SOUTH AFRICAN QUALIFICATIONS AUTHORITY
REGISTERED UNIT STANDARD:

Work with, use and care for materials and resources which can impact on health and the environment

SAQA US ID	UNIT STANDARD TITLE			
119558	Work with, use and care for materials and resources which can impact on health and the environment			
ORIGINATOR				
SGB Environmental Sc/Mgt & Waste Mgt				
PRIMARY OR DELEGATED QUALITY ASSURANCE FUNCTIONARY				
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FIELD			**SUBFIELD**	
Field 10 - Physical, Mathematical, Computer and Life Sciences			Environmental Sciences	
ABET BAND	**UNIT STANDARD TYPE**	**PRE-2009 NQF LEVEL**	**NQF LEVEL**	**CREDITS**
Undefined	Regular	Level 2	NQF Level 02	10
REGISTRATION STATUS	**REGISTRATION START DATE**	**REGISTRATION END DATE**	**SAQA DECISION NUMBER**	
Reregistered	2018-07-01	2023-06-30	SAQA 06120/18	
LAST DATE FOR ENROLMENT	**LAST DATE FOR ACHIEVEMENT**			
2024-06-30	2027-06-30			

In all of the tables in this document, both the pre-2009 NQF Level and the NQF Level is shown. In the text (purpose statements, qualification rules, etc), any references to NQF Levels are to the pre-2009 levels unless specifically stated otherwise.

This unit standard does not replace any other unit standard and is not replaced by any other unit standard.

PURPOSE OF THE UNIT STANDARD

In order for me to perform effectively in the field of environmental science, environmental management and waste management, I will be able to:
• Identify a range of materials and resources and describe their characteristics and properties
• Work with, use, transport and store materials safely and responsibly
• Work with and use resources responsibly
• Identify, categorise, collect, handle and dispose of different types of waste.

I will also know and understand:
• The properties of a range materials (including waste) that commonly occur in my context
• The positive and negative effects of such materials on the environment
• The basic principles for responsible use and handling of various materials and resources in my context.

I can be assessed against this unit standard in the context of any activity which is related to managing environmental issues, such as:
• Waste management related activities, eg
> Materials recovery and buy back centres
> Waste reception
> Landfill operations
• Water course cleaning, care and maintenance
• Care of public places, open areas, cultural and natural heritage sites
• Maintenance of parks and sports fields
• Involvement in community projects and job creation schemes relating to environmental practice
• General industrial or extraction, ie activities with an environmental care or improvement focus

The skill, the knowledge and the values reflected in this unit standard form part of the exit level outcomes required for the National Certificate in Environmental Practice NQF Level 2.

LEARNING ASSUMED TO BE IN PLACE AND RECOGNITION OF PRIOR LEARNING

It is assumed that the learner is competent in Communication and Mathematical literacy skills at NQF Level 1.

UNIT STANDARD RANGE

The scope and level of this unit standard is indicated by range statements related to the Specific Outcomes. Materials and resources can be interpreted quite broadly.

Resources would typically be natural resources such as energy, water, air, minerals.

Materials would typically be manufactured or the subject of use.

Material(s) could include: metals, glass, plastics, rubber (including tyres), asbestos, chemicals, agro chemicals, foodstuffs, pharmaceuticals and medical materials, fuels, lubricants, plant materials, human and animal materials, construction materials, etc and includes materials classified as waste (which includes any material that is left over from the production process).

My context: the learner's work, domestic or community context.

Specific Outcomes and Assessment Criteria:

SPECIFIC OUTCOME 1

Classify materials and resources found in an environment according to their potential impact(s) on health and the environment.

OUTCOME RANGE

Impact(s) include beneficial as well as adverse effects.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Materials and resources are classified, identified and named correctly.

ASSESSMENT CRITERION RANGE

Understanding of different ways of classifying materials and resources is demonstrated, and the purposes for which they are used is explained.

ASSESSMENT CRITERION 2

The properties / characteristics of the materials and resources and their potential impact on health and the environment are described correctly.

ASSESSMENT CRITERION RANGE

Properties / characteristics: physical / chemical / biological

The impacts described should cover a range of environmental components (air, soil, water, plants, animals, humans).

ASSESSMENT CRITERION 3

The Material Data Safety Sheets (MSDS) requirements for hazardous chemical substances found in the chosen environment are extracted correctly.

ASSESSMENT CRITERION RANGE

Includes an explanation of the format and purpose of Material Data Safety Sheets (MSDS).

ASSESSMENT CRITERION 4

Each material or resource usage or the way the material or resource occurs is described and related to its physical properties / characteristics.

ASSESSMENT CRITERION RANGE

Occurs: in some contexts the range of materials or resources may include some that are not used, although their properties / characteristics should be known, eg alien or invader plant species, waste to be disposed of.

SPECIFIC OUTCOME 2

Work with, use, transport, store and care for materials and resources.

OUTCOME RANGE

Includes accounting for use of consumables, securely storing resources, identifying breaches of security, following procedures for obtaining materials.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Correct materials are used for the appropriate purpose, in the correct manner.

ASSESSMENT CRITERION RANGE

In formal workplaces this assessment criterion would relate to applying organisational procedures correctly.

ASSESSMENT CRITERION 2

Materials are extracted, used, handled and stored to protect them against damage and to prevent damage to health and the environment.

ASSESSMENT CRITERION RANGE

In formal workplaces handling, transport and storage of materials is in accordance with specific guidelines for particular materials and locations; learners not in formal workplaces would work in a simulated operational environment.

ASSESSMENT CRITERION 3

Defective materials are identified, isolated and reported and appropriate, corrective action is taken.

ASSESSMENT CRITERION 4

Personal protective clothing and equipment used is appropriately and in compliance with organisational policy and legislation.

ASSESSMENT CRITERION RANGE

In compliance with organisational policy: learners not in formal workplaces would have to be assessed in a simulated operational environment.

ASSESSMENT CRITERION 5

Opportunities to prevent, minimise, correct and remedy impact are identified correctly.

SPECIFIC OUTCOME 3

Recognise and respond to environmentally damaging impacts resulting from the extraction, use, transport or storage of materials or resources.

OUTCOME RANGE

The nature of the impact may change with varying contexts. The learner should be aware of at least some of these.

Includes both potential and actual impacts on the environment

Respond to includes reporting, taking preventive, corrective or remedial action, etc.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Potential threats to the environment and actual impacts are recognised and reported timeously.

ASSESSMENT CRITERION 2

Action is taken to prevent, correct or remedy the environmental damage appropriately.

ASSESSMENT CRITERION RANGE

Appropriate action: within the authority of the learner, according to worksite procedures (or equivalent), etc.

SPECIFIC OUTCOME 4

Compile required records related to handling and using materials or resources and submit reports.

OUTCOME RANGE

Includes appropriate records of potential / actual environmental impacts and preventive / corrective / remedial actions.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Relevant documentation is completed, up to date and in the required format.

ASSESSMENT CRITERION RANGE

Includes waste tracking documentation, eg TREM cards.

ASSESSMENT CRITERION 2

Consumable materials usage is accounted for, and excesses and shortages are identified and reported timeously.

SPECIFIC OUTCOME 5

Collect, handle and dispose of waste.

OUTCOME RANGE

This relates to general waste associated with the learner's context - which could include the domestic and/or community context so as to provide a sufficiently broad scope.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

The concepts and principles of waste management are described and explained correctly.

ASSESSMENT CRITERION RANGE

Concepts and principles include the waste management hierarchy: avoid, minimise, separate, re-use/repair, recycle, treat, process, dispose; cleaner production, etc.

ASSESSMENT CRITERION 2

The waste management process is described and explained correctly.

ASSESSMENT CRITERION RANGE

Waste management process includes the sequence of steps in waste management, ie generation, storage, collection, transport, processing / treatment (recycling, composting, incinerating), disposal.

ASSESSMENT CRITERION 3

Waste management processes are applied correctly in the learner's context.

ASSESSMENT CRITERION RANGE

A waste stream familiar to the learner is investigated, and practical ways of applying waste management principles and procedures are demonstrated.

ASSESSMENT CRITERION 4

Special waste is recognised, classified and responded to appropriately.

ASSESSMENT CRITERION RANGE

Special waste includes hazardous waste, electronic waste, health care generic waste, health care risk waste and radioactive waste.

Respond appropriately includes applying special methods of storing waste prior to collection, isolating waste, reporting, following emergency procedures, etc.

SPECIFIC OUTCOME 6

Conserve materials and resources and use them wisely.

ASSESSMENT CRITERIA

ASSESSMENT CRITERION 1

Methods of conservation and wise and responsible use of materials and resources are identified and described accurately.

ASSESSMENT CRITERION 2

Opportunities in the environment to conserve and use materials and resources wisely are identified and described accurately.

ASSESSMENT CRITERION RANGE

The environment could include the domestic and/or community context so as to provide a sufficiently broad scope.

ASSESSMENT CRITERION 3

The purpose of wise and responsible use of materials and resources is explained accurately.

UNIT STANDARD ACCREDITATION AND MODERATION OPTIONS

To obtain credits I must be assessed. The assessment will be based on evidence that I produce. My assessment will be governed by the policies and guidelines of a relevant Education and Training Quality Assurance body (ETQA), which has jurisdiction over this field of learning. The policies and procedures of the relevant ETQA will also determine:
- How my assessment is moderated
- How I can appeal against the outcome of the assessment

Any institution or company which offers learning that will enable me to achieve the purpose of this unit standard must be accredited as a provider through the relevant ETQA.

My assessment against this standard should meet all the requirements of established principles. It should include practical assessment activities, which are appropriate to the contents of this unit standard. These activities should include an appropriate combination of self and peer assessment, practical and oral assessments, observations, etc.

I can be assessed in the language of my choice although if I have to report incidents or conditions to someone else, I will be assessed on my ability to report in the language commonly used in my working environment.

I will be assessed on all the Specific Outcomes, Critical Cross-Field Outcomes and Essential Embedded Knowledge. The Specific Outcomes must be assessed in their own right, through oral and practical evidence. My assessment will not only be based on observation but also on other evidence which I compile into a portfolio of evidence. I cannot be assessed only through a written or oral test.

The Specific Outcomes and essential knowledge will be assessed in relation to each other. If I am able to explain the items which fall under the heading of Essential Embedded Knowledge, but am unable to perform the Specific Outcomes, then I cannot be assessed as 'competent'. Similarly, if I am able to perform tasks described under the Specific Outcomes, but cannot explain or justify them in terms of the fundamental concepts, principles and practice relevant to the level of the unit standard that underpins my skill, then I cannot be assessed as 'competent'.

I will also be assessed on my ability to apply the principles and techniques related to the Critical Cross-Field Outcomes, not only in terms of what I can demonstrate, but also in terms of what I know and can discuss.

My assessment for this unit standard can be done in conjunction with the assessment of other unit standards related to a qualification, and even in conjunction with my assessment for the qualification as a whole.

UNIT STANDARD ESSENTIAL EMBEDDED KNOWLEDGE

The following items reflect the type of knowledge that the assessor will evaluate

1. Names & functions of:
- natural resources and their properties
- materials and material properties
- types of waste
- the waste hierarchy
- steps in the waste management process
- Material Safety data Sheets
- expiry dates
- pictograms and symbols

2. Purpose of:
- work methods that protect health and the environment, conserve resources, minimise waste and prevent pollution
- classifying materials
- sorting, recycling, compacting, composting, incinerating waste
- personal protective clothing and equipment
- Material Safety data Sheets
- expiry dates
- information on labels

3. Attributes, descriptions, characteristics & properties:
- properties and characteristics of resources and materials (including waste)

- pictograms and symbols related to the contents of containers
- environmentally damaging incidents
- environmental impacts
- methods of preventing or reducing environmental damage
- preventive, corrective or remedial action
- adverse and potentially beneficial effects of waste on the environment

4. Processes and events:
- reporting actual and potential damage to the environment
- dealing with actual and potential damage to the environment
- recording information
- minimising, reusing, sorting, separating, isolating, recycling, compacting, composting and incinerating waste
- selecting and wearing appropriate personal protective clothing and equipment
- conserving resources

5.Causes and effects, implications of:
- pollution
- not conserving resources
- poorly managed waste
- using non-renewable resources
- failure to work safely

6. Procedures and techniques:
- applying work methods that conserve resources and prevent damage to the environment
- procedures for reporting environmental threats and incidents
- procedures for dealing with potential and actual damage to the environment
- procedures for handling, processing and disposing of waste (avoid, minimise, separate, re-use / repair, recycle, treat, process, dispose)
- emergency procedures
- using TREM cards
- procedures for storing materials (eg awareness of flammability)

7. Sensory cues:
- related to identifying and classifying materials and resources
- related to recognising defective materials; pollution, irresponsible use of resources; potential and actual damage to the environment
- for recognising types of materials and classes of waste

8. Regulations, legislation, agreements, policies, standards:
- relevant legislation related to the environment and waste management
- workplace policies and standards

9. Theory: rules, principles, laws:
- relevant environmental principles
- related to using, transporting, storing and caring for environmentally sensitive materials
- related to the waste hierarchy
- related to conservation of resources

10. Categories:
- of materials
- of waste

11. Relationships, systems:
- relationships between the properties / characteristics of materials; their safe use, handling, storage and care; and their potential to cause environmental damage
- relationships between resource and material properties and the correct methods for handling and using them

UNIT STANDARD DEVELOPMENTAL OUTCOME

N/A

UNIT STANDARD LINKAGES

N/A

Critical Cross-field Outcomes (CCFO):

UNIT STANDARD CCFO IDENTIFYING

Identify and solve problems
- handle and use environmentally sensitive materials (including waste) safely
- Conserve resources

UNIT STANDARD CCFO WORKING

Work effectively with others
• work safely with due care for the health and well-being of others

UNIT STANDARD CCFO ORGANISING

Organise and manage myself and my activities
• carry out activities in accordance with procedures for handling and using potentially harmful substances

UNIT STANDARD CCFO COLLECTING

Collect, analyse, organise and critically evaluate information
• use sensory information to identify environmentally sensitive materials and anticipate and avoid damaging incidents
• use pictograms to identify contents of containers
• understand the format and purpose of the Material Data Safety Sheet and extract relevant information

UNIT STANDARD CCFO COMMUNICATING

Communicate effectively
• record and report information related to handling and using materials

UNIT STANDARD CCFO SCIENCE

Use science and technology effectively and critically
• use knowledge of material properties when handling and using potentially dangerous substances

UNIT STANDARD CCFO DEMONSTRATING

Demonstrate an understanding of the world as a set of related systems
• understand the interrelationships between the properties of materials (including waste), the correct methods of handling them and their effects on health and the environment

UNIT STANDARD ASSESSOR CRITERIA

N/A

REREGISTRATION HISTORY

As per the SAQA Board decision/s at that time, this unit standard was Reregistered in 2012; 2015.

UNIT STANDARD NOTES

N/A

QUALIFICATIONS UTILISING THIS UNIT STANDARD:

	ID	QUALIFICATION TITLE	PRE-2009 NQF LEVEL	NQF LEVEL	STATUS	END DATE	PRIMARY OR DELEGATED QA FUNCTIONARY
Core	49605	National Certificate: Environmental Practice	Level 2	NQF Level 02	Reregistered	2023-06-30	LG SETA
Elective	58955	National Certificate: Chemical Manufacturing	Level 2	NQF Level 02	Reregistered	2023-06-30	CHIETA
Elective	74269	National Certificate: Occupational Health, Safety and Environment	Level 2	NQF Level 02	Reregistered	2021-06-30	As per Learning Programmes recorded against this Qual

PROVIDERS CURRENTLY ACCREDITED TO OFFER THIS UNIT STANDARD:

This information shows the current accreditations (i.e. those not past their accreditation end dates), and is the most complete record available to SAQA as of today. Some Primary or Delegated Quality Assurance Functionaries have a lag in their recording systems for provider accreditation, in turn leading to a lag in notifying SAQA of all the providers that they have accredited to offer qualifications and unit standards, as well as any extensions to accreditation end dates. The relevant Primary or Delegated Quality Assurance Functionary should be notified if a record appears to be missing from here.

1. A4 Consultancy CC
2. ABA Sebenzi
3. Agisanang SA Training
4. Amabamba Recruitment

5. Atlegang Training Consulting
6. AVAX SA 481 CC. T/A Mandisa Development Services
7. Bantubanye Skills
8. BF QUALITY SOLUTIONS (PTY) LTD
9. Big Start Training and Development
10. Boni Africa Events & Development
11. Buena Vista Learning Academy
12. BUSINESS CIRCLE CONSULTATION
13. Classic Human Capital Solutions
14. CTC College(PTY) LTD.
15. Ditirelo Skills Development Services
16. Edutraining Business College
17. Elective Training Institute Enterprise CC
18. ENVOY PLANET CONSULTING AND PROJECTS (PTY) LTD
19. eThekwini Municipality - Durban
20. Fire Protection Association of Southern Africa
21. Goitsikitso Enterprise Trading
22. Green Horizon Consulting (Pty) Ltd
23. Growth Management Consulting
24. Icando
25. Ilinge Labantu Debt Solution
26. Inafrica General Trading Pty LTD
27. IQ Skills Academy (PTY) LTD.
28. KAGISHO BUSINESS CONCEPTS (Pty) LTD
29. Kernel Management and Consulting (PTY) LTD.
30. Kgolo Institute
31. KHOSITHI TRAINING
32. KNOWLEDGE PRODUCTION
33. Kuyakhula Development Initiatives
34. Mabuya Amahle Trading
35. Mahayi HRD Services cc
36. Makavila Suppliers CC.
37. Mangalani Business Enterprises
38. Mazasa Management Consulting CC.
39. Mbinga Holdings (Pty) Ltd
40. Mcebo Technologies
41. Mind Magic Consulting
42. Mission Point Consulting
43. Mortarboard Training Solutions
44. Networx for Career Development
45. NJ & L Trading Enterprise CC.
46. Nomagwanishe Investments cc
47. NOMAKU TRADERS CC
48. NS Global Academy
49. Outeniqua Leadership Institute
50. Outlearning Pty Ltd
51. Pioneer Business Consulting
52. Power Rush Trading 170 CC.
53. PWI CORPORATE TRAINING PTY LTD
54. Quick Leap Investment
55. RLSTP Training & Development (PTY) LTD.
56. Senelo Trading CC
57. Siljeur Training Academy
58. Sinokuhle Konke Trading Enterprise
59. Spring Forest Trading 578 CC
60. Talent Emporium Academy (PTY) Ltd
61. Thando Consulting Services
62. The Crimson CO CC.
63. Thubelihle Graduate Institute
64. TLD Consulting
65. Tloumogale Business Development & Consulting

66. Tshamutengo General Dealers CC.
67. Tshwane Skills Training Centre
68. Umfolozi FET College
69. University of Venda
70. Vicmat Consultants
71. XL AT Consulting CC
72. Ya Hina Management Consulting and projects
73. YAB Business Solutions (Pty)Ltd