DEMONSTRATE ENVIRONMENTAL LITERACY

UNIT CODE: IT/OS/ICT/BC/06/6/A

UNIT DESCRIPTION

This unit specifies the competencies required to follow procedures for environmental hazard control, follow procedures for environmental pollution control, comply with workplace sustainable resource use, evaluate current practices in relation to resource usage, develop and adhere to environmental protection principles/strategies/guidelines, analyze resource use, develop resource conservation plans and implement selected plans.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function.	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range*
1. Control environmental hazard	1.1 *Storage methods* for environmentally hazardous materials are strictly followed according to environmental regulations and OSHS. 1.2 *Disposal methods* of hazardous wastes are followed at all times according to environmental regulations and OSHS. 1.3 *PPE* is used according to OSHS.
2. Control environmental Pollution control	2.1 Environmental pollution *control measures* are compiled following standard protocol. 2.2 Procedures for solid waste management are observed according Environmental Management and Coordination Act 1999 2.3 Methods for minimizing *noise pollution* complied following environmental regulations.
3. Demonstrate sustainable resource use	3.1 Methods for minimizing wastage are complied with. 3.2 Waste management procedures are employed following principles of 3Rs (Reduce, Reuse, Recycle) 3.3 Methods for economizing or reducing resource consumption are practiced.
4. Evaluate current practices in relation to resource usage	4.1 Information on resource efficiency systems and procedures are collected and provided to the work group where appropriate. 4.2 Current resource usage is measured and recorded by members of the work group. 4.3 Current purchasing strategies are analyzed and recorded according to industry procedures. 4.4 Current work processes to access information and data is analyzed following enterprise protocol.

5. Identify Environmental legislations/conventions for environmental concerns	5.1 Environmental legislations/conventions and local ordinances are identified according to the different environmental aspects/impact
	5.2 Industrial standard/environmental practices are described according to the different environmental concerns
6. Implement specific environmental programs	6.1 Programs/Activities are identified according to organizations policies and guidelines.
	6.2 Individual roles/responsibilities are determined and performed based on the activities identified.
	6.3 Problems/constraints encountered are resolved in accordance with organizations' policies and guidelines
	6.4 Stakeholders are consulted based on company guidelines
7. Monitor activities on Environmental protection/Programs	7.1 Activities are periodically monitored and Evaluated according to the objectives of the environmental program
	7.2 Feedback from stakeholders are gathered and considered in Proposing enhancements to the program based on consultations
	7.3 Data gathered are analyzed based on Evaluation requirements
	7.4 Recommendations are submitted based on the findings
	7.5 Management support systems are set/established to sustain and enhance the program
	7.6 Environmental incidents are monitored and reported to concerned/proper authorities
8. Analyze resource use	8.1. All resource consuming processes are Identified
	8.2. Quantity and nature of Resource consumed is determined
	8.3. Resource flow is analyzed through different parts of the process.
	8.4. Wastes are classified for possible source of resources.
9. Develop resource Conservation plans	9.1. Efficiency of use/conversion of resources is determined following industry protocol.
	9.2. Causes of low efficiency of use of resources are Determined based on industry protocol.
	9.3. Plans for increasing the efficiency of resource use are developed based on findings.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
PPE May include but are not limited to	1.1 Mask 1.2 Gloves 1.3 Goggles 1.4 Safety hat 1.5 Overall 1.6 Hearing protector
Environmental pollution control measures may include but are not limited to:	2.1 Methods for minimizing or stopping spread and ingestion of airborne particles 2.2 Methods for minimizing or stopping spread and ingestion of gases and fumes 2.4 Methods for minimizing or stopping spread and ingestion of liquid wastes
Wastes may include but are not limited to:	3.1 Unnecessary waste 3.2 Necessary waste
Waste management Procedures may include but are not limited to:	4.1 Sorting 4.2 Storing of items 4.2 Recycling of items 4.3 Disposal of items
Resources may include but are not limited to:	5.1 Electric 5.2 Water 5.3 Fuel 5.4 Telecommunications 5.5 Supplies 5.6 Materials
Workplace environmental hazards may include but are not limited to:	6.1 Biological hazards 6.2 Chemical and dust hazards 6.3 Physical hazards
Organizational systems and procedures may include but are not limited to:	7.1 Supply chain, procurement and purchasing 7.2 Quality assurance 7.3 Making recommendations and seeking approvals
Legislations/Conventions may include but are not limited to:	8.1 EMCA 1999 8.2 Montreal Protocol 8.3 Kyoto Protocol

Environmental aspects/impacts may include but are not limited to:	9.1 Air pollution
	9.2 Water pollution
	9.3 Noise pollution
	9.4 Solid waste
	9.5 Flood control
	9.6 Deforestation/Denudation
	9.7 Radiation/Nuclear /Radio Frequency/ Microwaves
	9.8 Situation
	9.9 Soil erosion (e.g. Quarrying, Mining, etc.)
	9.10 Coral reef/marine life protection
Industrial standards / Environmental practices may include but are not limited to:	10.1 ISO standards
	10.2 Company environmental management systems (EMS)
Periodic may include but are not limited to:	11.1 hourly
	11.2 daily
	11.3 weekly
	11.4 monthly
	11.5 quarterly
	11.6 yearly
Programs/Activities may include but are not limited to:	12.1 Waste disposal (on-site and off-site)
	12.2 Repair and maintenance of equipment
	12.3 Treatment and disposal operations
	12.4 Clean-up activities
	12.5 Laboratory and analytical test
	12.6 Monitoring and evaluation
	12.7 Environmental advocacy programs

REQUIRED SKILLS AND KNOWLEDGE
This section describes the skills and knowledge required for this unit of competency.

Required Skills
The individual needs to demonstrate the following skills:
- Following storage methods of environmentally hazardous materials
- Following disposal methods of hazardous wastes
- Using PPE
- Practicing OSHS
- Complying environmental pollution control
- Observing solid waste management
- Complying methods of minimizing noise Pollution
- Complying methods of minimizing wastage
- Employing waste management procedures
- Economizing resource consumption
- Listing of resources used

- Measuring current usage of resources
- Identifying and reporting workplace environmental hazards
- Conveying all environmental issues
- Following environmental regulations
- Identifying environmental regulations
- Assessing procedures for assessing compliance
- Collecting information on environmental and resource efficiency systems and procedures, and Providing information to the work group
- Measuring and recording current resource usage
- Analysing and recording current purchasing strategies.
- Analysing current work processes to access information and data and Assisting identifying areas for improvement
- Analysing resource flow
- Determining efficiency of use/conversion of resources
- Determining causes of low efficiency of use
- Developing plans for increasing the efficiency of resource use
- Checking resource use plans
- Complying to regulations/licensing requirements
- Determining benefit/cost of plans
- Ranking proposals based on benefit/cost compared to limited resources
- Checking proposals meet regulatory requirements
- Monitoring implementation
- Making adjustments to plan and implementation
- checking new resource usage

Required Knowledge

The individual needs to demonstrate knowledge of:
- Storage methods of environmentally hazardous materials
- Disposal methods of hazardous wastes
- Usage of PPE Environmental regulations
- OSHS
- Types of pollution
- Environmental pollution control measures
- Different solid wastes
- Solid waste management
- Different noise pollution
- Methods of minimizing noise pollution
- Methods of minimizing wstage
- Waste management procedures
- Economizing of resource consumption
- Principle of 3Rs
- Types of resources

- Techniques in measuring current usage of resources
- Calculating current usage of resources
- Types of workplace environmental hazards
- Environmental regulations
- Environmental regulations applying to the enterprise.
- Procedures for assessing compliance with environmental regulations.
- Collection of information on environmental and resource efficiency systems and procedures,
- Measurement and recording of current resource usage
- Analysis and recording of current purchasing strategies.
- Analysis current work processes to access information and data Analysis of data and information
- Identification of areas for improvement
- Resource consuming processes
- Determination of quantity and nature of resource consumed
- Analysis of resource flow of different parts of the resource flow process
- Use/conversion of resources
- Causes of low efficiency of use
- Increasing the efficiency of resource use
- Inspection of resource use plans
- Regulations/licensing requirements
- Determine benefit/cost for alternative resource sources
- Benefit/costs for different alternatives
- Components of proposals
- Criteria on ranking proposals
- Regulatory requirements
- Proposals for improving resource efficiency
- Implementation of resource efficiency plans
- Procedures in monitor implementation
- Adjustments of implementation plan
- Inspection of new resource usage

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate:
	1.1 Controlled environmental hazard
	1.2 Controlled environmental pollution
	1.3 Demonstrated sustainable resource use

		1.4 Evaluated current practices in relation to resource usage
		1.5 Demonstrated knowledge of environmental legislations and local ordinances according to the different environmental issues /concerns.
		1.6 Described industrial standard environmental practices according to the different environmental issues/concerns.
		1.7 Resolved problems/ constraints encountered based on management standard procedures
		1.8 Implemented and monitored environmental practices on a periodic basis as per company guidelines
		1.9 Recommended solutions for the improvement of the program
		1.10 Monitored and reported to proper authorities any environmental incidents
	2. Resource Implications	The following resources should be provided: 2.1 Workplace with storage facilities 2.2 Tools, materials and equipment relevant to the tasks (e.g. Cleaning tools, cleaning materials, trash bags) 2.3 PPE, manuals and references 2.4 Legislation, policies, procedures, protocols and localordinances relating to environmental protection 2.5 Case studies/scenarios relating to environmental Protection
3	Methods of Assessment	Competency in this unit may be assessed through: 3.1 Demonstration 3.2 Oral questioning 3.3 Written examination 3.4 Interview/Third Party Reports 3.5 Portfolio (citations/awards from GOs and NGOs, certificate of training – local and abroad) 3.6 Simulations and role-play
4	Context of Assessment	Competency may be assessed on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment.
5	Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.