necessary to comply with manufacturer's manual.</p> <p>2.5. Standard start-up and shutdown procedures are conducted according to requirements of operator's manual.</p>
3. Use small plant and equipment	<p>3.1. Site hazards associated with small plant and equipment operations are identified and appropriate controls established in accordance with the requirements of the site safety plan.</p> <p>3.2. Operating techniques are identified and applied for small plant and equipment to achieve optimum output in accordance with manufacture's design specifications while</p>

	<p>maintaining specified tolerances.</p> <p>3.3. Machine is operated to produce results within design specifications to meet specified tolerances.</p> <p>3.4. Plant and equipment are safely located when not in immediate use.</p>
4. Carry out operator maintenance	<p>4.1. Plant/equipment is shutdown and prepared for maintenance as per manufacturer's manual and organisational requirements.</p> <p>4.2. Inspection and fault finding is conducted in accordance with the manufacture's specifications and/or organisational requirements.</p> <p>4.3. Defective parts are removed and replaced safely and effectively according to manufacturer's manual and organisational requirements.</p> <p>4.4. Regular programmed maintenance tasks are carried out in accordance with the manufacturers and/or organisational requirements.</p>
5. Clean up	<p>5.1. Work area is cleared and materials are disposed of or recycled in accordance with project environmental management plan.</p> <p>5.2. Plant, equipment and tools are cleaned, checked, maintained and stored in accordance with manufacturer's recommendations and standard work practices.</p>

Variable	Range
Relevant compliance documentation	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Ethiopian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Work instructions	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, charts and hand drawings, memos, Materials Safety Data Sheets (MSDS) and diagrams or sketches • plans and specifications • quality requirements, including dimensions, tolerances, standards of work and material standards • safe work procedures related to the operation of small plant

	and equipment on construction sites
Safety requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • protective clothing and equipment • use of tools and equipment • workplace environment and safety • handling of materials • use of fire fighting equipment • use of First Aid equipment • hazards and risks control, including: <ul style="list-style-type: none"> ➤ uneven/unstable terrain ➤ trees ➤ fires ➤ overhead and underground services ➤ bridges ➤ buildings ➤ traffic ➤ embankments ➤ excavations and cuttings ➤ structures and ➤ hazardous materials and substances ➤ safe operating procedures ➤ underground and overhead services ➤ other machines ➤ personnel restricted access barriers ➤ traffic control ➤ working at heights ➤ working in proximity to others ➤ worksite visitors and ➤ the public • emergency procedures, including: <ul style="list-style-type: none"> ➤ emergency shutdown and stopping ➤ extinguishing equipment fires ➤ organisational First Aid requirements and ➤ evacuation
Environmental protection requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • organisational/project environmental management plan • waste management • water quality protection • noise, vibration and dust management and • clean-up management
Small plant and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • generator • compressor • inverter • solar

	<p>Compaction equipment may include:</p> <ul style="list-style-type: none"> • plate compactor • pedestrian roller • wacker • packer • tamper) <p>Concrete equipment may include:</p> <ul style="list-style-type: none"> • concrete mixer • batcher • vibration • trowelling machine (helicopter) <p>Excavation equipment may include:</p> <ul style="list-style-type: none"> • mini loader (dingo) • jackhammer • posthole borer • pedestrian trencher <p>Cutting equipment may include:</p> <ul style="list-style-type: none"> • masonry saw • construction saw • band saw <p>Maintenance equipment may include:</p> <ul style="list-style-type: none"> • mower • brush cutter • mulcher <p>Water equipment may include:</p> <ul style="list-style-type: none"> • pump • spear • pressure cleaner <p>Lighting equipment may include:</p> <ul style="list-style-type: none"> • mobile lighting plant <p>Lifting and materials handling:</p> <ul style="list-style-type: none"> • pedestrian forklift • pallet trolleys • hoist <p>Traffic Management may include:</p> <ul style="list-style-type: none"> • mobile variable message sign
Operator maintenance	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • cleaning • authorised servicing • the monitoring, recording and reporting of faults • the conduct of authorised minor replacements
Materials	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • water • clays, silts, stone, gravel, mud, rocks and, topsoil

	<ul style="list-style-type: none"> • bituminous mixes • timber • fuels and oils • power leads • replacement parts and consumables
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Evidence Guide	
Critical aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions to operate small plant and equipment • implementation of requirements, procedures and techniques for the safe, effective and efficient operating of small plants and equipment • working with others to operate small plants and equipment that meets all of the required outcomes • consistent timely operating of small plants and equipment that safely, effectively and efficiently meets the required outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • small plant and equipment types, characteristics, technical capabilities and limitations • basic soil types and characteristics • site and equipment safety requirements • small plant and equipment operating techniques related to essential tasks • operational, maintenance and basic diagnostic procedures • site isolation and traffic control responsibilities and authorities • Materials Safety Data Sheets (MSDS) and materials handling methods • project quality requirements • industry and site specific terminology • JSA's/Safe work method statement
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • apply legislative, organisation and site requirements and procedures • apply clear and direct speaking and active listening skills • apply teamwork to a range of situations, particularly in a safety context • apply problem solving techniques, particularly in teams and in dealing with safety issues • interpret and apply information • show initiative in adapting to changing work conditions or contexts particularly when working across a variety of work placements • manage time, particularly in organising priorities and planning

	<p>work</p> <ul style="list-style-type: none"> • take responsibility for self organisation of work priorities • use a range of mediums to learn
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Conduct Local Risk Control
Unit Code	MIN MRI1 06 0114
Unit Descriptor	This unit covers the conduct of local risk control in resources and infrastructure industries. It includes identifying hazards; assessing risk and identifying unacceptable risk; identifying, assessing and implementing risk treatments; and completing records and reports.

Elements	Performance Criteria
1. Identify hazards	<p>1.1. Compliance documentation relevant to conducting local risk control is accessed, interpreted and applied.</p> <p>1.2. Work area conditions are inspected to identify potential hazards in the workplace.</p> <p>1.3. Existing procedures are applied to deal with recognised hazards.</p> <p>1.4. The type and scope of unresolved hazards and their likely impact are recognised.</p>
2. Assess risk and identify unacceptable risk	<p>2.1. Consequence is assessed and determined if the event should occur.</p> <p>2.2. Likelihood of the event is considered and determined.</p> <p>2.3. Criteria are identified for the acceptability/unacceptability of the risk or source from the appropriate party.</p> <p>2.4. Risk against criteria is assessed to identify if it warrants 'unacceptable risk' status and either action or refer to the appropriate party.</p>
3. Identify, assess and implement risk treatments	<p>3.1. All possible risk treatment options are identified and considered.</p> <p>3.2. Options are identified by preliminary analysis and consideration of possible options.</p> <p>3.3. Options, including the identification of resource requirements are analysed.</p> <p>3.4. Most appropriate action is selected for dealing with the situation.</p> <p>3.5. The course of action is planned and prepared in detail and required resources are acquired/obtained.</p> <p>3.6. The risk treatment is implemented.</p> <p>3.7. Risk management processes are reviewed.</p>

4. Complete records and reports	<p>4.1. Information on the course of action and implementation is communicated.</p> <p>4.2. Records and reports for hazards and actions are completed from personal risk assessment as specified by legislation and site requirements.</p>
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Variable	Range
Relevant compliance documentation	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • legislative, organisation and site requirements and procedures • Ethiopian standards • code of practice • Employment and Workplace Relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Hazards	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • a source of potential harm or a situation with a potential to cause loss • equipment • stored energy • methods • plans • people • the work environment
Consequence	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • the outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage or gain
Likelihood	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • a qualitative description of probability and frequency
Risk	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • The chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood
Risk treatment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • selection and implementation of appropriate options for dealing with risk
Frequency	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • a measure of likelihood expressed as the number of occurrences of an event in a given time
Criteria for the acceptability/ unacceptability of the risk	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • the organisation's internal policy, goals and/ or objectives in reference to relevant legislation

Risk treatment options	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • eliminating the hazard • substitution • engineering controls • administrative controls (procedures, etc) • Personal protective equipment.
Records and reports	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • hazard reporting forms • supervisor/deputy/OCE reports • incident reports • near miss reports • shift reports • JSAs • Take 5 • Step Back
Probability	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • the measure of the chance of occurrence expressed as a number between 0 and 1

Evidence Guide

Critical aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions to conduct local risk control • implementation of requirements, procedures and techniques for the safe, effective and efficient conduct of local risk control • working with others to undertake and conduct of local risk control that meets all of the required outcomes • consistent timely completion of conducting local risk control that safely, effectively and efficiently meets the required outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • knowledge of the requirements, procedures and instructions to conduct local risk control • implementation of requirements, procedures and techniques for the safe, effective and efficient conduct of local risk control • working with others to undertake and conduct of local risk control that meets all of the required outcomes • consistent timely completion of conducting local risk control that safely, effectively and efficiently meets the required outcomes
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • apply legislative, organisation and site requirements and procedures • speak clearly and directly, listen carefully to instructions and

	<p>information, respond to and clarify directions</p> <ul style="list-style-type: none"> • collect, analyse and organise information • access, interpret and apply site information • work with other team members • apply teamwork to a range of situations • apply problems solving skills • apply decision making skills • show initiative in adapting to changing work conditions or contexts • apply time management • take responsibility for self organisation of work priorities • apply mathematical skills to perform a basic risk ranking of hazards • interpret and apply material safety data sheets (MSDS)
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Apply First Aid
Unit Code	MIN MRI1 07 0114
Unit Descriptor	This unit of competency describes the skills and knowledge required to provide first aid response, life support, management of casualty(s), the incident and other first aiders, until the arrival of medical or other assistance.

Elements	Performance Criteria
1. Assess the situation.	<p>1.1 Hazards in the situation that may pose a risk of injury or illness to self and others are identified, assessed and minimised.</p> <p>1.2 Immediate risk to self and casualty's health and safety is minimised by controlling any hazard in accordance with occupational health and safety requirements.</p> <p>1.3 Casualty is assessed and injuries, illnesses and conditions are identified.</p>
2 .Apply first aid procedures.	<p>2.1 Information is calmly provided to reassure casualty, adopting a communication style to match the casualty's level of consciousness.</p> <p>2.2 Available resources and equipment are used to make the casualty as comfortable as possible.</p> <p>2.3 Respond to the casualty in a culturally aware, sensitive and respectful manner.</p> <p>2.4 The nature of casualty's injury/condition and relevant first aid procedures is determined and explained to provide comfort.</p> <p>2.5 Consent is sought from casualty prior to applying first aid management.</p> <p>2.6 First aid management is provided in accordance with established first aid principles and Ethiopian Resuscitation Council (ARC) Guidelines and/or State/Territory regulations, legislation and policies and industry requirements.</p> <p>2.7 First aid assistance is sought from others in a timely manner and as appropriate.</p> <p>2.8 First aid equipment is correctly operated as required for first aid management according to manufacturer/supplier's instructions and local policies and/or procedures.</p>

	<p>2.9 Safe manual handling techniques are used as required.</p> <p>2.10 Casualty's condition is monitored and responded in accordance with effective first aid principles and procedures.</p> <p>2.11 Casualty management is finalised according to casualty's needs and first aid principles.</p>
3. Communicate details of the incident.	<p>3.1 Ambulance support and/or appropriate medical assistance is/are requested according to relevant circumstances using relevant communication media and equipment.</p> <p>3.2 Assessment of casualty's condition and management activities is accurately conveyed to ambulance services /other emergency services/relieving personnel.</p> <p>3.3 Reports are prepared as appropriate in a timely manner, presenting all relevant facts according to established procedures.</p> <p>3.4 Details of casualty's physical condition, changes in conditions, management and response to management are accurately recorded in line with established procedures.</p> <p>3.5 Confidentiality of records and information is maintained in line with privacy principles and statutory and/or organisation policies.</p>
4. Evaluate own performance.	<p>4.1 Feedback is sought from appropriate clinical expert.</p> <p>4.2 The possible psychological impacts on rescuers of involvement in critical incidents are recognised.</p> <p>4.3 Debriefing/evaluation is made participatory as appropriate to improve future response and address individual needs.</p>

Variable	Range
Contextualisation to address specific requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Focus on first aid management of specific types of injury • First aid provision under specific constraints or circumstances (e.g. in confined spaces, in maritime work environment or in work environment involving identified risks/hazards)
Established first aid	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Preserve life • Prevent illness, injury and condition(s) becoming worse • Promote recovery • Protect the unconscious casualty
Vital signs	<ul style="list-style-type: none"> • Consciousness Breathing Circulation
A hazard	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • A source or situation with the potential for harm in terms of

	human injury or ill-health, damage to property, the environment, or a combination of these
Hazards	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Physical hazards • Biological hazards • Chemical hazards • Hazards associated with manual handling
Risks	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Risks from equipment, machinery and substances • Risks from first aid equipment • Environmental risks • Exposure to blood and other body substances • Risk of further injury to the casualty • Risks associated with the proximity of other workers and bystanders • Risks from vehicles
Casualty's condition	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Abdominal injuries • Airway obstruction • Allergic reactions • Altered and loss of consciousness • Bleeding • Burns - thermal, chemical, friction, electrical • Chest pain/cardiac arrest • Injuries: cold and crush injuries; eye and ear injuries; head, neck and spinal injuries; minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations • Near drowning • Envenomation - snake, spider, insect and marine bites • Environmental conditions such as hypothermia, hyperthermia, dehydration, heat stroke • Fractures • Medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions • No signs of life • Poisoning and toxic substances (including chemical contamination) • Respiratory distress/arrest • Seizures • Shock • Stroke • Substance misuse - common drugs and alcohol, including

	illicit drugs.
First aid management	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • The setting in which first aid is provided, including: <ul style="list-style-type: none"> ➤ workplace policies and procedures ➤ industry/site specific regulations, codes etc. ➤ OHS requirements ➤ state and territory workplace health and safety legislative requirements ➤ location and nature of the incident ➤ situational risks associated with, for example, electrical and biological hazards, weather, motor vehicle accidents ➤ location of emergency services personnel. ➤ The use and availability of first aid equipment and resources ➤ Infection control ➤ Legal and social responsibilities of first aider
Resources and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • AED • First aid kit • Auto-injector • Puffer/inhaler • Resuscitation mask or barrier • Spacer device
Communication media and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Telephones, including landline, mobile and satellite phones • HF/VHF radio • Flags • Flares • Two way radio • Email • Electronic equipment • Hand signals
Appropriate clinical expert	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Supervisor/manager • Ambulance officer/paramedic • Other medical/health worker
Documentation	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Injury report forms • Workplace documents as per organisation requirements
Documentation	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Time • Location • Description of injury • First aid management

	<ul style="list-style-type: none"> • Fluid intake/output, including fluid loss via: <ul style="list-style-type: none"> ➤ blood ➤ vomit ➤ faeces ➤ urine • Administration of medication including: <ul style="list-style-type: none"> ➤ time ➤ date ➤ person administering ➤ dose ➤ Vital signs
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Evidence Guide	
Critical aspects of Competence	<p>Must demonstrate knowledge and skills competence to:</p> <ul style="list-style-type: none"> • Assessment must include demonstrated evidence of specified Essential Knowledge and Essential Skills identified in this competency unit • Competence should be demonstrated working individually and, where appropriate, as part of a first aid team • Consistency of performance should be demonstrated over the required range of situations relevant to the workplace or community setting • Currency of first aid knowledge and skills is to be demonstrated in line with State/Territory regulations, legislation and policies, ARC and industry guidelines
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • Assessment must include demonstrated evidence of specified Essential Knowledge and Essential Skills identified in this competency unit • Competence should be demonstrated working individually and, where appropriate, as part of a first aid team • Consistency of performance should be demonstrated over the required range of situations relevant to the workplace or community setting • Currency of first aid knowledge and skills is to be demonstrated in line with State/Territory regulations, legislation and policies, ARC and industry guidelines • injuries: cold and crush injuries; eye and ear injuries; head, neck and spinal injuries; minor skin injuries; needle stick injuries; soft tissue injuries including sprains, strains, dislocations • envenomation - snake, spider, insect and marine bites • environmental impact such as hypothermia, hyperthermia, dehydration, heat stroke • fractures

	<ul style="list-style-type: none"> • medical conditions, including cardiac conditions, epilepsy, diabetes, asthma and other respiratory conditions • near drowning • poisoning and toxic substances (including chemical contamination) • respiratory distress • seizures • shock • stroke • substance misuse - common drugs and alcohol, including illicit drugs • Awareness of stress management techniques and available support • Social/legal issues: <ul style="list-style-type: none"> ➤ duty of care ➤ need to be culturally aware, sensitive and respectful ➤ importance of debriefing
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • Conduct an initial casualty assessment • Plan an appropriate first aid response in line with established first aid principles, policies and procedures, ARC Guidelines and/or State/Territory regulations, legislation and policies and industry requirements and respond appropriately to contingencies in line with own skills • Demonstrate correct procedures for performing CPR using a manikin, including standard precautions (i.e. as per unit HLTCP201A Perform CPR) • Apply first aid principles • Infection control, including use of standard precautions • Follow OHS guidelines • safe manual handling • consideration of the welfare of the casualty • ability to call an ambulance • site management to prevent further injury • Provide assistance with self-medication as per subject's own medication regime and in line with State/Territory legislation, regulations and policies and any available medical/pharmaceutical instructions • Administer medication in line with state/territory regulations, legislation and policies • Prepare a written incident report or provide information to enable preparation of an incident report • Communicate effectively and assertively in an incident • Make prompt and appropriate decisions relating to managing

	<p>an incident in the workplace</p> <ul style="list-style-type: none"> • Call an ambulance and/or medical assistance according to relevant circumstances and report casualty's condition • Use literacy and numeracy skills as required to read, interpret and apply guidelines and protocols • Evaluate own response and identify appropriate improvements where required
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Use Personal Computer
Unit Code	MIN MRI1 08 0114
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to start up a personal computer or business computer terminal; to correctly navigate the desktop environment; and to use a range of basic functions.

Elements	Performance Criteria
1. Start computer, system information and features	<p>1.1. Workspace, furniture and equipment are adjusted to suit user ergonomic requirements.</p> <p>1.2. Work organisation that meets organisational and occupational health and safety (OHS) requirements is ensured for computer operation.</p> <p>1.3. Computer is started or logged on according to user procedures.</p> <p>1.4. Basic functions and features are identified using system information.</p> <p>1.5. Desktop configuration is customised, if necessary, with assistance from appropriate persons.</p> <p>1.6. Help functions are used as required.</p>
2. Navigate and manipulate desktop environment	<p>2.1. Features are opened, closed and accessed by selecting correct desktop icons.</p> <p>2.2. Desktop windows are opened, resized and closed by using correct window functions and roles.</p> <p>2.3. Shortcuts are created from the desktop, if necessary, with assistance from appropriate persons.</p>
3. Organize files using basic directory and folder structures	<p>3.1. Folders/subfolders are created with suitable names.</p> <p>3.2. Files are saved with suitable names in appropriate folders.</p> <p>3.3. Folders/subfolders and files are renamed and moved as required.</p> <p>3.4. Folder/subfolder and file attributes are identified.</p> <p>3.5. Folders/subfolders and files are moved using cut and paste, and drag and drop techniques.</p> <p>3.6. Folders/subfolders and files are saved to appropriate media where necessary.</p> <p>3.7. Folders/subfolders and files searched for using appropriate</p>

	software tools. 3.8. Deleted folder/subfolders and files are restored as necessary.
4. Print information	4.1. Information is printed from installed printer. 4.2. Progress of print jobs is viewed and deleted as required. 4.3. Default printer is changed if installed and required.
5. Shut down computer	5.1. All open applications are closed. 5.2. Computer is shut-down according to user procedures.

Variable	Range
Ergonomic requirements	May include but not limited to: <ul style="list-style-type: none"> • avoiding radiation from computer screens • chair height, seat and back adjustment • document holder • footrest • keyboard and mouse position • lighting • noise minimisation • posture • screen position • workstation height and layout
Work organisation	May include but not limited to: <ul style="list-style-type: none"> • exercise breaks • mix of repetitive and other activities • rest periods • Visual Display Unit (VDU) eye testing
Occupational health and safety requirements	May include but not limited to: <ul style="list-style-type: none"> • OHS guidelines related to the use of the screen equipment, computing equipment and peripherals, ergonomic work stations, security procedures, customisation requirements • statutory requirements
Desktop icons	May include but not limited to: <ul style="list-style-type: none"> • directories/folders • files • network devices • recycle bin and waste basket
File attributes	May include but not limited to: <ul style="list-style-type: none"> • dates • size
Appropriate media	May include but not limited to: <ul style="list-style-type: none"> • CDs • diskettes

	<ul style="list-style-type: none">• local hard drive• other locations on a network• USB/ Flash/Thumb drives• zip disks
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Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Apply Quality Standards
Unit Code	MIN MRI1 09 0114
Unit Descriptor	This unit covers the knowledge, attitudes and skills required in applying quality standards in the operational activities.

Elements	Performance Criteria
1. Assess own work	<p>1.1 Completed work is checked against organization standards relevant to the activity being undertaken.</p> <p>1.2 An understanding is demonstrated on how the work activities and completed work relate to the next process and to the final appearance of the service / product.</p> <p>1.3 Faulty service is identified and isolated in accordance with policies and procedures.</p> <p>1.4 Faults and any identified causes are recorded and reported in accordance with standard procedures.</p>
2. Assess quality of service rendered	<p>2.1 Services rendered are quality checked against standards and specifications.</p> <p>2.2 Service rendered are evaluated using the appropriate evaluation parameters and in accordance with standards.</p> <p>2.3 Causes of any identified faults are identified and corrective actions are taken in accordance with policies and procedures.</p>
3. Record information	<p>3.1 Basic information on the quality performance is recorded in accordance with organization procedures.</p> <p>3.2 Records of work quality are maintained according to the requirements of the organization / enterprise.</p>
4. Study causes of quality deviations	<p>4.1 Causes of deviations from final outputs or services are investigated and reported in accordance with standard procedures.</p> <p>4.2 Suitable preventive action is recommended based on organization quality standards and identified causes of deviation from specified quality standards of final service or output.</p>
5. Complete documentation	<p>5.1 Information on quality parameters and other indicators of service performance is recorded.</p> <p>5.2 All service processes and outcomes are recorded.</p>

Variable	Range
Quality check	May include but not limited to: <ul style="list-style-type: none"> • Visual inspection • Physical measurements • Check against specifications/preferences
Quality standards	May include but not limited to: <ul style="list-style-type: none"> • materials • service • output • processes/procedures
Quality parameters	May include but not limited to: <ul style="list-style-type: none"> • style/design/specifications • durability • service variations • materials • damage and imperfections

Evidence Guide	
Critical Aspects of Competency	Demonstrates skills and knowledge to: <ul style="list-style-type: none"> • Check completed work continuously against standard • Identify and isolated faulty service / workmanship • Check service rendered against organization standards • Identify and apply corrective actions on the causes of identified faults • Record basic information regarding quality performance • Investigate causes of deviations of services against standard • Recommend suitable preventive actions
Underpinning Knowledge	Demonstrates knowledge of: <ul style="list-style-type: none"> • Relevant quality standards, policies and procedures • Characteristics of services • Safety environment aspects of service processes • Relevant evaluation techniques and quality checking procedures • Workplace procedures • Reporting procedures
Underpinning Skills	Demonstrates skills to: <ul style="list-style-type: none"> • Interpret work instructions, specifications and standards appropriate to the required work or service • Carry out relevant performance evaluation • Maintain accurate work records in accordance with procedures • Meet work specifications

	<ul style="list-style-type: none"> • Communicate effectively within defined workplace procedures
Resource Implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Work with Others
Unit Code	MIN MRI1 10 0114
Unit Descriptor	This unit covers the knowledge, skills, and attitudes required to develop workplace relationship and contribute in workplace activities.

Element	Performance Criteria
1. Develop effective workplace relationship	<p>1.1 Duties and responsibilities are done in a positive manner to promote cooperation and good relationship.</p> <p>1.2 Assistance is sought from workgroup when difficulties arise and addressed through discussions.</p> <p>1.3 Feedback on performance provided by others in the team is encouraged, acknowledged and acted upon.</p> <p>1.4 Differences in personal values and beliefs are respected and acknowledged in the development.</p>
2. Contribute to work group activities	<p>2.1 Support is provided to team members to ensure workgroup goals are met.</p> <p>2.2 Constructive contributions to workgroup goals and tasks are made according to organizational requirements.</p> <p>2.3 Information relevant to work is shared with team members to ensure designated goals are met.</p>

Variable	Range
Duties and responsibilities	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Job description and employment arrangements • Organization's policy relevant to work role • Organizational structures • Supervision and accountability requirements including OHS • Code of conduct
Work group	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Supervisor or manager • Peers/work colleagues • Other members of the organization
Feedback on performance	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Formal/Informal performance appraisal • Obtaining feedback from supervisors and colleagues and clients • Personal, reflective behavior strategies • Routine organizational methods for monitoring service delivery
Providing support	<p>May include but not limited to:</p>

to team members	<ul style="list-style-type: none"> • Explaining/clarifying • Helping colleagues • Providing encouragement • Providing feedback to another team member • Undertaking extra tasks if necessary
Organizational requirements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Goals, objectives, plans, system and processes • Legal and organization policy/guidelines • OHS policies, procedures and programs • Ethical standards • Defined resources parameters • Quality and continuous improvement processes and standards

Evidence Guide	
Critical aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Provide support to team members to ensure goals are met • Act on feedback from clients and colleagues • Access learning opportunities to extend own personal work competencies to enhance team goals and outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • relevant legislation that affects operations, especially with regards to safety • reasons why cooperation and good relationships are important • knowledge of the organization's policies, plans and procedures • understanding how to elicit and interpret feedback • knowledge of workgroup member's responsibilities and duties • importance of demonstrating respect and empathy in dealings with colleagues • understanding of how to identify and prioritize personal development opportunities and options
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • read and understand the organization's policies and work procedures • write simple instructions for particular routine tasks • interpret information gained from correspondence • request advice, receive feedback and work with a team • organize work priorities and arrangement • select and use technology appropriate to a task • relate to people from a range of social, cultural and ethnic backgrounds
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of	<p>Competence may be assessed through:</p>

Assessment	<ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Receive and Respond to Workplace Communication
Unit Code	MIN MRI1 11 0114
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to receive, respond and act on verbal and written communication.

Element	Performance Criteria
1. Follow routine spoken messages	<p>1.1 Required information is gathered by listening attentively and correctly interpreting or understanding information/instructions.</p> <p>1.2 Instructions/information is properly recorded.</p> <p>1.3 Instructions are acted upon immediately in accordance with information received.</p> <p>1.4 Clarification is sought from workplace supervisor on all occasions when any instruction/information is not clear.</p>
2. Perform workplace duties following written notices	<p>2.1 Written notices and instructions are read and interpreted correctly in accordance with organizational guidelines.</p> <p>2.2 Routine written instruction is followed in sequence.</p> <p>2.3 Feedback is given to workplace supervisor based on the instructions/information received.</p>

Variable	Range
Written notices and instructions	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Handwritten and printed material • Internal memos • External communications • Electronic mail • Briefing notes • General correspondence • Marketing materials • Journal articles
Organizational guidelines	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Information documentation procedures • Company policies and procedures • Organization manuals • Service manual

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Demonstrate knowledge of organizational procedures for

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	<p>handling verbal and written communications</p> <ul style="list-style-type: none"> • Receive and act on verbal messages and instructions • Demonstrate competence in recording instructions/information
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • organizational policies/guidelines in regard to processing internal/external information • ethical work practices in handling communications • communication process
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • receive and clarify conciseness messages/information/communication • record messages/information accurately
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Demonstrate Work Values
Unit Code	MIN MRI1 12 0114
Unit Descriptor	This unit covers the knowledge, skills and attitude required in demonstrating proper work values.

Elements	Performance Criteria
1. Define the purpose of work	<p>1.1 One's unique sense of purpose for working and the 'whys' of work are identified, reflected on and clearly defined for one's development as a person and as a member of society.</p> <p>1.2 Personal mission is achieved in harmony with company's values.</p>
2. Apply work values/ethics	<p>2.1 Work values/ethics/concepts are classified and reaffirmed in accordance with the transparent company ethical standards, policies and guidelines.</p> <p>2.2 Work practices are undertaken in compliance with industry work ethical standards, organizational policy and guidelines.</p> <p>2.3 Personal behavior and relationships with co-workers and/or clients are conducted in accordance with ethical standards, policy and guidelines.</p> <p>2.4 Company resources are used in accordance with transparent company ethical standard, policies and guidelines.</p>
3. Deal with ethical problems	<p>3.1 Company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct are accessed and applied in accordance with transparent company ethical standard, policies and guidelines.</p> <p>3.2 Work incidents/situations are reported and/or resolved in accordance with company protocol/guidelines.</p> <p>3.3 Resolution and/or referral of ethical problems identified are used as learning opportunities.</p>
4. Maintain integrity of conduct in the workplace	<p>4.1 Personal work practices and values are demonstrated consistently with acceptable ethical conduct and company's core values.</p> <p>4.2 Instructions to co-workers are provided based on ethical, lawful and reasonable directives.</p> <p>4.3 Company values/practices are shared with co-workers using appropriate behavior and language.</p>

Variable	Range
Work values/ethics/	May include but are not limited to: <ul style="list-style-type: none"> • Commitment/ Dedication

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concepts	<ul style="list-style-type: none"> • Sense of urgency • Sense of purpose • Love for work • High motivation • Orderliness • Reliability and Dependability • Competence • Goal-oriented • Sense of responsibility • Being knowledgeable • Loyalty to work/company • Sensitivity to others • Compassion/Caring attitude • Balancing between family and work • Sense of nationalism
Work practices	<p>May include but are not limited to:</p> <ul style="list-style-type: none"> • Quality of work • Punctuality • Efficiency • Effectiveness • Productivity • Resourcefulness • Innovativeness/Creativity • Cost consciousness • 5S • Attention to details
Company resources	<p>May include but are not limited to:</p> <ul style="list-style-type: none"> • Consumable materials • Equipment/Machineries • Human • Time • Financial resources
Work incidents/ Situations	<p>May include but are not limited to:</p> <ul style="list-style-type: none"> • Violent/intense dispute or argument • Gambling • Use of prohibited substances • Pilferages • Damage to person or property • Vandalism • Falsification • Bribery • Sexual Harassment • Blackmail

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • Define one’s unique sense of purpose for working • Clarify and affirm work values/ethics/concepts consistently in the workplace • Demonstrate work practices satisfactorily and consistently in compliance with industry work ethical standards, organizational policy and guidelines • Demonstrate personal behavior and relationships with co-workers and/or clients consistent with ethical standards, policy and guidelines • Use company resources in accordance with company ethical standard, policies and guidelines. • Follow company ethical standards, organizational policy and guidelines on the prevention and reporting of unethical conduct/behavior
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Occupational health and safety • Work values and ethics • Company performance and ethical standards • Company policies and guidelines • Fundamental rights at work including gender sensitivity • Work responsibilities/job functions • Corporate social responsibilities • Company code of conduct/values • Balancing work and family responsibilities
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • Interpersonal skills • Communication skills • Self awareness, understanding and acceptance • Application of good manners and right conduct
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Develop Understanding of Entrepreneurship
Unit Code	MIN MRI1 13 0114
Unit Descriptor	This unit covers skills, knowledge and attitude required to understand the principles, functions, strategies and methods of entrepreneurship. It also covers identifying and developing the major entrepreneurial competences.

Elements	Performance Criteria
1. Describe and explain the principles, concept and scope of entrepreneurship	<p>1.1 The principles, concept and terminology of entrepreneurship are analyzed and discussed.</p> <p>1.2 The different / various forms of enterprises in the community are identified and their roles understood.</p> <p>1.3 The identified enterprises are categorized and classified.</p> <p>1.4 The terms and elements involved in the concept of enterprising, both on a personal level and in the context of being enterprising in business are identified and interpreted.</p> <p>1.5 Functions of entrepreneurship in business and how the entrepreneurs improved business and economic environment are explained.</p>
2. Discuss how to become entrepreneur	<p>2.1 Self-employment as an alternative option for an individual economic independence and personal growth is discussed and analyzed.</p> <p>2.2 Advantages and disadvantages of self-employment are discussed and explained.</p> <p>2.3 Entrepreneurial characteristics and traits are identified and discussed.</p> <p>2.4 Self-potential is assessed to determine if qualified to become future entrepreneur.</p> <p>2.5 Major competences of successful entrepreneurship are identified and explained.</p>
3. Discuss how to organize an enterprise	<p>3.1 The importance and role of business entrepreneurship in the society are discussed and correlated to the operations of the economy.</p> <p>3.2 Facts about small and medium enterprises are discussed, clarified and understood.</p> <p>3.3 Key success factor in setting up small and medium business are identified and explained.</p> <p>3.4 Business opportunities are identified and assessed.</p>

	<p>3.5 Business ideas are generated using appropriate tools, techniques and steps.</p> <p>3.6 Procedures for identifying suitable market for business are discussed and understood.</p> <p>3.7 Major factors to consider in selecting a location for a business are identified and discussed</p> <p>3.8 Basic types of business ownership are identified and explained.</p> <p>3.9 Amount of money needed to start an enterprise estimated and distinction between pre operations and initial operation payments clarified.</p> <p>3.10 Advantages and disadvantages of using various sources of capital to start an enterprise are identified.</p>		
<p>4. Discuss how to operate an enterprise</p>	<p>4.1 Disadvantages and advantages of three alternatives means of becoming an entrepreneur are identified and understood.</p> <p>4.2 Process of hiring and managing people is discussed and explained.</p> <p>4.3 The importance and techniques of managing time are discussed and understood.</p> <p>4.4 The techniques and procedures of managing sales are discussed and explained.</p> <p>4.5 Factors to consider in selecting suppliers and the steps to follow when doing business with them are identified and discussed.</p> <p>4.6 Awareness of how new technologies can affect small and medium business are developed.</p> <p>4.7 Characteristics of appropriate technology for use in small and medium business are identified and explained.</p> <p>4.8 Different types of cost that occur in a business and how to manage them are discussed and understood.</p> <p>4.9 Factors and procedures in knowing the cost of the enterprise are discussed and understood.</p> <p>4.10 Importance of financial record keeping and preparing simple financial statement are explained and understood.</p> <p>4.11 The application of self-management skills and negotiation skills are discussed in operating a business.</p> <p>4.12 Risk assessment and management of business enterprise</p>		
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	are performed.
5. Develop one's own business plan	<p>5.1 Process of preparing/ writing a business plan is discussed and applied.</p> <p>5.2 Standard structure and format are applied in preparing business plan.</p> <p>5.3 Findings of the business plan are interpreted, assessed and analyzed.</p> <p>5.4 Feasibility of the business idea is made clear and understandable.</p> <p>5.5 Problems that may arise or encounter when starting a business are identified and understand.</p> <p>5.6 Techniques and procedures in obtaining and sourcing information are discussed and understood.</p>

Variables	Range
Classification	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Private vs. public • Profit vs. non-profit • Formal vs. Non-formal • Individual vs. Community • Local vs. Foreign • Business vs. Social • Small vs. Large • Manufacturing vs. Service • Consumer vs. Industrial
Major factors	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Economics (local economy) • Population • Competition
Three alternatives	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Buying an existing business • Starting a new business • Operating a franchising business

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates skills and knowledge to:</p> <ul style="list-style-type: none"> • explain principles and concept of entrepreneurship • discuss how to become entrepreneur • discuss how to organize an enterprise • discuss how to operate an enterprise • develop business plan

Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • Entrepreneurship principles, concepts and terminologies • Entrepreneurial competence • Entrepreneurial motivation • Risk assessment and evaluation • Principles and process of negotiations • Self-management and self-employment • Managing sales, people and time • Factors in setting up small and medium business • Small and Medium Enterprise • Business plan development • Discussion techniques and procedures
Underpinning Skills	<p>Demonstrate skills in:</p> <ul style="list-style-type: none"> • Planning and Leading • Presentation skills • Using technology • Managing money • Preparing simple financial statement • Selecting suppliers
Resource Implications	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Mineral Resources Infrastructure Work Level I	
Unit Title	Apply 3S
Unit Code	MIN MRI1 14 0114
Unit Descriptor	This unit of competence covers the knowledge, skills and attitudes required by a worker to apply 3S techniques to his/her workplace. The unit assumes the worker has a particular job in the allocated workplace known by the individual.

Elements	Performance Criteria
1. Organize junior Kaizen Promotion Team (KPT).	<p>1.1 Basics, principles and stages of KPT are identified using appropriate procedures.</p> <p>1.2 Structure of Junior KPT is established in accordance with the organizational procedures.</p> <p>1.3 Effective and appropriate contributions are made to complement team activities and objectives using individual skills and competencies.</p> <p>1.4 Effective and appropriate forms of communications are used and undertaken with KPT members who contribute to know KPT activities and objectives.</p> <p>1.5 Kaizen Board (Visual Management Board) is prepared and used in harmony with different workplace contexts.</p>
2. Prepare for work.	<p>2.1 Work instructions are used to determine job requirements, including method, material and equipment.</p> <p>2.2 Job specifications are read and interpreted following working manual.</p> <p>2.3 OHS requirements, including dust and fume collection, breathing apparatus and eye and ear personal protection needs are observed throughout the work.</p> <p>2.4 Appropriate materials are selected.</p> <p>2.5 Safety equipment and tools are identified and checked for safe and effective operation.</p>
3. Sort items.	<p>3.1 Plan is prepared to implement sorting activities.</p> <p>3.2 Cleaning activities are performed.</p> <p>3.3 All items in the workplace are identified following the appropriate procedures.</p> <p>3.4 Necessary and unnecessary items are listed using the</p>

	<p>appropriate format.</p> <p>3.5 Red tag strategy is used for unnecessary items.</p> <p>3.6 Unnecessary items are evaluated and placed in an appropriate place other than the workplace.</p> <p>3.7 Necessary items are recorded and quantified using appropriate format.</p> <p>3.8 Performance results are reported using appropriate formats.</p> <p>3.9 Necessary items are regularly checked in the workplace.</p>
4. Set all items in order.	<p>4.1 Plan is prepared to implement set in order activities.</p> <p>4.2 General cleaning activities are performed.</p> <p>4.3 Location/layout, storage and indication methods for items are decided.</p> <p>4.4 Necessary tools and equipment are prepared and used for setting in order activities.</p> <p>4.5 Items are placed in their assigned locations.</p> <p>4.6 After use, the items are immediately returned to their assigned locations.</p> <p>4.7 Performance results are reported using appropriate formats.</p> <p>4.8 Each item is regularly checked in its assigned location and order.</p>
5. Perform shine activities.	<p>5.1 Plan is prepared to implement shine activities.</p> <p>5.2 Necessary tools and equipment are prepared and used for shinning activities.</p> <p>5.3 Shine activity is implemented using appropriate procedures.</p> <p>5.4 Performance results are reported using appropriate formats.</p> <p>5.5 Regular shinning activities are conducted.</p>

Variable	Range
Junior KPT	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • 3S • 3MU (Mura, Muri and MUDA) • 4P (Policy, Procedure, People and Plant) • 4M (Material, Method, Man and Machine) • PDCA (Plan, Do, Check and Act)
OHS requirements	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • Legislation/ regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace

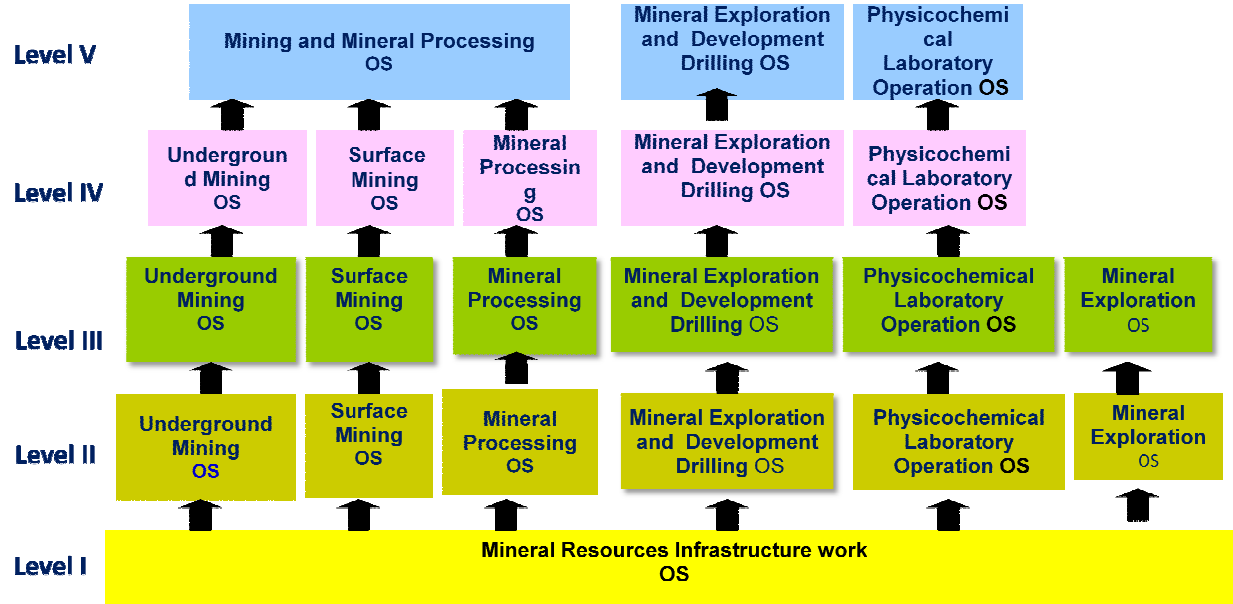
	<p>environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances.</p> <ul style="list-style-type: none"> • Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices. • Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with workplace organization. • Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.
Safety equipment and tools	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • dust masks / goggles • glove • working cloth • first aid • safety shoes
Items	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • tools • jigs/fixtures • materials/components • machine and equipment • manuals • documents • personal items (e.g. bags, lunch boxes and posters) • safety equipment and personal protective equipment • other items which happen to be in the work area
The appropriate procedures	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • steps for implementing 3S (sort, set in order and shine) activities. • written, verbal and computer based or in some other format.
Unnecessary items	<p>are not needed for current production or administrative operation and include but not limited to:</p> <ul style="list-style-type: none"> • defective or excess quantities of small parts and inventory • outdated or broken jigs and dies • worn-out bits • outdated or broken tools and inspection gear • old rags and other cleaning supplies • electrical equipment with broken cords • outdated posters, signs, notices and memos <p>some locations where unneeded items tend to accumulate may include but not limited to:</p>

	<ul style="list-style-type: none"> • in rooms or areas not designated for any particular purpose • in corners next to entrances or exists • along interior and exterior walls • next to partitions and behind pillars • under the eaves of warehouses • under desks and shelves and in desk and cabinet drawers • near the bottom of tall stacks of items • on unused management and production schedule boards • in tools boxes that are not clearly sorted
Appropriate format	<p>may include but not limited to:</p> <ul style="list-style-type: none"> • all items. • necessary items. • unnecessary items.
Red tag	<p>may include but not limited to:</p> <p>A format prepared with a red color paper or card which is filled and attached temporarily on the unnecessary items until decision is made. The red tag catch people’s attention because red is a color that stands out. So to fill and attach red tag on items, asks the following three questions:</p> <ul style="list-style-type: none"> • Is this item needed? • If it is needed, is it needed in this quantity? • If it is needed, does it need to be located here?
Necessary items	<p>Are required in the workplace for current production or administrative operation in the amount needed.</p>
Tools and equipment	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • paint • hook • sticker • signboard • nails • shelves • chip wood • sponge • broom • pencil • shadow board/ tools board
Shine activity	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Inspection • Cleaning • Minor maintenance may include: <ul style="list-style-type: none"> ➤ Tightening bolts ➤ Lubrication ➤ Replacing missing parts

Evidence Guide			
Critical Aspects of Competence	Demonstrates skills and knowledge to: <ul style="list-style-type: none"> • Discuss how to organize KPT. • Describe the pillars of 5S. • Implement 3S in own workplace by following appropriate procedures. 		
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: <ul style="list-style-type: none"> • Kaizen principle, pillars and concept • Key characteristic of Kaizen • Elements of Kaizen • Wastes/MUDA • Basics of KPT • Aims, benefits and principles of KPT • Stages of KPT • Structure and role of the components of Junior KPT • Concept and parts of Kaizen board • Concept and benefits of 5S • The pillars of 5S • Three stages of 5S application • Benefits and procedure of sorting activities • The concept and application of Red Tag strategy • OHS procedures • Benefits and procedure of set in order activities • Set in order methods/techniques • Benefits and procedure of shine activities • Inspection methods • Planning and reporting methods • Method of Communication 		
Underpinning Skills	Demonstrates skills of: <ul style="list-style-type: none"> • Participating actively in KPT • technical drawing • communication skills • planning and reporting own tasks in implementation of 3S • following procedures to implement 3S in own workplace • using sorting formats to identify necessary and unnecessary items • improving workplace layout following work procedures • preparing labels, slogans, etc. • reading and interpreting documents • observing situations • gathering evidence by using different means • recording activities and results using prescribed formats • working with others • solving problems by applying 3S 		
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	<ul style="list-style-type: none"> • preparing and using Kaizen board • preparing and using tools and equipment to implement 3S
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

MINERAL EXPLORATION, MINING AND MINERAL PROCESSING



Acknowledgement

We wish to extend thanks and appreciation to the many representatives of business, industry, academe and government agencies who donated their time and expertise to the development of this occupational standard.

We would like also to express our appreciation to Federal TVET Agency, Ministry of Education (MoE), Ministry of Mining who made the development of this occupational standard possible.

This occupational standard was developed in January 2014 at Addis Ababa, Ethiopia.

COMMENT TEMPLATE

The Federal TVET Agency values your feedback of the document.
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