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SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Maritime Operations

Registered by NSB 11, Services, publishes the following unit standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the unit standards. The unit standards can be accessed via the SAQA web-site at www.saqqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, Hatfield Forum, 1067 Arcadia Street, Hatfield.

Comment on the unit standards should reach SAQA at the address ***below and no later than 13 March 2004***. All correspondence should be marked **Standards Setting – SGB for Maritime Operations** and addressed to

The Director: Standards Setting and Development
SAQA
Attention: Mr. D Mphuthing
Postnet Suite 248
Private Bag X06
Waterkloof
0145
or faxed to 012 – 431 5144
e-mail: dmpthuthing@saqa.co.za

JOE SAMUELS
DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

| | |
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| Unit Standard Title | Demonstrate a basic knowledge of commercial fishing methods |
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| LEVEL: | 2 |
| CREDIT: | 4 |
| FIELD: | Services |
| SUB-FIELD: | Maritime Operations |

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard will be useful to people who wish to follow a career path within a fishing industry and have commenced employment as an ordinary seaman and already completed the minimum qualifying time at sea, as required by regulation.

People credited with this unit standard are able to:

- describe passive fishing methods
- describe active fishing methods
- describe commonly used electronic fish finding aids, and
- describe how environmental features assist in the finding of fish.

RANGE STATEMENT:

The following scope and context applies to the whole unit standard:

Passive fishing method refers to the use of static fishing gear and does not usually include hunting.

Active fishing method refers to the use of towed or circling gear and usually involves hunting.

LEARNING ASSUMED TO BE IN PLACE:

None.

Specific outcomes and Assessment Criteria

specific outcome 1

Describe passive fishing methods.

Range:

description must include two of: lining, potting, set netting.

assessment criteria

- 1.1 The fishing gear and components identified and described are consistent with accepted industry practice for the specified method.
- 1.2 The deck layout identified and described is consistent with the method, according to company and/or accepted industry practice.

- 1.3 The principles of the method are accurately outlined, and particular features described in terms of implications for safety and environmental impact.

Range:

features include: dangers to birdlife

- 1.4 The description correctly matches examples of targeted species with the specified method.

specific outcome 2

Describe active fishing methods.

Range:

description must include two of: trawling, dredging, seining.

assessment criteria

- 2.1 The fishing gear and components identified and described are consistent with accepted industry practice for the specified method.
- 2.2 The deck layout identified and described is consistent with the method, according to company and/or accepted industry practice.
- 2.3 The principles of the method are accurately outlined, and particular features described in terms of implications for safety and environmental impact.
- Range:
features include: trawling: by-catch, fasteners
- 2.4 The description correctly matches examples of targeted species with the specified method.

specific outcome 3

Describe commonly used electronic fish finding aids.

Range:

sounder, sonar, net monitors, weather fax, sea surface temperature monitor.

assessment criteria

- 3.1 The specified aid is correctly identified by the name generally accepted in the industry.
- 3.2 The description of the basic operating principles of the aid are accurate and consistent with manufacturer's specifications.
- 3.3 The description outlines what fishing finding information the aid can provide, including the advantages and limitations of the device.

specific outcome 4

Describe how environmental features assist in the finding of fish.

Range:

seasons, water temperature, bird patterns, weather, moon phase, sea bottom topography.

assessment criteria

- 4.1 The description of assistance of environmental features in the finding of fish is consistent with the principles of marine biology and accepted industry practice.
- 4.2 The description outlines examples of fish species that can be located by the environmental feature.

MODERATION AND ACCREDITATION OPTIONS:

Accreditation Options: Providers of learning towards this unit standard will need to meet the accreditation requirements of the relevant ETQA.

Moderation Option: The moderation requirements of the relevant ETQA must be met in order to award credit to learners for this unit standard.

Notes:

1. **Notes to assessors:**

Assessors should keep the following general principles in mind when designing and conducting assessments against this unit standard:

- Focus the assessment activities on gathering evidence in terms of the main outcome expressed in the title to ensure assessment is integrated rather than fragmented. Remember we want to declare the person competent in terms of the title. Where assessment at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes.
- Make sure that evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.
- Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.
- The assessment criteria provide the specifications against which assessment judgements should be made. In most cases, knowledge can be inferred from the quality of the performances, but in other cases, knowledge and understanding will have to be tested through questioning techniques. Where this is required, there will be assessment criteria to specify the standard required.
- The task of the assessor is to gather sufficient evidence, of the prescribed type and quality, as specified in this unit standard, that the candidate can achieve the outcomes again and again and again. This means assessors

will have to judge how many repeat performances are required before they believe the performance is reproducible.

- All assessments should be conducted in line with the following well documented principles of assessment: appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent.

The following particular issues should be taken into consideration when assessing against this unit standard:

- All candidates to be assessed for this unit standard are required to provide evidence of competence (obtained by attending an approved course) in the following
 - (i) Basic First Aid.
 - (ii) Fire Fighting
- Evidence is required with regard to the candidate being medically fit.
- The importance of both safety and due care and consideration for the environment is to be kept in mind when assessing a candidate for this unit standard.

2. Definition of Terms:

Terms have been clarified as far as possible through the use of range statements. Further clarification of terms is provided as follows:

SAMSA – South African Maritime Safety Authority.

This body is responsible for issuing certificates of competence at all levels in terms of the Merchant Shipping (Training and Certification) Regulations, 1999.

Issued by the Minister of Transport, under section 356 of the Merchant Shipping Act, 1951 (Act No. 57 of 1951). GG 20772/RG 6707

ISM – International Safety Management

This refers to a safety management system stipulated by regulation of the International Maritime Organisation. (IMO)

SOPEP- Ship Oil pollution Emergency Plan

Pollution plan in place for a particular ship, as required by the marine pollution regulations (MARPOL) legislated by IMO.

FFA:- Fire fighting Appliances

LSA:- Life saving Appliances

IOPP:- International Oil Pollution Prevention

MARPOL:- Marine Pollution

3. Critical Cross Field Outcomes

This unit standard promotes, in particular, the following critical cross-field outcomes:

- The learner must be able to effectively communicate operations related to fishing methods and fishing aids.

- The learner must be able to work effectively with others in fish finding operations.
- The learner must be able to collect, analyse, organise and evaluate information relating to fish finding and fish hunting.
- The learner must be able to use science and technology in describing the environmental features of fish finding.
- The learner must be able to responsibly and effectively organise and manage his / her fishing gear and components.

4. Embedded Knowledge:

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that for the most part, the possession or lack of the knowledge can be directly inferred from the quality of the candidate's performance. Where direct assessment of knowledge is required, assessment criteria have been included in the body of the unit standard.

- Guidance in correct operation of equipment is provided in The Code of Safe Working Practices for Seamen.
- Prevention of pollution of the marine environment is governed by regulation, (MARPOL) legislated by the International Maritime Organisation.

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| UNIT STANDARD TITLE: Describe and report vessel operational hazards. |
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LEVEL: 2

CREDITS: 2

FIELD: Services

SUB-FIELD: Maritime Operations

ISSUE DATE:

REVIEW DATE:

PURPOSE OF THIS UNIT STANDARD:

This unit standard will be useful to people who wish to follow a career path within a marine environment and have commenced employment as an ordinary seaman and already completed the minimum qualifying time at sea, as required by regulation.

People credited with this unit standard are able to:

- describe and report vessel operational hazards to personnel, and to the environment.
- describe and report vessel operational hazards to the environment

RANGE STATEMENTS:

The following scope and context applies to the whole unit standard:

In compliance with current Maritime Legislation, Codes and Practices, the scope of this unit standard covers the competence to perform survival and emergency procedures as required of a rating on board, e.g. merchant marine, port operations or fishing craft.

Specific range statements are provided in the body of the unit standard where they apply to particular specific outcomes or assessment criteria.

LEARNING ASSUMED TO BE IN PLACE:

The credit calculation is based on the assumption that learners are already competent in terms of the following outcomes or areas of learning when starting to learn towards this unit standard:

- Use of English and Mathematics at NQF level 1
- Competence equivalent to "pre-sea safety standard" (SAMSA regulations)

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

specific outcome 1:

Describe and report vessel operational hazards to personnel.

assessment criteria:

- 1.1. Personal injury hazard types are described and reported in accordance with the vessel's Safe Ship Management Policy and vessel's operating procedures.
Range:
hazard types include - slip, trip, being pinned, head clearance heights, cargo, ladders, being aloft, personal clothing, hair.
- 1.2. The actions of self and others are monitored, altered where necessary, and/or reported to the Skipper, to maintain personal safety in accordance with vessel's Safe Ship Management Policy and Procedures.
- 1.3. Hazards to vessel operation, and to the safety of the crew are recorded in the vessel log or reported to the Skipper, in accordance with vessel's Safe Ship Management Policy and Procedures.
- 1.4. Assistance required for securing crew and/or vessel equipment, prior to commencement of the letting go operation, is described and reported to the Skipper in accordance with vessel's Safe Ship Management Policy and Procedures.
Range:
crew - inside vessel railings;
equipment includes - gangways, ramps, derricks, cranes, lines, ancillary deck equipment.
- 1.5. The crew tally process, and its purpose, is described in accordance with vessel's Safe Ship Management Policy and Procedures.

specific outcome 2:

Describe and report vessel operational hazards to the environment.

Range:

ship board waste includes - solid waste, solvents, oil, fuel, sewage, contaminated water.

assessment criteria:

- 2.1. The disposal of shipboard waste is described in accordance with company, environmental, and industry regulations.
Range:
regulations include - company procedures.
- 2.2. Incidents of waste spillage entering waterways are reported to the Skipper in accordance with the vessel's operating procedures.
- 2.3. The immediate actions required to contain and neutralise waste spillage are described in accordance with vessel's Safe Ship Management Policy and Procedures.

ACCREDITATION AND MODERATION OPTIONS:

- Accreditation Options: Providers of learning towards this unit standard will need to meet the accreditation requirements of SAMSA and the relevant ETQA.
- Moderation Option: The moderation requirements of SAMSA and the relevant ETQA must be met in order to award credit to learners for this unit standard.

Notes:

1. Notes to assessors:

Assessors should keep the following general principles in mind when designing and conducting assessments against this unit standard:

- Focus the assessment activities on gathering evidence in terms of the main outcome expressed in the title to ensure assessment is integrated rather than fragmented. Remember we want to declare the person competent in terms of the title. Where assessment at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes.
- Make sure that evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.
- Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.
- The assessment criteria provide the specifications against which assessment judgments should be made. In most cases, knowledge can be inferred from the quality of the performances, but in other cases, knowledge and understanding will have to be tested through questioning techniques. Where this is required, there will be assessment criteria to specify the standard required.
- The task of the assessor is to gather sufficient evidence, of the prescribed type and quality, as specified in this unit standard, that the candidate can achieve the outcomes again and again and again. This means assessors will have to judge how many repeat performances are required before they believe the performance is reproducible.
- All assessments should be conducted in line with the following well documented principles of assessment: appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent.

The following particular issues should be taken into consideration when assessing against this unit standard:

- All candidates to be assessed for this unit standard are required to provide evidence of competence (obtained by attending an approved course) in the following
 - (i) Basic First Aid.

(ii) Fire Fighting

- Evidence is required with regard to the candidate being medically fit.
- The importance of both safety and due care and consideration for the environment is to be kept in mind when assessing a candidate for this unit standard.

2. Definition of Terms:

Terms have been clarified as far as possible through the use of range statements. Further clarification of terms is provided as follows:

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FFA:- Fire fighting Appliances

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IOPP:- International Oil Pollution Prevention

MARPOL:- Marine Pollution

3. Critical Cross Field Outcomes

This unit standard promotes, in particular, the following critical cross-field outcomes:

- The learner must be able to effectively communicate hazard to people and environment using visual, mathematical and/or language skills.
- The learner must be able to work effectively with others in securing crew and vessel equipment prior to the letting go operation.
- The learner must be able to collect, analyse, organise and evaluate information of the safety of crew and injury to the environment.
- The learner must be able to responsibly and effectively organise and manage his/her self during reporting and logging of vessel operational hazards.

4. Embedded Knowledge:

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment

criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that for the most part, the possession or lack of the knowledge can be directly inferred from the quality of the candidate's performance. Where direct assessment of knowledge is required, assessment criteria have been included in the body of the unit standard.

- Guidance in correct operation of equipment is provided in The Code of Safe Working Practices for Seamen.
- Prevention of pollution of the marine environment is governed by regulation, (MARPOL) legislated by the International Maritime Organisation

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|----------------------------|---|
| Unit Standard Title | Demonstrate knowledge of personal safety and survival at sea |
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LEVEL: 1
CREDIT: 2
FIELD: Services
SUB-FIELD: Maritime Operations

ISSUE DATE:

REVIEW DATE:

PURPOSE:

This unit standard is intended for those going to sea for the first time and who have little or no knowledge of maritime operations. It will be useful to people who wish to follow a career path within the small, medium and micro fishing industry and who commence employment at ordinary seaman level.

People credited with this unit standard are able to:

- demonstrate knowledge of basic safety and survival at sea
- demonstrate knowledge of the purpose and functioning of safety equipment
- carry out safety and survival operations at sea

RANGE STATEMENT:

The following scope and context applies to the whole unit standard:

The unit standard will typically serve to recognize learning in maritime familiarization and pre-sea training for small vessels.

Such training is required by any person going to sea for the first time and existing fishers on vessels of less than 25 Gross Tons

LEARNING ASSUMED TO BE IN PLACE:

None.

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

specific outcome 1:

Demonstrate knowledge of basic safety and survival at sea.

assessment criteria:

- 1.1. Types of emergencies are identified, and the description of actions appropriate to the particular emergency is accurate in terms of SAMSA regulations, and meets the required sequence of reporting and reaction.
Range:
emergencies include: fire, collision, grounding, capsized, injury
- 1.2. The importance of maintaining calm and presence of mind is explained in

relation to personal safety, survival and well-being of others.

- 1.3. The dangers associated with substance abuse is explained in relation to personal well-being and safety, the safety of the team and vessel, and legal requirements.
Range:
substance abuse includes: alcohol, recreational drugs, inappropriate use of mind altering substances (example glue, cough syrups)
dangers includes: personal incapacitation, inability to carry out duties safely,
- 1.4. The description of actions to take in the event of casualties on board is accurate in terms of the sequence and extent of actions to take before arrival of a qualified person, and complies with onboard safety policy and SAMSA codes.
Range:
extent of activities includes: positioning the casualties, stemming bleeding, treat for hypothermia
- 1.5. Terms used to identify and describe parts of the vessel, direction and items of equipment are accurate and comply with accepted nautical practice.
Range:
terms include: IMO requirements: direction (example north, south, port, starboard, astern, abeam); parts of a boat (example gangway, bridge, heads); items of equipment, ropes and knots
- 1.6. Hypothermia is accurately described in terms of its dangers to self and others, as well as cause and effects.
- 1.7. The need to provide personal and voyage particulars to the skipper and/or competent shore-based personnel is explained in terms of legal obligations, vessel regulations and possible disasters at sea.

specific outcome 2:

Demonstrate knowledge of the purpose and functioning of safety equipment.

assessment criteria:

- 2.1. Emergency equipment is accurately identified in terms of type, intended use and range of conditions for use.
Range:
safety equipment includes: life jackets, life buoys, life rafts,
- 2.2. Lifejackets and/or flotation aids are confirmed to be operational, and are worn in accordance with their design and manufacturers' specifications.
- 2.3. Types of fire extinguishers are accurately identified and described in terms of their purpose, operation and conditions for use.
Range:
extinguishers include: water, foam, dry powder, CO₂
- 2.4. Visual distress signaling equipment is located on board, accurately identified and described in terms of its intended purpose and manner of operation.
Range:
distress signaling equipment includes: pyrotechnics, flags, day shapes

intended use includes: day and night use, emergency conditions, weather conditions,

specific outcome 3:

Carry out safety and survival operations at sea.

assessment criteria:

- 3.1. Techniques for remaining afloat and/or moving in water under normal conditions, with and without flotation aids, are demonstrated in accordance with industry accepted standards and methods.
Range:
methods include: treading water, paddling with hands, kicking, floating on back, proper use of flotation aids
- 3.2. Fire extinguishers used are appropriate to the nature of the fire, and are used in accordance with their purpose, design and accepted fire-fighting practices.
Range:
fire-fighting practices include: use of spray nozzles and jets, direction and placement of spray or jet
- 3.3. Visual signaling equipment is used in at the appropriate times and in a manner consistent with design, purpose and SAMSA regulations.
- 3.4. Actions taken in dealing with casualties are appropriate to the context, severity of the injury and own experience, and are carried out in a manner consistent with accepted first aid practice.
- 3.5. Actions to be taken for preventing the onset of hypothermia in the event of capsizing meet accepted first aid practices and vessel safety plans.
Range:
actions to prevent hypothermia include: removing self from water (onto hull), warming (space blankets – capsized bottle)
- 3.6. Personal particulars are accurate and are provided to the skipper before the voyage, in compliance with vessel regulations and legal obligations.
Range:
personal particulars include: name, identity number, next of kin and contact numbers

ACCREDITATION AND MODERATION OPTIONS:

Accreditation Options: Providers of learning towards this unit standard will need to meet the accreditation requirements of SAMSA and the relevant ETQA.

Moderation Option: The moderation requirements of SAMSA and the relevant ETQA must be met in order to award credit to learners for this unit standard.

Notes:

1. **Notes to assessors:**

Assessors should keep the following general principles in mind when designing and conducting assessments against this unit standard:

- Focus the assessment activities on gathering evidence in terms of the main outcome expressed in the title to ensure assessment is integrated rather than fragmented. Remember we want to declare the person competent in terms of the title. Where assessment at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes.
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- Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.
- The assessment criteria provide the specifications against which assessment judgements should be made. In most cases, knowledge can be inferred from the quality of the performances, but in other cases, knowledge and understanding will have to be tested through questioning techniques. Where this is required, there will be assessment criteria to specify the standard required.
- The task of the assessor is to gather sufficient evidence, of the prescribed type and quality, as specified in this unit standard, that the candidate can achieve the outcomes again and again and again. This means assessors will have to judge how many repeat performances are required before they believe the performance is reproducible.
- All assessments should be conducted in line with the following well documented principles of assessment: appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent.

The following particular issues should be taken into consideration when assessing against this unit standard:

- Evidence is required with regard to the candidate being medically fit.
- The candidate must meet SAMSA's requirements for going to sea.
- The importance of both safety and due care and consideration for the environment is to be kept in mind when assessing a candidate for this unit standard.

2. Definition of Terms:

Terms have been clarified as far as possible through the use of range statements. Further clarification of terms is provided as follows:

SAMSA – South African Maritime Safety Authority.

This body is responsible for issuing certificates of competence at all levels in terms of the Merchant Shipping (Training and Certification) Regulations, 1999.

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Pollution plan in place for a particular ship, as required by the marine pollution regulations (MARPOL) legislated by IMO.

FFA:- Fire fighting Appliances

LSA:- Life saving Appliances

IOPP:- International Oil Pollution Prevention

MARPOL:- Marine Pollution

3. Critical Cross Field Outcomes

This unit standard promotes, in particular, the following critical cross-field outcomes:

- The learner must be able to effectively communicate operations related to safety equipment and basic safety and survival.
- The learner must be able to work effectively with others in executing basic safety and survival operations.
- The learner must be able to collect, analyse, organise and evaluate safety risks, equipment and survival operations at sea.
- The learner must be able to responsibly and effectively organise and manage his / her activities operations and equipment related to safety and survival at sea.

4. Embedded Knowledge:

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that for the most part, the possession or lack of the knowledge can be directly inferred from the quality of the candidate's performance. Where direct assessment of knowledge is required, assessment criteria have been included in the body of the unit standard.

- An emergency situation is identified and promotes the correct response.
- Guidance in correct operation of equipment is provided in The Code of Safe Working Practices for Seamen.

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| UNIT STANDARD TITLE: | Implement and maintain adherence to safe working practices and policies. |
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LEVEL: 2
CREDITS: 2
FIELD: Services
SUB-FIELD: Maritime Operations

ISSUE DATE:

REVIEW DATE:

PURPOSE OF THIS UNIT STANDARD:

This unit standard will be useful to people who wish to follow a career path within a fishing environment and have commenced employment as an ordinary seaman and already completed the minimum qualifying time at sea, as required by regulation.

People credited with this unit standard are able to

- follow safe working practices
- follow emergency procedures
- and identify potentially hazardous situations and goods

RANGE STATEMENTS:

The following scope and context applies to the whole unit standard:

The work environment includes all operational and accommodation areas.

Rules and regulations include: International Conference for the Safety of Life at Sea, SOLAS; International Convention on Standards of Training, Certification and Watchkeeping, STCW 95; Code of Safe Working Practice; test certificates and Deck Equipment Registers; and organisational policies, work rules, and regulations, and their subsequent amendments.

Aspects of the environment include: lighting, noise, atmospheric contamination, and physical hazards.

Personnel to be protected include: the individual, crew, contractors, passengers, and visitors.

Specific range statements are provided in the body of the unit standard where they apply to particular specific outcomes or assessment criteria.

LEARNING ASSUMED TO BE IN PLACE:

The credit calculation is based on the assumption that learners are already competent in terms of the following outcomes or areas of learning when starting to learn towards this unit standard:

- Use of English and Mathematics at NQF level 1
- Competence equivalent to "pre-sea safety standard" (SAMSA regulations)

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA**specific outcome 1:**

Follow safe working practices during steaming and fishing operations.

assessment criteria:

- 1.1. Tasks are performed in a safe manner, and in accordance with legislative requirements and company policy and procedures.

Range:

tasks include: baiting hooks, repairing nets, preparing nets/lines

- 1.2. Work activity is undertaken in accordance with company and/or vessel operating procedures.

- 1.3. Personnel protective clothing is appropriate to the conditions, used or worn in accordance with its design and purpose, and stored according to company procedures.

Range:

PPE includes: gloves, boots, overalls,

- 1.4. Machine guards are employed and used as required, according to manufacturer's and company procedures.

- 1.5. Safety signs and symbols are correctly identified and followed according to their instructions, as laid down in operating procedures.

specific outcome 2:

Follow emergency procedures.

assessment criteria:

- 2.1. The correct personnel for contact in emergency situations are identified according to onboard safety structures and chains of command.

- 2.2. Identified personnel are advised of the situation in the event of an emergency in the prescribed manner, and with a degree of urgency appropriate to the specific context.

- 2.3. Emergency and evacuation procedures are described and demonstrated according to ship's procedures.

- 2.4. Ship evacuation procedures are followed in the case of an emergency, in accordance with standing instructions.

Range:

procedures include: muster station, safety equipment operation, launch and operation of lifeboats/rafts

specific outcome 3:

Identify potentially hazardous situations and goods.

Range:

potential hazards includes: un-stored lines

assessment criteria:

- 3.1. Potential hazards are identified, and action taken is prompt, and appropriate to the nature of the hazard.
- 3.2. Hazardous items and substances are handled and stored according to the onboard safety procedures.
- 3.3. Actions taken during hazardous situations are appropriate to the specific context, and minimise the potential danger to self and others.
- 3.4. Protective clothing and equipment are appropriate to the context, and are used according to their purpose and design, and manufacturer's specifications.
- 3.6. Workplace hazards are identified during the course of work and reported to the specified person according to standard operating procedures.

Range:

reports on workplace hazards may be verbal or written using standardised report forms.

ACCREDITATION AND MODERATION OPTIONS:

Accreditation Options: Providers of learning towards this unit standard will need to meet the accreditation requirements of the relevant ETQA.

Moderation Option: The moderation requirements of the relevant ETQA must be met in order to award credit to learners for this unit standard.

Notes:**1. Notes to assessors:**

Assessors should keep the following general principles in mind when designing and conducting assessments against this unit standard:

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- Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.
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- All assessments should be conducted in line with the following well documented principles of assessment: appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent.

The following particular issues should be taken into consideration when assessing against this unit standard:

- All candidates to be assessed for this unit standard are required to provide evidence of competence (obtained by attending an approved course) in the following
 - (i) Basic First Aid.
 - (ii) Fire Fighting
- Evidence is required with regard to the candidate being medically fit.
- The importance of both safety and due care and consideration for the environment is to be kept in mind when assessing a candidate for this unit standard.

2. Definition of Terms:

Terms have been clarified as far as possible through the use of range statements. Further clarification of terms is provided as follows:

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ISM – International Safety Management

This refers to a safety management system stipulated by regulation of the International Maritime Organisation. (IMO)

SOPEP- Ship Oil pollution Emergency Plan

Pollution plan in place for a particular ship, as required by the marine pollution regulations (MARPOL) legislated by IMO.

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|----------|--|
| FFA:- | Fire fighting Appliances |
| LSA:- | Life saving Appliances |
| IOPP:- | International Oil Pollution Prevention |
| MARPOL:- | Marine Pollution |

3. Critical Cross Field Outcomes

This unit standard promotes, in particular, the following critical cross-field outcomes:

- The learner must be able to effectively communicate safe working practices and emergency procedures.
- The learner must be able to work effectively with others in executing emergency procedures.
- The learner must be able to collect, analyse, organise and evaluate potentially hazardous situations and goods.
- The learner must be able to responsibly and effectively organise and manage his / her activities steaming and fishing operations.

4. Embedded Knowledge:

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that for the most part, the possession or lack of the knowledge can be directly inferred from the quality of the candidate's performance. Where direct assessment of knowledge is required, assessment criteria have been included in the body of the unit standard.

- Guidance in correct operation of equipment is provided in The Code of Safe Working Practices for Seamen.
- Prevention of pollution of the marine environment is governed by regulation, (MARPOL) legislated by the International Maritime Organisation

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|--|
| UNIT STANDARD TITLE: Use a marine radio in an emergency situation |
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LEVEL: 2
CREDITS: 3
FIELD: Services
SUB-FIELD: MaritimeOperations

ISSUE DATE:

REVIEW DATE:

PURPOSE OF THIS UNIT STANDARD:

This unit standard is intended for those going to sea for the first time and who have little or no knowledge of maritime operations. It will be useful to people who wish to follow a career path within the small, medium and micro fishing industry and who commence employment at ordinary seaman level.

People credited with this unit standard are able to

- demonstrate knowledge of the Radio Communications (Radio) Regulations, and
- use a marine radio in an emergency situation.

RANGE STATEMENTS:

The following scope and context applies to the whole unit standard:

- Current Maritime Legislation and Codes of Practice
- Standing instructions

Specific range statements are provided in the body of the unit standard where they apply to particular specific outcomes or assessment criteria.

LEARNING ASSUMED TO BE IN PLACE:

The credit calculation is based on the assumption that learners are already competent in terms of the following outcomes or areas of learning when starting to learn towards this unit standard:

- Use of English and Mathematics at NQF level 1
- Competence equivalent to "pre-sea safety standard" (SAMSA regulations)

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

specific outcome 1:

Select and use signalling equipment under maritime distress conditions.

Range:

signalling equipment includes but is not limited to - lights, flags, emergency position indicating radio beacons (EPIRBs), hand signals, radio transmissions, flares (including smoke), sound signals, flames, search and rescue radar transponders (SARTS).

assessment criteria:

- 1.1. The signalling equipment selected is appropriate in terms of the intended purpose and specified conditions. Rationale for the choice is consistent with particular context, and consequences of inappropriate choices are explained.
Range:
conditions include - visibility, sea, weather, proximity to the shore or other vessels.
- 1.2. Operation of signalling equipment complies with intended purpose, manufacturer's directions and legislative requirements.
- 1.3. The procedures to be followed when a distress signal is accidentally activated are described, and are consistent with SAMSA codes and company operating policies.

specific outcome 2:

Use a marine radio in an emergency situation.

Range:

VHF, SSB/MF.

assessment criteria:

- 2.1 The frequency selected is appropriate for a distress call.
Range:
VHF channel 16; SSB/MF 2182.
- 2.2 The distress call and message is handled in a manner consistent with the degree of urgency required, and is appropriate to the given situation, in accordance with the radio handbook.
- 2.3 "Mayday received" and "mayday relay" are handled in a manner consistent with the particular context, in accordance with guidelines and regulations.
- 2.4 An urgency call is handled in a manner consistent with the particular context, in accordance with guidelines and regulations.
- 2.6 A security call is handled in a manner consistent with the particular context, in accordance with guidelines and regulations.

ACCREDITATION AND MODERATION OPTIONS:

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the relevant ETQA.
2. Any institution offering learning that will enable achievement of this unit standard must be accredited as a provider through the relevant ETQA by SAQA.
3. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines and the agreed ETQA procedures.

NOTES:

1. CRITICAL CROSS-FIELD OUTCOMES:

The following critical cross-field outcomes are addressed in this unit standard:

- 1.1 The learner must be able to identify and solve problems regarding the use of a marine radio in an emergency situation, and make decisions using critical thinking.
- 1.2 The learner must be able to organise and manage his/her activities responsibly and effectively, ensuring that emergency communication procedures are followed.
- 1.3 The learner must be able to communicate effectively, using appropriate language skills during an emergency situation.
- 1.4 The learner must be able to use science and technology ensuring effective completion of the emergency situation at hand.

2. EMBEDDED KNOWLEDGE:

Essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that for the most part, the possession or lack of the knowledge can be directly inferred from the quality of the candidate's performance. Where direct assessment of knowledge is required, assessment criteria have been included in the body of the unit standard.

- Effective communication is assisted by the knowledge and use of basic nautical terms.
- Functions and correct names for various parts of the ship are correctly identified.
- Correct terminology is used when communicating.

3. NOTES TO ASSESSORS

Assessors should keep the following principles in mind when designing and conducting assessments against this unit standard:

- Focus the assessment activities on gathering evidence in terms of the main outcome expressed in the title to ensure assessment is integrated rather than fragmented. Remember we want to declare the person competent in terms of the title. Where assessment at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes.
- Make sure evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.

- Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.
- The assessment criteria provide the specifications against which assessment judgements should be made. In most cases, knowledge can be inferred from the quality of the performances, but in other cases, knowledge and understanding will have to be tested through questioning techniques. Where this is required, there will be assessment criteria to specify the standard required.
- The task of the assessor is to *gather sufficient evidence, of the prescribed type and quality, as specified in this unit standard, that the candidate can achieve the outcomes again and again and again*. This means assessors will have to judge how many repeat performances are required before they believe the performance is reproducible.
- All assessments should be conducted in line with the following well documented principles of assessment: *appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent*

The following particular issues should be taken into consideration when assessing against this unit standard.

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|-----------------------------|---|
| Unit Standard Title: | Assist in abandon ship and sea survival techniques |
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|-------------------|---------------------|
| LEVEL: | 2 |
| CREDITS: | 10 |
| FIELD: | Services |
| SUB-FIELD: | Maritime Operations |

ISSUE DATE:

REVIEW DATE:

PURPOSE OF THIS UNIT STANDARD:

This unit standard will be useful to people who wish to follow a career path within a marine environment and have commenced employment as an ordinary seaman and already completed the minimum qualifying time at sea, as required by regulation.

People credited with this unit standard are able to

- demonstrate knowledge of the vessels muster and emergency stations, muster lists, signals, and sea survival equipment
- assist in abandon ship procedures, and
- retrieve a person overboard

RANGE STATEMENTS:

The following scope and context applies to the whole unit standard:

Legislation relevant to this unit standard includes but is not limited to the Maritime Transport Act and Maritime Rules under the act and their subsequent amendments.

Survival management procedures refer to procedures that are set by the company.

Competency demonstrated in this unit standard must comply with a vessel master's instructions.

Specific range statements are provided in the body of the unit standard where they apply to particular specific outcomes or assessment criteria.

LEARNING ASSUMED TO BE IN PLACE:

The credit calculation is based on the assumption that learners are already competent in terms of the following outcomes or areas of learning when starting to learn towards this unit standard:

- Use of English and Mathematics at NQF level 1
- Competence equivalent to "pre-sea safety standard" (SAMSA regulations)

Specific outcomes and Assessment Criteria

specific outcome 1

Demonstrate knowledge of the vessel's muster and emergency stations and muster lists, signals, and sea survival equipment.

assessment criteria

- 1.1 The location of the vessel's muster and emergency stations, muster lists, signalling equipment, and sea survival equipment are accurately described, in accordance with vessel's Safe Ship Management Policy and Procedures.
Range:
deck or level, port or starboard, fore or aft, amidships.
- 1.2 The vessel's muster and emergency stations, muster lists, signalling equipment, and sea survival equipment are described in terms of their intended function during an emergency.
- 1.3. Specific features of operation which may endanger others are described and operating methods indicated to minimise danger are consistent with standing instructions.

specific outcome 2

Assist in abandon ship procedures.

assessment criteria

- 2.1 Assistance is offered with a degree of urgency appropriate to the context, and in a manner consistent with the vessel's abandon ship procedures.
- 2.2 Injured and distressed crew are provided with instructions which are consistent with vessel's abandon ship procedures.
- 2.3 Instructions and/or communication from responsible personnel with respect to the abandon ship situation is passed on to other crew members in a manner consistent with vessel's abandon ship procedures.
- 2.4 Emergency locators and/or other emergency devices are activated in accordance with the Skipper's instructions.
Range:
emergency equipment includes: radio, Emergency Position Indicating Radio Beacon (EPIRB).
- 2.5 The operation of life preservation equipment is demonstrated in accordance with the design specifications, and the vessel's abandon ship procedures.
Range:
life preservation equipment includes - personal life preservation equipment, survival suits, life rafts, life boats, life jackets and buoys.

specific outcome 3

Assist in retrieving a person overboard.

assessment criteria

- 3.1 Visual contact with person overboard is maintained throughout the retrieval operation, in accordance with the vessel's emergency procedure.
Range:
directly, through reference to objects.
- 3.2 Retrieval techniques are appropriate to the particular conditions, and maintain the safety of the crew and person overboard, in accordance with vessel's emergency procedures.
Range:
survival techniques include - a vessel's emergency procedures, specific guidelines for survival in cold water
- 3.3 The consequences of inappropriate actions and/or techniques are described with reference to the safety of crew and person overboard.
- 3.4. The Skipper is kept informed of the position and status of the person overboard throughout the retrieval process in accordance with standing instructions.
- 3.5. Actions administered to promote survival of retrieved person are appropriate to the particular context, and consistent with survival management procedures.
Range:
hypothermic, injured, and emotionally and physically stressed.

ACCREDITATION AND MODERATION OPTIONS:

Accreditation Options: Providers of learning towards this unit standard will need to meet the accreditation requirements of SAMSA and the relevant ETQA.

Moderation Option: The moderation requirements of SAMSA and the relevant ETQA must be met in order to award credit to learners for this unit standard.

Notes:

1. **Notes to assessors:**
Assessors should keep the following general principles in mind when designing and conducting assessments against this unit standard:
 - Focus the assessment activities on gathering evidence in terms of the main outcome expressed in the title to ensure assessment is integrated rather than fragmented. Remember we want to declare the person competent in terms of the title. Where assessment at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes.
 - Make sure that evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance

as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.

- Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.
- The assessment criteria provide the specifications against which assessment judgments should be made. In most cases, knowledge can be inferred from the quality of the performances, but in other cases, knowledge and understanding will have to be tested through questioning techniques. Where this is required, there will be assessment criteria to specify the standard required.
- The task of the assessor is to gather sufficient evidence, of the prescribed type and quality, as specified in this unit standard, that the candidate can achieve the outcomes again and again and again. This means assessors will have to judge how many repeat performances are required before they believe the performance is reproducible.
- All assessments should be conducted in line with the following well documented principles of assessment: appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent.

The following particular issues should be taken into consideration when assessing against this unit standard:

- All candidates to be assessed for this unit standard are required to provide evidence of competence (obtained by attending an approved course) in the following
 - (i) Basic First Aid.
 - (ii) Fire Fighting
- Evidence is required with regard to the candidate being medically fit.
- The importance of both safety and due care and consideration for the environment is to be kept in mind when assessing a candidate for this unit standard.

2. Definition of Terms:

Terms have been clarified as far as possible through the use of range statements. Further clarification of terms is provided as follows:

SAMSA – South African Maritime Safety Authority.

This body is responsible for issuing certificates of competence at all levels in terms of the Merchant Shipping (Training and Certification) Regulations, 1999.

Issued by the Minister of Transport, under section 356 of the Merchant Shipping Act, 1951 (Act No. 57 of 1951). GG 20772/RG 6707

ISM – International Safety Management

This refers to a safety management system stipulated by regulation of the International Maritime Organisation. (IMO)

SOPEP- Ship Oil pollution Emergency Plan
Pollution plan in place for a particular ship, as required by the marine pollution regulations (MARPOL) legislated by IMO.

FFA:- Fire fighting Appliances

LSA:- Life saving Appliances

IOPP:- International Oil Pollution Prevention

MARPOL:- Marine Pollution

3. Critical Cross Field Outcomes

This unit standard promotes, in particular, the following critical cross-field outcomes:

- The learner must be able to effectively communicate abandon ship procedures using visual, mathematical and/or language skills.
- The learner must be able to work effectively with others in abandoning ship and retrieving a person overboard.
- The learner must be able to collect, analyse, organise and evaluate information of the location, equipment and features of the vessels muster and emergency station.
- The learner must be able to responsibly and effectively organise and manage his/her self during ship abandonment.

4. Embedded Knowledge:

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that for the most part, the possession or lack of the knowledge can be directly inferred from the quality of the candidate's performance. Where direct assessment of knowledge is required, assessment criteria have been included in the body of the unit standard.

- Guidance in correct operation of equipment is provided in The Code of Safe Working Practices for Seamen.
- Prevention of pollution of the marine environment is governed by regulation, (MARPOL) legislated by the International Maritime Organisation

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|-----------------------------|-------------------------------|
| Unit Standard Title: | Apply first aid at sea |
|-----------------------------|-------------------------------|

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|---------------------|---------------------|
| LEVEL: | 2 |
| CREDITS: | 2 |
| FIELD: | Services |
| SUB-FIELD: | Maritime Operations |
| ISSUE DATE: | |
| REVIEW DATE: | |

PURPOSE OF THIS UNIT STANDARD:

This unit standard will be useful to people who wish to follow a career path within a marine environment and have commenced employment as an ordinary seaman and already completed the minimum qualifying time at sea, as required by regulation.

People credited with this unit standard are able to

- apply immediate first aid action on board ship, and
- operate and apply life support equipment and techniques.

RANGE STATEMENTS:

The following scope and context applies to the whole unit standard:

Equipment may include resuscitation equipment (oxygen), and first aid equipment.

Procedures and practices may include those approved by first aid services.

Life support procedures may include Cardio-Pulmonary Resuscitation (CPR), Expired Air Resuscitation (EAR).

Guidelines may include those from first aid organisations.

Injuries and conditions covered by this registered standard include: poisoning injuries to muscular skeletal system, burns and scalds, cardiac arrest, asphyxia, drowning, effects of heat and cold, and other problems associated with sea survival.

LEARNING ASSUMED TO BE IN PLACE:

The credit calculation is based on the assumption that learners are already competent in terms of the following outcomes or areas of learning when starting to learn towards this unit standard:

- Use of English and Mathematics – unit No: Math 2001 – at NQF level 2
- Competence equivalent to “pre-sea safety standard” (SAMSA regulations)

Specific outcomes and Assessment Criteria**specific outcome 1**

Apply immediate first aid action on board ship.

assessment criteria

- 1.1. Identification of probable cause, nature, and extent of injury or condition is prompt, complete, and conforms to current first aid practice.
- 1.2. Communication and attitude towards the casualty is calm, reassuring and promotes effective management of the casualty and situation.
- 1.3. The sequence of treating multiple injuries and conditions is directly related to their importance with respect to threatening life. The sequence is consistent with accepted best practice.
- 1.4. Treatment of injuries and patient condition meets is consistent with the nature and extent of the injury, and conforms to current first aid practice.
- 1.5. Risk of harm to self and others assisting is minimised in accordance with accepted best practice. Consequences of inappropriate interventions are described in terms of impact on self and casualty.

specific outcome 2

Operate and apply life support equipment and techniques.

assessment criteria

- 2.1 Life support equipment is selected is appropriate to the specified context. The equipment is operated according to manufacturer's instructions and procedures, and first aid practices.
Range:
life support equipment includes: resuscitation equipment (oxygen)
- 2.2 First aid equipment and materials applied at emergency incidents are selected according to identified needs, and applied in accordance with first aid practices.
Range:
first aid equipment includes: bandages
- 2.3 Life support techniques are appropriate to the context, and are applied in accordance with rules and regulations to victims showing the effects of trauma.
Range:
techniques include: Cardio-Pulmonary Resuscitation (CPR), Expired Air Resuscitation (EAR)

Accreditation Options: Providers of learning towards this unit standard will need to meet the accreditation requirements of SAMSA and the relevant ETQA.

Moderation Option: The moderation requirements of SAMSA and the relevant ETQA must be met in order to award credit to learners for this unit standard.

Notes:

1. **Notes to assessors:**
Assessors should keep the following general principles in mind when designing and conducting assessments against this unit standard:
 - Focus the assessment activities on gathering evidence in terms of the main outcome expressed in the title to ensure assessment is integrated rather than fragmented.

Remember we want to declare the person competent in terms of the title. Where assessment at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes.

- Make sure that evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.
- Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.
- The assessment criteria provide the specifications against which assessment judgments should be made. In most cases, knowledge can be inferred from the quality of the performances, but in other cases, knowledge and understanding will have to be tested through questioning techniques. Where this is required, there will be assessment criteria to specify the standard required.
- The task of the assessor is to gather sufficient evidence, of the prescribed type and quality, as specified in this unit standard, that the candidate can achieve the outcomes again and again and again. This means assessors will have to judge how many repeat performances are required before they believe the performance is reproducible.
- All assessments should be conducted in line with the following well documented principles of assessment: appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent.

The following particular issues should be taken into consideration when assessing against this unit standard:

- Evidence is required with regard to the candidate being medically fit.
- The importance of both safety and due care and consideration for the environment is to be kept in mind when assessing a candidate for this unit standard.

2. Definition of Terms:

Terms have been clarified as far as possible through the use of range statements. Further clarification of terms is provided as follows:

SAMSA – South African Maritime Safety Authority.

This body is responsible for issuing certificates of competence at all levels in terms of the Merchant Shipping (Training and Certification) Regulations, 1999.

Issued by the Minister of Transport, under section 356 of the Merchant Shipping Act, 1951 (Act No. 57 of 1951). GG 20772/RG 6707

ISM – International Safety Management

This refers to a safety management system stipulated by regulation of the International Maritime Organisation. (IMO)

SOPEP- Ship Oil pollution Emergency Plan

Pollution plan in place for a particular ship, as required by the marine pollution regulations (MARPOL) legislated by IMO.

FFA:- Fire fighting Appliances

LSA:- Life saving Appliances

IOPP:- International Oil Pollution Prevention

MARPOL:- Marine Pollution

3. Critical Cross Field Outcomes

This unit standard promotes, in particular, the following critical cross-field outcomes:

- The learner must be able to effectively communicate first aid and life support requirements using visual and/or language skills.
- The learner must be able to work effectively with others in selecting and applying life support techniques.
- The learner must be able to collect, analyse, organise and evaluate information relating to injury and treatment of patient and risk to self.
- The learner must be able to responsibly and effectively organise and manage his/her self during first aid and life support activities.

4. Embedded Knowledge:

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that for the most part, the possession or lack of the knowledge can be directly inferred from the quality of the candidate's performance. Where direct assessment of knowledge is required, assessment criteria have been included in the body of the unit standard.

- Knowledge supporting this unit standard includes: general function and construction of various parts of the human body, in particular the skeletal, muscular, cardiovascular, and respiratory systems; procedures relating to burns, resuscitation, fractures, sprains, strains, spinal injury; general knowledge of the first aid aspects of publications I on effects of toxic substances on the body and aspects of poisoning; and effects of heat and cold on the body; symptoms and therapy for congelation and cause, and therapy for sunburn.

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| UNIT STANDARD TITLE: Stow and handle ropes, and use knots and lashings on a vessel . |
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LEVEL: 2

CREDITS: 6

FIELD: Services

SUB-FIELD: Maritime Operations

ISSUE DATE:

REVIEW DATE:

PURPOSE OF THIS UNIT STANDARD:

This unit standard will be useful to people who wish to follow a career path within a marine environment and have commenced employment as an ordinary seaman and already completed the minimum qualifying time at sea, as required by regulation.

People credited with this unit standard are able to

- demonstrate stowage and handling of ropes
- describe the construction and storage of ropes
- splice ropes consistent with their intended use on a vessel select
- select and use knots and lashings.

RANGE STATEMENTS:

The following scope and context applies to the whole unit standard:

- Competency demonstrated in this unit standard must comply with current accepted industry practice as required by SAMSA codes.

Specific range statements are provided in the body of the unit standard where they apply to particular specific outcomes or assessment criteria.

LEARNING ASSUMED TO BE IN PLACE:

The credit calculation is based on the assumption that learners are already competent in terms of the following outcomes or areas of learning when starting to learn towards this unit standard:

- Use of English and Mathematics at NQF level 1
- Competence equivalent to "pre-sea safety standard" (SAMSA regulations)

SPECIFIC OUTCOMES AND ASSESSMENT CRITERIA

specific outcome 1:

Handle and stow ropes on sea-going vessels.

assessment criteria:

- 1.1. Commonly used ropes are explained in terms of their main characteristics and uses.

- 1.2. Commonly used ropes are used in accordance with their design and purpose, and the vessel's operating procedures and/or safety policies.
Range:
ropes include - natural fibre, polyester, nylon, polypropylene, polyethylene.
- 1.3. Ropes are coiled and flaked out in accordance with their construction type, and vessel's operating procedures.
- 1.4. Ropes are handled in a manner that protects the operator, crew, and passengers, and in line with the vessel's operating procedures and/or safety procedures.
- 1.5. Ropes are stowed in a manner that ensures that they are ready for immediate use as required, according to vessel operating procedures and/or safety procedures.
- 1.6. Chaffing materials used to protect ropes are identified and described in accordance with current accepted industry practice and/or vessel's operating procedures. The consequences of not using such materials is explained with reference to cost and safety of personnel.
- 1.7. Damage to ropes is identified and reported in accordance with vessel operating procedures and/or safety procedures.

specific outcome 2:

Describe the construction and storage of ropes.

assessment criteria:

- 2.1. Materials used in the manufacture of ropes used on a vessel are identified and described in terms of their particular strengths, weaknesses and application.
Range:
materials include - natural fibre, polyester, nylon, polypropylene, polyethylene.
- 2.2. The construction and type of rope used on a vessel are identified.
Range:
types include - monofilament, laid, braid, multi plait.
- 2.3. The storage requirements for ropes are described in accordance with the manufacturer's instructions and vessel operating procedures. The consequences of incorrect storage are described in terms of cost and safety.

specific outcome 3:

Splice ropes to purpose on a vessel.

assessment criteria:

- 3.1. Ropes are spliced in accordance with accepted industry practice.
Range:

- 3 strand rope - backsplice, eyesplice, shortsplice; multi plait rope - eyesplice.
- 3.2. The splice selected is appropriate to the intended purpose of the splice in accordance with accepted industry practice and/or Standing Instructions.
 - 3.3. Whippings are tied in accordance with accepted industry practice.
 - 3.3. Ends of synthetic rope are stopped in accordance with accepted industry practice.

specific outcome 4:

Select and use knots and lashings.

assessment criteria

- 4.1. Knots and lashings are described in terms of their strengths and weaknesses for particular applications. The consequences of incorrect selection or execution are described with reference to personal, crew or vessel safety.
Range:
knots and lashings include - bowline, sheet bend, round turn, two half hitches, figure eight, double sheet bend, rolling hitch, clove hitch, fisherman's bend/anchor hitch, black wall hitch, barrel hitch.
- 4.2. Knots and lashings are selected and tied in a manner that is consistent with the intended purpose of the knots or lashing, in accordance with vessel's operating and/or safety policies and procedures.

ACCREDITATION AND MODERATION OPTIONS:

1. Anyone assessing a learner against this unit standard must be registered as an assessor with the relevant ETQA.
2. Any institution offering learning that will enable achievement of this unit standard must be accredited as a provider through the relevant ETQA by SAQA.
3. Moderation of assessment will be overseen by the relevant ETQA according to the moderation guidelines and the agreed ETQA procedures.

NOTES:

1. CRITICAL CROSS-FIELD OUTCOMES:

The following critical cross-field outcomes are addressed in this unit standard:

- 1.1 Using critical and creative thinking the learner must be able to identify and solve problems regarding the use of ropes, knots and lashings.
- 1.2 The learner must be able to organise and manage his/her activities responsibly and effectively, ensuring that procedures for handling and stowage of knots are followed.

- 1.3 The learner must be able to work effectively with others as members of a team.
- 1.4 The learner must be able to demonstrate an understanding of stowage and storage of knots by recognising that problem-solving contexts do not exist in isolation.

2. EMBEDDED KNOWLEDGE:

Essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that for the most part, the possession or lack of the knowledge can be directly inferred from the quality of the candidate's performance. Where direct assessment of knowledge is required, assessment criteria have been included in the body of the unit standard.

- Guidance in correct operation of equipment is provided in The Code of Safe Working Practices for Seamen.

3. TERMINOLOGY

Natural fibre, polyester, nylon, polypropylene, polyethylene; monofilament, laid, braid, multi plait; backsplice, eyesplice, shortsplice; multi plait rope – eyesplice; bowline, sheet bend, round turn, two half hitches, figure eight, double sheet bend, rolling hitch, clove hitch, fisherman's bend/anchor hitch, black wall hitch, barrel hitch

4. NOTES TO ASSESSORS

Assessors should keep the following principles in mind when designing and conducting assessments against this unit standard:

- Focus the assessment activities on gathering evidence in terms of the main outcome expressed in the title to ensure assessment is integrated rather than fragmented. Remember we want to declare the person competent in terms of the title. Where assessment at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes.
- Make sure evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.
- Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.
- The assessment criteria provide the specifications against which assessment judgements should be made. In most cases, knowledge can be inferred from the quality of the performances, but in other cases, knowledge and understanding will have to be tested through questioning

techniques. Where this is required, there will be assessment criteria to specify the standard required.

- The task of the assessor is to *gather sufficient evidence, of the prescribed type and quality, as specified in this unit standard, that the candidate can achieve the outcomes again and again and again*. This means assessors will have to judge how many repeat performances are required before they believe the performance is reproducible.
- All assessments should be conducted in line with the following well documented principles of assessment: *appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent*

| | |
|-----------------------------|---|
| Unit Standard Title: | Identify and describe common parts, fittings and equipment on a vessel |
|-----------------------------|---|

LEVEL: 2
CREDITS: 3
FIELD: Services
SUB-FIELD: Maritime Operations

ISSUE DATE:

REVIEW DATE:

PURPOSE OF THIS UNIT STANDARD:

This unit standard will be useful to people who wish to follow a career path within a marine environment and have commenced employment as an ordinary seaman and already completed the minimum qualifying time at sea, as required by regulation.

People credited with this unit standard are able to:

- describe common parts of a vessel, and
- identify equipment and fittings commonly used on a vessel.

RANGE STATEMENTS:

The following scope and context applies to the whole unit standard:

Legislation relevant to this unit standard includes but is not limited to the Merchant Shipping Act, SAMSA regulations and their subsequent amendments.

Specific range statements are provided in the body of the unit standard where they apply to particular specific outcomes or assessment criteria.

LEARNING ASSUMED TO BE IN PLACE:

The credit calculation is based on the assumption that learners are already competent in terms of the following outcomes or areas of learning when starting to learn towards this unit standard:

- Use of English and Mathematics at NQF level 1
- Competence equivalent to "pre-sea safety standard" (SAMSA regulations)

Specific outcomes and Assessment Criteria

specific outcome 1

Describe common parts of a vessel.

assessment criteria

- 1.1. Common parts of a vessel are identified in terms of their location, name, and function.

Range:

parts include - bow, stern, port, starboard hull, centre line, amidships, water line, bilge, freeboard, collision bulkheads, length, scuppers, freeing ports draught marks.

- 1.2. Operational areas are described in terms of function and location.

Range:

operational areas include - crew accommodation areas, deck, galley, holds, wheelhouse, cold storage, engine room, steering flat.

- 1.3. Access to, and regulations applying to access and/or use of operational areas are described in accordance with standing instructions.

specific outcome 2

Identify equipment and fittings commonly used on a vessel.

assessment criteria

- 2.1 Equipment and fittings are correctly identified and named in terms commonly accepted within the fishing industry.
- 2.2. Equipment and fittings are identified in terms of their intended use on the vessel.
Range:
equipment includes - anchor and windlass, hatch covers, deck gear, water tight doors, water tight hatches, engine, safety equipment.
- 2.3. Regulations pertaining to the operation and/or use of equipment are described with particular reference to own access and implications for personal, crew equipment and/or vessel safety.

ACCREDITATION AND MODERATION OPTIONS:

Accreditation Options: Providers of learning towards this unit standard will need to meet the accreditation requirements of SAMSA and the TETA ETQA.

Moderation Option: The moderation requirements of SAMSA and the TETA ETQA must be met in order to award credit to learners for this unit standard.

Notes:

1. Notes to assessors:

Assessors should keep the following general principles in mind when designing and conducting assessments against this unit standard:

- Focus the assessment activities on gathering evidence in terms of the main outcome expressed in the title to ensure assessment is integrated rather than fragmented. Remember we want to declare the person competent in terms of the title. Where assessment at title level is unmanageable, then focus assessment around each specific outcome, or groups of specific outcomes.

- Make sure that evidence is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays are used, there should be supporting evidence to show the candidate is able to perform in the real situation.
- Do not focus the assessment activities on each assessment criterion. Rather make sure the assessment activities focus on outcomes and are sufficient to enable evidence to be gathered around all the assessment criteria.
- The assessment criteria provide the specifications against which assessment judgments should be made. In most cases, knowledge can be inferred from the quality of the performances, but in other cases, knowledge and understanding will have to be tested through questioning techniques. Where this is required, there will be assessment criteria to specify the standard required.
- The task of the assessor is to gather sufficient evidence, of the prescribed type and quality, as specified in this unit standard, that the candidate can achieve the outcomes again and again and again. This means assessors will have to judge how many repeat performances are required before they believe the performance is reproducible.
- All assessments should be conducted in line with the following well documented principles of assessment: appropriateness, fairness, manageability, integration into work or learning, validity, direct, authentic, sufficient, systematic, open and consistent.

The following particular issues should be taken into consideration when assessing against this unit standard:

- All candidates to be assessed for this unit standard are required to provide evidence of competence (obtained by attending an approved course) in the following
 - (i) Basic First Aid.
 - (ii) Fire Fighting
- Evidence is required with regard to the candidate being medically fit.
- The importance of both safety and due care and consideration for the environment is to be kept in mind when assessing a candidate for this unit standard.

2. Definition of Terms:

Terms have been clarified as far as possible through the use of range statements. Further clarification of terms is provided as follows:

SAMSA – South African Maritime Safety Authority.

This body is responsible for issuing certificates of competence at all levels in terms of the Merchant Shipping (Training and Certification) Regulations, 1999.

Issued by the Minister of Transport, under section 356 of the Merchant Shipping Act, 1951 (Act No. 57 of 1951). GG 20772/RG 6707

ISM – International Safety Management

This refers to a safety management system stipulated by regulation of the International Maritime Organisation. (IMO)

SOPEP- Ship Oil pollution Emergency Plan
Pollution plan in place for a particular ship, as required by the marine pollution regulations (MARPOL) legislated by IMO.

FFA:- Fire fighting Appliances

LSA:- Life saving Appliances

IOPP:- International Oil Pollution Prevention

MARPOL:- Marine Pollution

3. Critical Cross Field Outcomes

This unit standard promotes, in particular, the following critical cross-field outcomes:

- The learner must be able to effectively communicate common vessel parts and equipment, using visual, mathematical and/or language skills.
- The learner must be able to collect, analyse, organise and evaluate information relating to the parts, equipment and fittings of a vessel.
- The learner must be able to responsibly and effectively organise and manage his/her operations in respect vessel equipment and fittings.

4. Embedded Knowledge:

The following essential embedded knowledge will be assessed through assessment of the specific outcomes in terms of the stipulated assessment criteria. Candidates are unlikely to achieve all the specific outcomes, to the standards described in the assessment criteria, without knowledge of the listed embedded knowledge. This means that for the most part, the possession or lack of the knowledge can be directly inferred from the quality of the candidate's performance. Where direct assessment of knowledge is required, assessment criteria have been included in the body of the unit standard.

- Guidance in correct operation of equipment is provided in The Code of Safe Working Practices for Seamen.
- Prevention of pollution of the marine environment is governed by regulation, (MARPOL) legislated by the International Maritime Organisation