NATIONAL COMPETENCY STANDARD

WSQ Framework : WSH Professionals
Competency Category : Implement operational control of WSH
Competency Code : WP-IC-302C-1
Competency Unit : Coordinate implementation of emergency preparedness and response plans

Competency Descriptor : On completion of this unit, learner will have the knowledge and skills to coordinate the implementation and maintenance of emergency preparedness and response plans.

Competency Level : 3
Credit Value : 1
Version Number : 1.0
Effective Date : 27 August 2007
Review Date : -
Developer : Generic Skills Development Division
Custodian : Generic Skills Development Division

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# National Competency Standard

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<td>- Have a basic knowledge of workplace processes, procedures, activities and practices</td>
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<td>- Be able to listen, read, speak and write English at a proficiency level equivalent to the Employability Skills System (ESS) Workplace Literacy level 5</td>
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<td>- Be able to manipulate numbers at a proficiency level equivalent to ESS Workplace Numeracy level 5</td>
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<tr>
<td>- Possess basic IT skills such as use of internet, use of basic word processing and presentation software</td>
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Competency Unit Title
Coordinate implementation of emergency preparedness and response plans

Description of Competency Element

Competency Element Title
1. Assist in implementation of emergency preparedness and response plans

Performance Criteria
A competent person should be able to successfully perform the following:

1.1 Identify emergency-causing hazards and types of organisational emergency situations in accordance with organisational procedures.
1.2 Identify appropriate response plans and equipment in accordance with organisational procedures.
1.3 Determine emergency notification requirements and maintain emergency contact list in accordance with organisational procedures and legal requirements.
1.4 Arrange relevant training and rehearsal to prepare emergency response team to handle emergency situations.
1.5 Seek external assistance to assist in planning and handling emergency situations where needed.

Underpinning Knowledge
The candidate needs to know and understand:

- Types of emergency-causing hazards
- Types of emergency situations
- On-site emergency response equipment
- Types of organisational emergency plans
- Notification requirements during emergency
- Emergency contact list
- Roles and responsibilities of response team members
- Types of emergency training and practices for the response team
- Types of external assistance
- Legal requirements

Range and Context
Type of emergency-causing hazards, which may include:

- Fire
- Hazardous substances
- Chemicals / biological agents
Types of emergency situations, which may include:
- Fire
- Release of hazardous substances or chemical spillage
- Medical emergency
- Containment of chemical release
- Blackout or emergency shutdown
- Natural disaster situation for the haze, floods or earthquakes
- Confined space emergency entry
- Other emergency situations specific to organisation

Types of organisational emergency plans may include:
- Actions by person who discovered the emergency situations
- Actions by members of emergency response teams
- Actions by management and supervisors
- Actions by employees
- Actions by human resources personnel
- Actions by security personnel
- Actions by facility personnel
- Actions by public relations personnel
- Actions by Crisis Management Team
- Actions by visitors
- Actions to be taken after office hours
- Locations, storage and quantities of emergency equipment
- Information on types of hazardous materials on site, which may include:
  - Types of hazardous materials
  - Storage location(s)
  - Secondary containment(s) to limit the damage
  - Types of potential release:
    - Spillage
    - Leakage
    - Damage by physical force (dropped from vehicle, damaged by forklift, etc)
    - Vapour release that could lead to accidents / incidents
- Initial responses to hazardous materials releases
- Actions to be taken during emergency situations during normal working hours
- Actions to be taken during emergency situations outside normal working hours
- Investigation and report requirements after emergency incident

Types of emergency response equipment, which may include:
- Fire protection systems
  - Sprinkler system
  - Fire hydrants
  - Fire alarm panels and sub-panels
  - Fire hose reels
  - Fire break glass
  - Smoke and heat detectors
  - Various types of fire extinguishers
  - Fire engine access and parking location
· Firemen’s lift
· Rescue Equipment
  · Self Contained Breathing Apparatus
  · Personal Protective Equipment
· Chemical spillage containment equipment:
  · Spill containment kits
  · Absorbent materials
  · Disposal bags

Types of notification requirements, which may include:
· Notification of organisational personnel for emergency response during and after normal working hours
· Notification to government agencies such as:
  · Singapore Civil Defence Force
  · Police
  · National Environment Agency
  · Health Science Authorities
  · Building Control Authorities
· Notification to neighbouring companies who may be affected

Emergency contact list may include:
· Internal
  · Emergency response teams
    · Emergency controllers at departmental and organizational levels
    · First aiders
    · First responders
    · Fire fighters
    · Hazmat team
    · Counsellors
    · Structural engineers
    · Facility personnel
    · Security personnel
    · Human resources personnel
    · Public relation officer
    · WSH Officer
  · Emergency controller
  · Management
  · Crisis management team
· External
  · Fire engine
  · Ambulance
  · Police
  · Ministry of manpower (for fatal cases involving workers)
  · National environmental agency (for release of Hazardous Substance)
  · Building Control Authorities (for cases which could affect structure of building)
  · Utilities supplies companies
  · External emergency response resources
  · Neighbours
Emergency response team training, which may include:
- Fire fighting
- Spill containment
- First aid
- Rescue technique
- Use of emergency response equipment

Emergency response team rehearsals, which may include:
- Fire fighting practice
- Dry runs for spill response procedures
- Practice on rescue procedures
- Practice on giving first aids
- Practice on use of emergency equipment
- Table top exercise

Coordination of emergency response training and rehearsal may include:
- Scheduling the training and practice sessions
- Arranging for the facilities and logistics for the training and practices
- Arranging for attendance of the emergency response team members

Types of external assistance, which may include:
- Government agencies
- Training providers on emergency preparedness and response
- Commercial emergency response services
- Consultants
- Insurance companies

Legal requirements, which may include:
- WSH Act Schedule 2 on Dangerous Occurrences
- WSH (Incident Reporting) Regulations
- Fire Safety (Fire Emergency Plan) Regulations
- Fire Safety (Petroleum and Flammable Materials) Regulations
- Singapore Civil Defence Force - Guidelines on Company Emergency Response Plan
- Environmental Pollution Control (Hazardous Substances) Regulations

**Evidence Sources**

Listed below are a few examples about the kind of evidence that would provide a guide as to whether an individual is meeting the standards required to be competent.

**Work Activities**

- Coordinating training for emergency response team
- Communicating appropriate response actions to personnel at the workplace during an emergency
- Coordinating with site incident commander and workplace safety and health officer during emergency
### Products and outcomes
- List of possible emergency situations
- Table of hazardous materials or chemical storage list
- Medical and rescue equipment list
- List of clean up contractors
- List of external assistance for emergency response

### Verbal and/or Written Reports
- List types of hazards that would lead to emergency situations
- List types of possible emergency situations
- Discuss the organisational procedures in various types of emergency situations
- List hazardous materials at the workplace and the emergency response procedure in case of a spill
- List the locations, storage and quantities of emergency equipment
- Describe the notification procedure during emergency
- Describe action to be taken during an emergency
- Discuss means of obtaining external help on emergency response
- Discuss training requirements for emergency response team
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### Competency Unit Title

Coordinate implementation of emergency preparedness and response plans

### Description of Competency Element

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### Performance Criteria

A competent person should be able to successfully perform the following:

2.1 Organise and prepare for emergency drills to facilitate evaluation of emergency preparedness and response capability of organisation.

2.2 Coordinate conduct of drill in accordance with organisational procedures.

2.3 Arrange post-emergency and drill review to discuss on the effectiveness of emergency preparedness and response procedures based on emergency and drill records.

2.4 Collate findings of the post emergency and drill review to identify areas of improvements needed.

2.5 Monitor closure of improvement action items arising from the post emergency and drill review and update relevant parties in accordance with organisational procedures.

2.6 Report to management on closure and follow up actions required.

### Underpinning Knowledge

The candidate needs to know and understand:

- Types of drills to be conducted
- Preparation for drills
- Coordinating the conduct of drills
- Process of drill review
- Types of emergency and drill records
- Documentation of drill review
- Areas for improvement
- Relevant parties to be updated
- Tracking for closure of action items

### Range and Context

Types of drills may include:

- Fire fighting drills
• Evacuation drill
• Rescue drill
• Medical emergency drill
• Hazardous materials release or chemical spillage drill
• Blackout or emergency shut down drill
• Confined space rescue drill
• Drills during normal office hours
• Drills after office hours
• Other drills that are deemed critical to the organisation

Process of drill preparation may include:
• Scheduling of the drill
• Arranging for the facilities and logistics for drill
• Arranging for tools and equipment needed for the drill
• Emergency response equipment
• Rescue equipment
• First aid equipment
• Personal Protective Equipment
• Camera and Video Camera
• Drill recording sheets
• Arranging for attendance of the emergency response team members
• Setting a scenario for the drill
• Setting up the simulated condition for the drill
• Determining the criteria to be assessed during the drill

Process of coordinating conduct of drill which may include:
• Checking response equipment prior to drill
• Informing and communicating with other personnel on site and neighbouring organisations about the drill to prevent unnecessary alarm
• Informing other interested parties about the drill, including:
  • Decentralised fire alarm monitoring services
  • Insurance company
  • Government agencies
• Allocation of observers of the drill
• Recording of proceeding of the drill
• Written description
• Photos or videos
• Checking on safety precautions during the drill

Process of drill review may include:
• Identifying gaps between actual and planned response
• Identifying gaps between planned and practicable procedures
• Evaluating speed of response of emergency response teams
• Evaluating orderliness during response
• Evaluating accuracy of response actions
• Evaluating adequacy of manpower resource
• Evaluating safety and health precautions of responders
• Evaluating adequacy and capability of equipment
• Recording of proceeding of the drill
Types of emergency and drill review records may include:
- Report time taken for various stages of the drills
- Observations from site incident commanders
- Observations from participating members
- Observations from workplace safety & health committee
- Discussion on improvements to the drill conducted
- Drill report
- Minutes of post emergency and drill meeting

Areas for improvement, which may include:
- Speed of response
- Accuracy of response actions
- Emergency response equipment
- Adequacy of emergency response resources
- Competency of emergency response team
- Response procedures
- Communication during emergency situations
- Orderliness in response
- More realistic simulation of actual situation during drills
- Response procedures
- Competency of emergency response team members
- Coordination of response efforts among different teams and departments
- Communication during emergency situations

Monitor the closure of improvement action items, which include:
- Identify the person in charge for completing the action items and the planned date of completion
- Obtain regular updates on status of action items from the person in charge
- Compare actual situation with planned schedule of the action item
- Update management regularly on status of action items
- Report to management on lapses in implementation if necessary
- Verify the completed action items
- Check that other affected areas and procedures due to action items are updated
- Report to management on completion of action items.
- Obtaining updates of action items status from responsible persons
- Reporting to management on the status of action and any deviation from the set target

Relevant parties to be updated may include:
- Management
- Emergency response team
- Persons in departments and areas affected by the action items
- Persons in charge of updating affected procedures and documentation
**Evidence Sources**

Listed below are a few examples about the kind of evidence that would provide a guide as to whether an individual is meeting the standards required to be competent.

**Work Activities**
- Planning and coordinating the drill(s)
- Assessing the effectiveness of drill
- Arranging for post emergency and drill meeting

**Products and Outcomes**
- Emergency preparedness drills plan
- Timing recorded for the drill events
- Photographs and videos of the drill events
- Drill report
- Reports on the findings and improvements of the drills

**Verbal and/or Written Report**
- List types of drills to be conducted
- List preparation items for drills
- Procedure for conduct of drills
- Purpose of assessing emergency preparedness and response based on drill results
- Procedures for documenting post emergency and drill reviews and improvements
- Tracking process for closure of action items
- Types of post emergency and drill discussion and records
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**Competency Unit Title**
Coordinate implementation of emergency preparedness and response plans

**Description of Competency Element**

**Competency Element Title**
Coordinate maintenance of emergency response equipment and plans

**Performance Criteria**
A competent person should be able to successfully perform the following:

3.1 Collate inventory list of organisational emergency response equipment in accordance with organisational emergency preparedness and response plans.

3.2 Select competent suppliers and contractors for testing and maintenance of emergency equipment in accordance with legal requirements.

3.3 Arrange with appointed contractor for testing and maintenance of emergency response equipment in accordance with the legal requirements and guidelines.

3.4 Keep maintenance records of response equipment in accordance with organisational procedures.

3.5 Coordinate inspection of emergency response equipment to ensure the response equipment are operationally ready.

3.6 Coordinate periodic review of emergency preparedness and response plan to ensure that the plan is relevant and current to organisational requirements.

**Underpinning Knowledge**
The candidate needs to know and understand:
- Types of emergency response equipment
- Selection of competent suppliers and contractors
- Maintenance and testing of emergency response equipment
- Record keeping for emergency response equipment
- Inspection of emergency response equipment
- Process of ERP plan review

**Range and Context**
Types of emergency response equipment, which may include:
- Fire alarm
- Emergency lightings
- Fire extinguishers
• Fire hose reels
• Fire hydrants
• Fire suppression systems
• Chemical containment equipment
• Emergency shower and eyewash
• Sensors, thermostats, meters and detectors
• Medical or rescue equipment
• First aid kit
• Chemical spill response kits

Selection of suppliers and contractors, which include:
• List of workshops certified by SCDF for the servicing and maintenance of fire extinguishers
• Contractors for testing and maintenance of emergency lightings
• Contractors for testing and maintenance of fire sprinklers, hose reels and other fire protection equipment

Maintenance and testing of emergency response equipment, which include:
• Fire extinguishers
• Fire hose reels
• Emergency exit lightings
• Fire alarms
• Fire and heat detection devices
• Fire sprinklers
• Fire hydrants

Maintenance records may include:
• Type of equipment
• Date of service
• Record of identified problems and actions taken
• Due date for next test
• Persons or organisations responsible for testing

Inspections of equipment, which may include:
• Inspections by maintenance personnel in accordance with maintenance plan
• Inspections by WSH committee
• Inspections by third party

Inspection schedule which may include:
• Regular inspection by internal maintenance personnel
• Regular inspection by external contractors
• Inspections and audits by WSH committee

Coordination of plan review process may include:
• Schedule of the review
• Getting the participation of relevant parties such as:
  • Emergency response organisation
  • Management
  • Custodian of organisational emergency response plan
- WSH Officer
- Fire Safety Manager
- Subject matter experts in emergency response preparedness and plan
- Emergency preparedness and response improvement taking into account of drills improvement and suggestions
- Emergency equipment reviews, updates and replacement
- Personal protective equipment usage, replacement and updates
- Adequacy of detection devices, monitoring and early warning of emergency situations
- Review of response procedures
- Review of competency of emergency response personnel
- Maintenance log, records of inspection, work permit systems review and improvements

**Evidence Sources**

Listed below are a few examples about the kind of evidence that would provide a guide as to whether an individual is meeting the standards required to be competent.

**Work Activities**
- Collating inventory list of emergency response equipment
- Selecting competent suppliers and contractors for testing and maintaining emergency equipment
- Reviewing emergency preparedness and response plan

**Products and Outcomes**
- Current emergency preparedness and response plan
- Current list of emergency equipment inventory
- Current list of suppliers and contractors

**Verbal and/or Written Report**
- List types of emergency response equipment
- Discuss maintenance requirements for emergency response equipment
- Selecting competent suppliers and contractors
- Maintenance of emergency equipment by competent suppliers and contractors
- Procedures for monitoring emergency equipment and keeping it up-to-date.
- Procedures for updating and maintaining currency of the emergency response plan