



Australian Government

Department of Education, Employment and Workplace Relations

PUAOIL302 Use advanced equipment operations for oil spill response

Release: 1

PUAOIL302 Use advanced equipment operations for oil spill response

Modification History

PUAOIL302 Release 1: Primary release.

Unit Descriptor

This unit covers the competency required to safely deploy, operate, monitor and recover advanced oil spill response equipment.

Application of the Unit

This unit applies to personnel responsible for the choices and deployment of appropriate oil spill response equipment according to the type of product and the environmental conditions for a Tier 1, 2 or 3 response.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where ***bold italicised*** text is used, further information is detailed the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Manage the safety of the operation	<p>1.1 Identify <i>hazards</i> and <i>risks</i> for the site and equipment use through a job safety analysis.</p> <p>1.2 Apply the <i>hierarchy of controls</i> to manage hazards and risks.</p> <p>1.3 Select, use, maintain and store <i>personal protective equipment</i> in accordance with both occupational health and safety and material safety data sheet requirements.</p>
2. Communicate effectively with work team and incident management team	<p>2.1 Prepare site specific deployment plans based on the incident action plan (IAP).</p> <p>2.2 Plan, prepare and present <i>briefs and debriefs</i>.</p> <p>2.3 Maintain effective <i>communication</i> channels with all <i>stakeholders</i> involved in the deployment and recovery of <i>oil spill response equipment</i>.</p> <p>2.4 Ensure response personnel are capable of deploying the equipment in a team environment.</p>
3. Prepare equipment for use	<p>3.1 Identify required equipment using the IAP and/or site-specific deployment plan.</p> <p>3.2 Conduct routine <i>pre-operational checks</i> of equipment using manufacturer's specifications and <i>standard operating procedures</i>.</p> <p>3.3 Identify and segregate faulty equipment for repair or replacement.</p> <p>3.4 Identify equipment requiring licensed operators.</p>
4. Operate and/or deploy equipment	<p>4.1 Use equipment according to state/NT/Commonwealth <i>licensing requirements</i>.</p> <p>4.2 Operate and monitor equipment in accordance with manufacturer's specifications, supervisor's instructions and/or safe operating procedures (SOPs).</p> <p>4.3 Carry out work in accordance with occupational health and safety requirements and the IAP.</p> <p>4.4 Identify and record the use of consumables.</p>
5. Monitor operations	<p>5.1 Monitor, assess and re-assess the effectiveness of equipment and/or the recovery operation.</p> <p>5.2 Identify, action and monitor <i>environmental implications</i> associated with the operation and maintenance of equipment.</p> <p>5.3 Identify any changes to the response as a result of ongoing monitoring.</p>
6. Check, clean and store equipment	<p>6.1 Maintain records of equipment use in accordance with IAP, SOPs and/or the incident management</p>

- system.
- 6.2 Clean, secure and store equipment in accordance with manufacturers specifications, maintenance manual, supervisor's instructions and/or SOPs.
 - 6.3 Report and take action on equipment malfunction, fault, wear or damage.
 - 6.4 Maintain and clean the workplace in line with occupational health and safety requirements and the demobilisation plan.

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- communicate effectively with others
- work effectively within a team environment
- work safely and collaboratively with others
- read and interpret material safety data sheets
- take appropriate initiative relating to the handling of equipment
- recognise and address problems when dismantling, inspecting and assembling equipment
- monitor equipment performance
- modify activities dependent on workplace situations including risk and environment
- complete maintenance records
- ability to identify hazards:
 - environmental
 - physical
 - chemical
- safe handling and use of equipment

Required Knowledge

- hazards:
 - environmental
 - physical
 - chemical
- OHS responsibilities
- loading and unloading of materials
- operational characteristics of equipment
- operation of equipment in accordance with SOPs

Evidence Guide

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Assessment must confirm the ability to:

- demonstrate the safe deployment and operation of equipment to contain, recover and store oil
- ensure safety and hazard control procedures are implemented
- identify hazardous situations that may arise and take appropriate action
- communicate effectively with others involved in the response
- monitor and reassess situations to ensure the best possible response according to environmental conditions

Context of and specific resources for assessment

Competency should be assessed in a simulated response environment or in an operational situation. It is suggested that Apply basic equipment operation be assessed either prior or with this unit.

Method of assessment

Assessment is completed using appropriately qualified assessors who select the most appropriate method of assessment.

Assessment may occur in an operational environment or in an approved simulated environment.

Forms of assessment may include:

- direct observation
- journals and workplace documentation
- third party reports from supervisors
- written or oral questions
- case studies

Guidance information for assessment

Where possible assessment should be completed holistically and may be assessed with other relevant units of competence For example may be assessed with PUAOIL201 Use basic equipment operations for oil spill response.

Range Statement

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Hazards may include:

- manual handling
- slips, trips and falls
- noise
- working around aircraft
- working around / on vessels
- chemical properties of oil:
 - combustibility
 - vapour
- environment:
 - heat
 - cold
 - tides
 - current
 - isolation
 - cliffs/heights
 - heights
 - rocks
- wildlife
- confined spaces
- vehicles

Risks may include:

- fatigue
- hearing loss
- physical injury
- equipment damage
- poisoning
- burns
- respiratory problems
- injection - hydraulic and pneumatic
- chemical risks:
 - inhalation
 - ingestion
 - absorption

Hierarchy of controls may include:

- elimination
- substitution
- modification
- containment
- ventilation
- work practices
- personal protection

Personal protective

- personal flotation device (PFD)

equipment as dictated by the material safety data sheets and the work environment may include:

- hearing protection
- boots (appropriate to conditions)
- gloves (chemical and / or abrasive protection)
- eye protection
- respirators
- disposable overalls

Briefs and debriefs may include:

- can use SMEACS or similar format
- SMEACS:
 - Situation – what has happened.
 - Mission – what you need to do about it.
 - Execution – how you are going to do it.
 - Administration & logistics – what you need to take action.
 - Command and communication – who else needs to be involved, who needs to know about it etc
 - Safety

Communication may be by:

- briefings
- reports
- sitreps
- logs
- incident forms / records
- incident action plans
- site specific deployment plans
- discussion
- verbal directions
- hand signals
- information board
- using:
 - landline phone
 - mobile
 - computer
 - marine radio (VHF)
 - uhf
 - satellite phone
 - pager
 - facsimile

Stakeholders may include:

- incident management team
- aircraft operators
- marine vessel operators and crew
- logistics officers
- media
- public
- traditional owners
- government
- businesses
- team members

Oil spill response equipment

- containment:

may include:

- boom inflatable – plus v sweep boom
- recovery:
 - heavy oil transfer pump (and ancillary equipment)
 - oil recovery vessels
 - active skimmers
 - disk / drum skimmers
 - rope mops
- storage:
 - towable storage bladder
- other:
 - dispersant spray bucket and transfer pumps
 - shoreline flushing pump
 - marine radio (UHF, VHF)
 - correct use of sorbents

Pre-operational checks may include:

- equipment ‘in-test’ tagged and tested – electrical, slings, hoses
- maintenance checks
- pre-start and stop
- safety checklist
- fuels, fuel lines and oil
- battery electrolyte levels, wheels and tyre pressure
- air filters
- safety guards
- safety signs and barricades

Standard operational procedures

- procedures identifying safe and effective work method statements

Licensing requirements may include:

- state, territory and commonwealth legislation must be checked for high risk work and relevant licenses:
 - dogging
 - crane and hoist operation
 - forklift
 - confined spaces
 - 27 mhz and vhf marine radio equipment

Environmental implications may include:

- secondary contamination (decontamination station)
- waste (hot and cold zones)
- sensitive areas
- wildlife habitat
- flora

Unit Sector(s)

Marine pollution response.