Selection, Use and Maintenance of Respiratory Protective Equipment Procedure

Section 1 - Purpose and Scope

(1) This Procedure outlines the assessment of requirements for respiratory protective equipment (RPE) regarding purpose, selection, training, use and maintenance at the University of Queensland (UQ). It applies to all situations where a risk assessment requires a UQ worker to use RPE.

(2) For the purposes of this Procedure, the definition of UQ workers is broad – including staff, students, visitors, volunteers and contractors. The definition of UQ workers is provided in the Appendix.

(3) To prevent occupational diseases caused by breathing in contaminated air, RPE must be appropriate to the hazard/s present, suitable given the nature of the work and fit the face of the wearer. A suitable respirator that is correctly fitted to the user will minimise exposure to dusts, fumes, mists, gases, smokes, sprays and vapours.

(4) The requirements of this Procedure are intended to ensure that UQ meets its responsibilities in relation to RPE as outlined in the Work Health and Safety Regulation 2011. This Procedure must be read in conjunction with Personal Protective Equipment Procedure and the Use of Respiratory Protective Equipment Guideline. Collectively, these three documents outline UQ's respiratory protection program.

Section 2 - Process and Key Controls

(5) Organisational Units must identify and undertake risk assessments for respiratory hazards in the workplace. These are to be proportionate and relevant to the activities being undertaken and considering a reasonable estimate of potential exposures and physical form of airborne contaminants.

(6) Under the hierarchy of risk control, higher order controls should always be used before personal protective equipment (PPE), with the use of PPE always be considered in combination with more effective, higher order controls (see How to Manage Work Health and Safety Risks Code of Practice 2021).

(7) The following principles apply where RPE is determined to be an appropriate control measure, either in combination with other controls or as a stand-alone measure, through the risk assessment process or where stated in regulations:

a. People who are routinely required to use RPE should be screened for medical conditions that may impact their ability to wear RPE and a subsequent medical evaluation may be required.
b. UQ workers must be provided with appropriate RPE that suits the person, environment and work task.
c. When a tight-fitting respirator is to be used, UQ workers must be fit tested to the same make, model, style and size respirator that will be used.
d. UQ workers must be provided with information and training on the proper selection, use, fit, maintenance and storage of RPE.
e. Records on training, screening for relevant medical conditions, medical evaluations and fit testing must be maintained for each UQ worker, as required.

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Section 3 - Key Requirements

Risk Assessment

(8) To determine whether RPE is required, Organisational Units must identify potential respiratory hazards and conduct a risk assessment based on quantitative exposure assessments or a reasonable estimate of potential exposure given the contaminants' chemical characteristics and physical form. Consideration must also be given to:

a. the work activities undertaken;
b. environmental conditions;
c. recommendations in relevant Safety Data Sheets (SDSs);
d. requirements of hazard specific UQ procedures/guidelines (e.g. asbestos, Q fever);
e. local area requirements; and
f. requirements of external organisations (e.g. Queensland Health).

(9) Risk assessments must be completed in UQSafe.

Respirator Selection

(10) In deciding which kind of RPE to use, Organisational Units should consider the following factors:

a. Person - size, comfort, medical conditions that may impact safe use of RPE, compatibility with other PPE, prescription eyewear and cultural head dress.
b. Hazard - matching the RPE to the hazard.
c. Environment - temperature and humidity.
d. Nature of the work - length of time worn, physical work demands, potential contamination levels.
e. Recommendations from authoritative sources such as UQ policies and procedures, SDS, Codes of Practice.

(11) RPE compliant with AS/NZ1715:2009 Selection, use and maintenance of respiratory protective equipment (available via Standards Databases through UQ Library) is preferred. However, RPE that is compliant with international standards can be used where that standard provides an equivalent level of protection, e.g. an N95 respirator compliant with Occupational Safety and Health Administration (OSHA) Respiratory Protection Standard 29 CFR 1910.134.

Medical Evaluation

(12) People who are routinely required to use respirators should be screened for pre-existing medical conditions that may impact their ability to wear RPE, particularly chronic lung or upper respiratory conditions. When first issuing RPE to a worker, the supervisor, HSW Manager/Lead or Work Health and Safety Coordinator (WHSC) should ask the worker if they have any chronic lung or upper respiratory conditions that the worker believes will impact their ability to wear the RPE.

(13) If it is identified that a UQ worker has a medical condition that may impact their ability to wear RPE, a medical evaluation by their treating medical practitioner may be required. The UQ worker's Organisational Unit should provide the following information to the worker that can be taken to their treating medical practitioner to assist the medical evaluation process:

a. an example of the type of the respirator to be used;
b. duration and frequency of respirator use;
c. expected physical work effort;

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d. additional protective equipment and clothing to be worn with the respirator; and
e. temperature and humidity extremes that may be encountered.

(14) A written recommendation from the workers treating medical practitioner regarding their ability to wear the respirator should be provided to the UQ worker and their Organisational Unit, including any limitations on respirator use. A reassessment may be required when there is a change of circumstance that could affect the ability to wear RPE.

(15) If a medical evaluation determines that a UQ worker is unable to wear the respirator the Organisational Unit will investigate alternative arrangements e.g. use of a different type of respirator or alternative duties.

(16) It is the responsibility of each Organisational Unit to:

a. ensure UQ workers have been screened for pre-existing conditions that may impact their ability to wear RPE;
b. obtain any medical clearances required;
c. fund the associated financial cost; and
d. maintain records.

Respirator Fit Testing

(17) Tight-fitting respirators rely on a good seal against the wearer's face to provide protection. If there is not a good seal, contaminated air can leak in through gaps along the sealing surface of the respirator and be breathed in by the wearer. Fit testing measures how effectively a respirator is sealed against the face of a user and therefore whether it is providing the intended level of protection.

(18) UQ workers who are required to use tight-fitting respirators must be provided with fit testing to the same make, model, style and size respirator that will be used. Fit testing may be provided in-house by a competent person or may be outsourced to an appropriate external provider. The fit tester must have a certificate of completion indicating successful completion of the Australian Institute of Occupational Hygienist RESPFIT Respirator Fit Test Training or be able to demonstrate similar competency to the UQ Senior Manager, Occupational Hygiene and Specialist Services.

(19) To accommodate for fluctuations in supply chain availability and differences between respirator models provided by individual work areas, UQ workers should be successfully fit tested to at least two different models of respirator.

(20) Further information on fit testing protocol can be found in the Use of Respiratory Protective Equipment Guideline.

Training and Information

(21) UQ workers who wear respirators must be trained prior to initial use. The following elements should be included:

a. the role of RPE and its place within the hierarchy of controls;
b. capabilities and limitations of RPE;
c. routes of exposure and the types of airborne contaminants that may be present in the work area;
d. regulatory and local RPE requirements;
e. relevant sources of authoritative information e.g. hazard specific UQ policies and procedures, safety data sheets (SDS);
f. factors to consider when assessing if RPE will be used;
g. selecting RPE to ensuring it is appropriate to the person, task and environment;
h. fit-testing requirements for tight-fitting respirators;
i. how to inspect, put on, take off and conduct a fit check;
j. maintenance and storage requirements; and

k. recognition of medical conditions that might impact a user's ability to wear RPE.

Section 4 - Roles, Responsibilities and Accountabilities

Heads of Organisational Units

(22) The Head of Organisational Unit will:

a. ensure UQ workers have access to appropriate RPE and are provided with information and training on the use, maintenance and storage of RPE; and
b. provide the resources and time required for proper use, training, maintenance and storage of RPE.

Managers and Supervisors

(23) Managers and Supervisors will:

a. ensure UQ workers have been screened for pre-existing conditions that may impact their ability to wear RPE and obtain any medical evaluations required;
b. maintain records on training, fit testing, screening for relevant medical conditions and medical evaluations;
c. ensure tight-fitting respirators have been fit tested to the wearer and that fit testing is repeated as required;
d. ensure hazard identification, risk assessment, screening for relevant medical conditions and fit testing processes are undertaken;
e. ensure RPE in their work area is sufficient, suitable, in good condition and stored appropriately;
f. ensure fit testing is provided to UQ workers that are required to wear tight-fitting respirators; and
g. provide appropriate supervision, training and guidance.

UQ RPE Fit Testers

(24) UQ staff performing fit testing of respirators will:

a. have completed the RESPFIT fit tester competency training, or be able to demonstrate similar competency to the UQ Senior Manager, Occupational Hygiene and Specialist Services;
b. ensure the fit testing equipment is in good working order, properly set up and checked or tested before conducting the fit test, maintain and calibrate the fit test equipment in accordance with the manufacturer's instructions; and
c. maintain records of fit-testing and provide a completed wallet sized fit test card to each worker fit tested.

UQ Workers

(25) All UQ workers will:

a. adhere to the requirements of this Procedure;
b. participate in training, screening for relevant medical conditions, medical evaluations and fit testing as required;
c. wear RPE as provided and use it appropriately;
d. regularly inspect RPE and replace as needed; and
e. report any defective, inadequate or damaged RPE to their supervisor.

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Section 5 - Monitoring, Review and Assurance

(26) Heads of Organisational Units and Supervisors should regularly review the effectiveness of RPE particularly following incidents or near misses and after changes to processes, personnel, storage systems and physical changes in RPE products.

(27) HSW Managers and WHSCs will conduct regular inspections (at least annually) to review appropriate risk controls, including the appropriate use of RPE.

Section 6 - Recording and Reporting

(28) Organisational Units are to maintain records of risk assessment, fit testing, screening for relevant medical conditions, medical evaluations and training.

Section 7 - Appendix

Definitions

Term	Definition
Fit Testing	A method of ensuring a tight-fitting respirator is a suitable fit by detecting if air leaks through gaps between the respirator facepiece and face of the user.
Organisational Unit	A formal grouping of staff established to conduct a discrete set of activities within a functional area of UQ.
Personal Protective Equipment (PPE)	clothing or equipment designed to be worn by someone to protect them from the risk of injury or illness.
Qualitative Fit Test	A pass/fail test that relies on the ability of the wearer to taste or smell a sweet or sour test agent. This type of fit test can only be used on half-face respirators.
Quantitative Fit Test	Uses specialised equipment to numerically measure how much air leaks into a respirator. This type of fit test can be used on half-face respirators, full-face respirators, and powered air purifying respirators.
Respiratory Protective Equipment (RPE)	A type of PPE designed to protect the wearer from airborne contaminants, low oxygen environments or diving work.
Tight-fitting Respirator	Relies on a good seal between the respirator and the wearer’s face to provide protection. Including half-face disposable, half-face reusable, full-face reusable and tight-fitting powered air purifying respirators.
UQ Workers	For the purposes of this Procedure includes: • staff - continuing, fixed-term, research (contingent funded) and casual staff; • contractors, subcontractors and consultants; • visiting academics and researchers; • academic title holders, visiting academics, Emeritus Professors , adjunct and honorary title holders, Industry Fellows and conjoint appointments; • Higher Degree by Research students; and • volunteers and students undertaking work experience

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