



Australian Government

Department of Education, Employment and Workplace Relations

PRMCL14B Maintain a clean room' environment

Release: 1

PRMCL14B Maintain a clean room' environment

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency covers the skills and knowledge required for maintaining a 'clean room' environment. Clean rooms are specialist facilities in that the presence of dust presents a hazard to the safe and efficient operation of electronic and other sensitive equipment. Some clean rooms may be pressurised to reduce the amount of dust entering the room. Clean rooms may be used for specialised computer installations, computer equipment repairs, PABX units, manufacturing electronic components environments, laboratories and some sterile rooms for food manufacturing. Cleaning in a clean room environment is a specialised field of cleaning. This unit is intended as an introduction to this type of cleaning and focuses on the need to exercise caution in selection of cleaning methods to ensure safety of personnel and equipment.

The unit requires the ability to assess the extent of the cleaning task through knowledge of the characteristics of a clean room environment and by applying and understanding client requirements and company policies and procedures in order to perform the task. The selection of appropriate equipment, chemicals and methods is essential for performing the task safely and efficiently.

Application of the Unit

Not Applicable

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Not Applicable

Employability Skills Information

Not Applicable

Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

- | | |
|----------------------------------|---|
| 1 Assess area to be cleaned | 1.1 Assess area to be cleaned and review <i>work order</i> in accordance with <i>company requirements</i> and clarify any issues with <i>appropriate person(s)</i>
1.2 Identify <i>hazards</i> and control risks in the work site in accordance with <i>legislative, occupational health and safety (OHS)</i> and <i>company requirements</i>
1.3 Identify types of ' <i>clean room</i> ' surfaces to be cleaned by observation and assess potential for <i>damage to clean room equipment</i> in accordance with <i>manufacturers' specifications, work order</i> and <i>company requirements</i>
1.4 Identify <i>soil</i> types on <i>surfaces</i> by observation in accordance with <i>work order</i> and <i>company requirements</i>
1.5 Determine the size and usage pattern of the work site to ensure safety of <i>personnel</i> and efficient use of <i>equipment</i> and <i>chemicals</i>
1.6 Identify and report any pre-existing damage at the work site to the <i>appropriate person(s)</i> in accordance with <i>company requirements</i> |
| 2 Select equipment and chemicals | 2.1 Select and use suitable <i>personal protective equipment (PPE)</i> in accordance with <i>manufacturers' specifications, OHS</i> and <i>company requirements</i>
2.2 Select <i>equipment</i> and <i>chemicals</i> appropriate for the <i>work order</i> in accordance with <i>OHS</i> and <i>company requirements</i>
2.3 Check operational effectiveness of <i>equipment</i> in accordance with <i>manufacturers' specifications</i> and <i>company requirements</i>
2.4 Adjust <i>equipment</i> to suit operator's requirements in accordance with <i>manufacturers' specifications</i> and <i>OHS requirements</i>
2.5 Prepare <i>chemicals</i> in accordance with <i>manufacturers' specifications, OHS</i> and <i>company requirements</i> |
| 3 Prepare work site | 3.1 Confirm and reassess <i>hazards</i> in the work site and control risks in accordance with <i>legislative, OHS</i> and <i>company requirements</i> |

ELEMENT**PERFORMANCE CRITERIA**

- 3.2 Install appropriate *signage and barriers* to maximise public safety during the cleaning operation in accordance with *work order* and *OHS* and *company requirements*
- 3.3 Remove furniture and fittings that impede the cleaning operation in accordance with *work order* and *company requirements*
- 3.4 Plan cleaning procedures moving from the highest to the lowest point in the work site in accordance with *work order* and *OHS* and *company requirements*
- 3.5 Locate client approved power outlet(s) for electrical cleaning equipment prior to use in accordance with *work order* and *company requirements*
- 3.6 Identify any *work restrictions* affecting the completion of the *work order* instructions and advise promptly the *appropriate person(s)*
- 4 Clean work site
 - 4.1 Remove *soil* and clean all surfaces using appropriate *equipment, PPE, chemicals* and *cleaning technique(s)* in accordance with *work order, manufacturers' specifications* and *OHS* and *company requirements*
 - 4.2 Conduct all work in accordance with *manufacturers' specifications* and *legislative, OHS* and *company requirements*
- 5 Tidy work site
 - 5.1 Remove *signage and barriers* in accordance with *work order* and *OHS* and *company requirements*
 - 5.2 Dispose of all collected *soil* and *waste* in accordance with client specifications, *work order, manufacturers' specifications* and *environmental, legislative, OHS* and *company requirements*
- 6 Clean, safety-check and store equipment and chemicals
 - 6.1 Clean *equipment* and *PPE* in accordance with *manufacturers' specifications* and *environmental, OHS* and *company requirements*
 - 6.2 Safety-check *equipment* and *PPE* in accordance with *manufacturers' specifications* and *OHS requirements* and record any required maintenance in accordance with *company requirements*
 - 6.3 Store and maintain *equipment* and *PPE* to

ELEMENT**PERFORMANCE CRITERIA**

allow ready access and re-use in accordance with *manufacturers' specifications* and *OHS* and *company requirements*

6.4 Store *chemicals* in accordance with *manufacturers' specifications* and *OHS* and *company requirements*

Required Skills and Knowledge

Refer to Evidence Guide

Evidence Guide

EVIDENCE GUIDE

The evidence guide identifies the requirements to be demonstrated to confirm competence for this unit. Assessment must confirm sufficient ability to use appropriate skills and knowledge to maintain a range of different types of surfaces, fittings and sensitive equipment in a 'clean room' environment. Assessment of performance should be over a period of time covering all categories within the range statement that are applicable in the working environment.

Critical aspects of competency

- Accurate identification of the types of surfaces and fittings.
- Compliance with company and legislative requirements.
- Outcomes achieved in relation to customer work order and company requirements.
- Safe and efficient cleaning methods.
- Selection of appropriate cleaning equipment and chemicals.

Knowledge needed to achieve the performance criteria

Knowledge and understanding are essential to apply this unit in the workplace, to transfer the skills to other contexts and to deal with unplanned events. The knowledge requirements for this unit are listed below.

- Knowledge of the impact of dust, moisture, electrical current and magnetic fields on sensitive electronic equipment.
- Knowledge of range of cleaning equipment and chemicals suitable for using with sensitive equipment.
- Awareness of applicable legislation, regulations, codes of practice and industry advisory standards.
- Company management structure and reporting procedures.
- Company procedures and practices.
- Emergency response and evacuation procedures.
- Injury, dangerous occurrence and incident reporting.
- Knowledge and compliance with the correct handling procedures for using ladders.
- Knowledge of biological and viral control procedures.
- OHS legislation and procedures.
- Routes of entry and potential symptoms of exposure from chemicals.

Specific skills needed to achieve the performance criteria

To achieve the performance criteria, some complementary skills are required. These are:

- maintaining hard floor surfaces
- maintaining soft floor surfaces
- cleaning glass surfaces
- maintaining ceiling surfaces and fittings
- spot cleaning
- applying correct manual handling techniques
- communicating clearly and concisely using written and verbal modes
- customer service
- handling and disposal of chemicals safely
- handling and disposal of contaminated and toxic waste
- performing the mathematical calculations required for the dilution and mixing of chemicals as specified on product labels

- problem solving and critical analysis
- reading, interpreting and responding appropriately to directions and safety instructions in equipment manuals and MSDS and on chemical labels
- requesting advice or further information
- seeking and receiving feedback
- sourcing, organising and recording information
- working on an individual basis or as part of a team.

Resources required to assess this unit

The following resources should be available:

- access to a suitable work site venue
- access to suitable equipment and chemicals
- access to personal protective equipment
- access to equipment operating manuals and MSDS
- work order instructions, work plans and schedules and policy documents
- assessment instruments, including personal planner and assessment record book.

Gaining evidence to assess this unit

For valid and reliable assessment of this unit, the competency should be demonstrated over a period of time and be observed by the assessor.

The competency is to be demonstrated in a range of situations that may include customer/workplace interruptions and involvement in related activities normally experienced in the workplace.

Assessment of competency may be made through practical demonstration in the work environment or in a simulated work environment.

Key competency levels

There are a number of processes that are learnt throughout work and life that are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the key competencies, although others may be added.

Information below highlights how these processes are applied in this unit of competency.

- | | | |
|------------------------------|---|---|
| 1 Perform the process | 2 Perform and administer the process | 3 Perform, administer and design the process |
|------------------------------|---|---|

How can communication of ideas and information be applied?	2	Identify and communicate to team members, mechanical, chemical and equipment requirements in accordance with company policy, OHS and other legislative requirements.
How can information be collected, analysed and organised ?	2	Collect and analyse information from management and client to ensure correct applications are carried out.
How are activities planned and organised ?	1	Organise and prioritise work tasks to meet work order and company requirements.
How can teamwork be applied?	2	Share information about equipment, OHS, legislative requirements, techniques and team process to complete tasks safely and within designated timelines.
How can the use of mathematical ideas and techniques be applied?	1	Calculate area(s) to be cleaned and measure and carry out chemical applications.
How can problem-solving skills be applied?	2	Communicate with management and client to gain information to resolve problems.
How can the use of technology be applied?	1	Record data for future use such as stock control.

Range Statement

RANGE STATEMENT

The range statement links the required knowledge and organisational and technical requirements to the workplace context. It describes any contextual variables that will be used or encountered when applying the competency in work situations. It allows for different work practices and work and knowledge requirements as well as for differences between organisations and workplaces. The following variables are listed in alphabetical order and may be present for this particular unit.

Appropriate person(s) may include:

- clients
- colleagues
- managers
- person(s) in control of work site(s)
- supervisors.

Chemicals may include:

- acid cleaners

- alkaline cleaners
- neutral cleaners
- solvent cleaners.

'Clean room' is a specialised facility that may accommodate:

- electronic manufacturing environment
- laboratories
- PABX equipment
- specialised computer installation
- sterile food manufacturing environments.

Cleaning technique(s) may include:

- buffing
- damp mopping
- dust mopping
- spot cleaning
- steam cleaning
- surface wiping with anti-static, lint-free cloths
- vacuum cleaning
- vacuuming with crevice tool on hard to access surfaces.

Company requirements may include:

- access and equity policy, principles and practice
- business and performance plans
- client communication procedures
- client confidentiality procedures
- client service standards
- communication channels and reporting procedures
- company goals, objectives, plans, systems and processes
- company issued identification badge/card/pass
- company policy and procedures
- company service standards
- defined resource parameters
- dress and presentation requirements
- duty of care, code of conduct, code of ethics
- emergency response and evacuation procedures
- maintenance procedures for equipment and PPE
- OHS control procedures (e.g. health and safety plans, job plans, job safety analysis, risk assessments, safe operating practices/procedures, safe work instructions, work method statements, safe system of work statements)
- OHS policies and procedures
- personnel practices and guidelines
- policies and procedures relating to own role, responsibility and delegation
- quality and continuous improvement processes and standards
- records and information systems and processes
- rights and responsibilities of employees and employers
- training (induction, refresher and new skills) materials
- use of contractors
- work site access security clearance procedures.

Damage to 'clean room' equipment may include:

- damage caused by liquids getting into or moisture accumulating in:
 - electrical and other cabling
 - equipment casing
- electrostatic or electromagnetic contamination
- falling or airborne dust
- loosening of cables or wiring.

Environmental requirements may include:

- clean-up, containment and/or isolation
- company policies and guidelines
- environmental protection agency and government department regulations and guidelines
- hazardous materials handling
- local government regulations/bylaws.

Equipment may include:

- access equipment:
 - 'A' frame ladders
 - extension poles
- cleaning equipment:
 - anti-static duster
 - broom
 - bucket
 - buffing machine with brushes and pads
 - damp mop
 - dust mop
 - dust pan
 - garbage bin
 - glass cleaning equipment
 - lint-free, anti-static cleaning cloth
 - scourer
 - vacuum cleaner fitted with micron filters and bags
 - vacuum crevice tool
 - wheeled cleaner's trolley.

Hazards may include:

- allergic reactions to chemicals and/or equipment, including latex allergies
- biological waste
- bites and stings
- blood and blood-stained products
- broken glass and other sharp surfaces
- chemical containers and/or decanted chemical storage containers labelled incorrectly
- confined/restricted spaces
- contaminated clothing, chemicals and/or equipment
- damaged or inappropriate equipment
- dust and fibres

- electrical hazards arising from cables, electrical fittings (switches and lights) and untested electrical equipment
- environmental impact
- extremes of heat and temperature
- fatigue
- fire
- gas
- heights
- human waste (faeces, urine, vomit)
- inadequate lighting and ventilation
- infectious and zoonotic diseases e.g. scabies/Q fever
- inhaling chemical fumes
- leaks, spill, splash and spray
- manual handling techniques including awkward and repetitive postures
- mobile/vehicle hazards around plant and vehicles
- moving and/or unguarded machinery and equipment
- noise
- occupational violence and bullying
- poor manual handling techniques
- poor personal hygiene practices
- repetitive motion, force and vibration
- synergistic chemical reactions (hazardous incompatibility or reactivity)
- syringes or other sharps
- ultraviolet light
- underfoot conditions e.g. slippery, uneven and rough surfaces
- unrestricted people access
- waste and waste disposal
- work in isolated/remote environments.

Legislative requirements may include:

- Australian Standards, quality assurance and certification requirements
- award and enterprise agreements
- codes of practice
- national industry standards
- relevant Commonwealth/state/territory legislation and local government regulations that affect company operation:
 - anti-discrimination and diversity
 - availability of chemical registers/manifests
 - chemical controls
 - consumer protection
 - environmental protection issues
 - equal employment opportunity
 - freedom of information
 - industrial equipment certificates of competency or licences
 - industrial relations
 - OHS Acts and regulations
 - privacy
 - trade practices

- workplace consultative arrangements.

Manufacturers' specifications may include:

- equipment operational manuals
- instructional guides
- material safety data sheets
- other resources supplied by the manufacturer (such as laminated cards notices, wall posters)
- product labels
- safety instructions pre-printed on equipment.

Occupational health and safety* (OHS) requirements may relate to:

- allergic reactions (contact dermatitis, etc)
- communication devices for remote and isolated locations e.g. mobile phone, two-way radio, etc
- dermatotoxicological control and prevention measures
- emergency procedures for eye and skin contact, inhalation and ingestion of toxic substances
- hazard identification and risk assessment mechanisms
- hazard reporting
- health surveillance and monitoring (including blood testing)
- hierarchy of hazard control procedures
- injury, dangerous occurrence and incident reporting requirements
- keeping access ways clear from obstruction
- maintaining clear access ways
- maintenance procedures for equipment and PPE
- national industry standards/codes of practice
- OHS control procedures (e.g. health and safety plans, job plans, job safety analysis, risk assessments, safe operating practices/procedures, safe work instructions, work method statements, safe system of work statements)
- protection from hazardous substances, noise and dust
- protection of people in the workplace
- routes of entry and potential symptoms of exposure from chemicals
- safety training (induction and refresher)
- ultraviolet light
- up-to-date electrical test and tag compliance
- use of chemicals in accordance with labels
- use, storage and maintenance of equipment in accordance with manufacturers' specifications and equipment operating manuals
- use, storage and maintenance of personal protective equipment and clothing.

** Also known as occupational safety and health or workplace health and safety*

Personal protective equipment (PPE) may include:

- ear muffs/plugs
- gloves - non-permeable
- goggles
- high-visibility vests/clothing
- overalls and other protective clothing
- respirator

- safety glasses
- safety shoes
- splash-proof face masks
- sun protection
- tongs
- ultraviolet protection
- wet-work clothing.

Personnel may include:

- client's staff
- facility/building staff/management
- fellow workers (colleagues).

Rights and responsibilities of employees may relate to:

- confidentiality and privacy rights
- duty of care
- knowing the appropriate personnel for reporting purposes
- knowing the location of manuals and/or related documents
- knowing the terms and conditions of own employment
- knowing the workplace procedures
- protection from discrimination and sexual harassment.

Rights and responsibilities of employers may relate to:

- duty of care
- providing a safe environment free from discrimination and sexual harassment (see relevant state and Commonwealth anti-discrimination legislation)
- providing a safe workplace in accordance with OHS legislation, codes of practice, regulations and standards
- providing information and training in work tasks, OHS and other employment related matters
- the right to dismiss you if you (see the *Commonwealth Workplace Relations Act 1996*):
 - are negligent, careless or cause an accident
 - commit a criminal offence
 - commit acts of disloyalty such as revealing confidential information
 - use abusive language.

Soil types may include:

- dust
- litter.

Surfaces may include:

- bench tops/work stations
- equipment casing
- cabling
- ceilings
- fittings:
 - cameras
 - lights

- monitors
- skylights
- smoke detectors
- sprinkling systems
- furniture
- glass
- hard floor surfaces
- soft floor surfaces (special dust-catching carpets)
- vents and grills.

Waste may be either solid or liquid and include:

- chemicals past the expiry date
- obsolete equipment
- packaging
- soil
- used cleaning cloths
- used containers
- used or unused chemicals
- used/contaminated personal protective equipment.

Work order information may include:

- access to work site and egress points
- completion times/dates
- insufficient people to complete the work task(s)
- job requirements and tasks
- legislative requirements and local government
- OHS requirements and emergency response procedures
- resource requirements - equipment and chemicals
- specific client requirements e.g. relationships with other activities, dress and presentation requirements
- use of signage and barriers
- work schedules
- working in isolated and remote locations
- work site contact person(s).

Work restrictions may include:

- amount of cleaning anticipated
- client activity
- employee(s) level of literacy and/or communication skills
- faulty or inappropriate equipment
- site hazards
- skills of the work unit/team
- staffing resources
- time limitations.
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Unit Sector(s)

Not Applicable

Functional Area:

Functional Area: Elective. Cleaning Operations