SELF CONTAINED BREATHING APPARATUS (SCBA) GUIDELINES

November 2015

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1. PURPOSE

The purpose of this document is to provide guidance on the provision and utilization of Self Contained Breathing Apparatus (SCBA) for the purposes of moderate spill clean-up, monitoring toxic vapours or low oxygen levels in a work area. BA is NOT to be used to rescue personnel. BA can be used for clean-up or use in potentially hazardous atmospheres including those contaminated with asphyxiating, flammable or toxic substances and biological agents if deemed safe via a risk assessment to do so.

2. SCOPE

These guidelines apply to the use, maintenance and testing of SCBA on the Australian campuses of Monash University.

3. ABBREVIATIONS

BEIMS  Building Environment Information Management System
OH&S  Occupational Health & Safety
PPE  Personal Protective Equipment
SCBA  Self-Contained Breathing Apparatus
RTO  Registered Training Organisation

4. DEFINITIONS

A comprehensive list of definitions is provided in the Definitions Tool. Definitions specific to this procedure/guideline are as follows.

4.1 RESPIRATOR

A respirator is a protective device designed to prevent the inhalation of contaminated air.

4.2 SELF-CONTAINED BREATHING APPARATUS (SCBA)

SCBA is a portable respirator that supplies air from a source carried by the user. The compressed air passes through a regulator, is inhaled by the user, and then exhaled out of the system. SCBA must comply with AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716:2012 Respiratory Protective Devices.

5. SPECIFIC RESPONSIBILITIES

A comprehensive list of OHS responsibilities is provided in the document Occupational health and safety management at Monash University: OHS Roles, Responsibilities and committees procedure. The responsibilities with respect to implementing SCBA within an area are summarised below.

5.1 HEADS OF ACADEMIC/ADMINISTRATION UNITS

To ensure that a strategy is implemented if it is determined there is the risk of low oxygen, toxic vapours, gases or particulates within their unit/entity. This may include:

- Using MFB and external contractor as a response unit, or
• Implementing a BA spill response team

5.2 OH&S COMMITTEES
It is the responsibility of the Faculty/Division/Local OH&S committees to:
• Conduct a Risk Assessment to determine if BA is required and make recommendations to the Head of Department/Division/Dean/Director. If required.
• The Committee is responsible for the BA implementation strategy.
• Where deemed required, ensure that the minimum of four SCBA units are available and maintained.
• Consult and inform BA Co-ordinators of all decisions made concerning BA in the Faculty/Division.

5.3 SUPERVISORS
It is the responsibility of supervisors to:
• identify if there is the risk of low oxygen levels or toxic vapours within their work area; and notify this to their OHS Committee

5.4 SCBA COORDINATOR
It is the responsibility of the SCBA Coordinator to:
• Risk Assess any BA response prior to entry, and coordinate the entry and exit,
• maintain current lists of SCBA trained personnel;
• Assess the suitability of all BA personnel prior to entry into a hazardous environment
• coordinate drills for their SCBA personnel in mock scenarios based on hazards in area to maintain training qualifications and experience;
• Implement BA response communications with their teams
• coordinate repair of SCBA units through Facilities & Services.
• Coordinate any additional BA response Personal Protective Equipment required where BA is deemed necessary.
• Ensure BA team members with qualities that would inhibit safe BA response are not engaged in BA operations including:
  • Unfit to perform BA response,
  • Have facial hair or long hair that would inhibit normal operation of the BA
  • Are not adequately dressed for the response
  • Are not visually impaired when adorning BA

5.5 SCBA PERSONNEL
It is the responsibility of those qualified to use SCBA to:
• respond promptly to a BA call out
• work within their level of competence;
• attend training as required;
• report any deficiencies in the SCBA to their SCBA coordinator; and
• report any changes in their health status which could affect their use of SCBA to OH&S and SCBA Coordinator.

5.6 FACILITIES AND SERVICES DIVISION

It is the responsibility of the Facilities and Services Division to:

• maintain all SCBA units through a scheduled inspection process in accordance with AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716:2012 Respiratory Protective Devices; and

• repair or purchase SCBA units (including installation and/or relocating) via requests made through the Building Environment Information Management System (BEIMS). All costs are to be charged back to the area requesting the service.

6. RISK MANAGEMENT OF AREAS REQUIRING BA RESPONSE

6.1 IDENTIFICATION OF AREAS REQUIRING SCBA

The OHS committee in conjunction with Supervisors must document via a Risk Assessment the control strategy for emergency clean up response where the any of the following are used:

Dangerous Goods and Hazardous substances, Poisons, Cytotoxics, Carcinogens and Asphyxiates or low oxygen potential areas.

Where BA is implemented the Faculty/Division must document safe work practices in using BA.

• Where BA is deemed required, but not implemented, the Faculty/Division should have a process in place to notify the MFB in an emergency and coordinate emergency clean up through an authorised external contractor.

6.2 TRAINING AND STAFF PROTOCOLS

Monash University staff will be considered appropriately qualified to use SCBA provided they:

• Complete the Monash SCBA training and usage Health Questionnaire provided by OH&S on application for training:

Complete SCBA training provided by Monash University or accredited through another RTO;

• Staff or students with SCBA qualifications obtained outside the university can be accepted as qualified users of SCBA upon verification of completed training, currency of the qualification with
demonstrated skills maintenance and completing the Monash SCBA training and usage Health Questionnaire;

Attend a skills maintenance session every 12 months and a skill maintenance record is logged by the qualified training provider;

Renew their training every two years if the annual skills maintenance is not maintained.

6.3 LOCATION OF SCBA UNITS

- SCBA should be ideally located in an accessible areas with four BA mounted to a wall.
- Where practicable, spare cylinders should be kept in close proximity and alternate SCBA unit locations identified and documented as backup equipment.
- SCBA should be stored and secured so that unauthorised use or tampering is prevented.
- All SCBA locations should be clearly marked in green and white in accordance with the requirements of AS 1319:1983 Safety signs for the occupational environment.

6.4 NUMBER OF PERSONNEL

The minimum number of staff required to respond to an adverse event is four (4) trained personnel plus one (1) other who is available for contacting Emergency services (0-000) within an area of potential risk.

Any variation to the number of personnel should be risk assessed by the SCBA Coordinator and discussed with the Head of Department/Dean/Director before conducting a response.

6.5 COMMUNICATION REQUIREMENTS

- The Faculty/ Division should have a communication strategy in place to contact all BA representatives upon requiring an emergency spill cleanup where BA is deemed necessary.
- The BA Coordinator is responsible for implementing BA response communications.

6.6 PRE & POST OPERATION CHECKS

All respiratory protective equipment should be inspected by the operator as per checklist in appendix 1 before and after it is used.

The check should encompass:

- Breaks or kinks in face piece or liner
- Adequate seal around face (inhale with face piece on)
- Adequate pressure in the cylinder (80% full on gauge)
- Operation of air feed (sharp breath in with face piece on).

6.7 ENTERING A HAZARDOUS ENVIRONMENT

- Entry into confined spaces must comply with the Facilities and
Services permit to work system for confined spaces.

- An assessment of the severity of the hazard and the appropriateness of the use of SCBA must be undertaken by either the Safety Officer or SCBA Coordinator.

- It is essential that whenever SCBA equipment is used that both a buddy system is implemented and back-up staff are standing by.

- If the hazardous event requiring SCBA is uncontrolled or there is a risk to the local population (i.e. fire, explosion or toxic vapours) the building must be evacuated (including SCBA personnel) and emergency services contacted.

- SCBA should be used in any situation where low oxygen levels are suspected or when airborne contaminants are unknown.

- Working in confined spaces presents unique problems which may include access and egress difficulties, the possibility of an oxygen deficient environment and the greater likelihood of high concentrations of contaminants. Safe entry requirements are covered in Monash Universities confined spaces permit to work requirements. The Hazard management of confined space entry should include emergency situations and recovery of personnel.

- The minimum number of staff required to respond to an event in the use of SCBA is four (4) trained personnel plus one (1) other for contacting Emergency services.

- The buddy system will consist of minimum two personnel in the hazardous environment one completing the tasks required and one assisting the process.

- The back-up team should consist of at least two SCBA trained and fitted personnel standing by monitoring the situation. The back-up team should be:
  - continuously supervising of those in the hazardous environment, either directly or with the aid of a signalling device
  - able to render assistance if the need arises.
  - constantly monitoring the SCBA air supply and time in the hazardous environment.
  - able to contact emergency services or first aid personnel if required.

- Prior to the back-up team assisting those who have entered an area, a third party should be available to contact emergency services or raise the evacuation alarm.

6.8 EXITING A HAZARDOUS ENVIRONMENT

- The residual level of hazard in the environment should be assessed
by those using the SCBA under guidance from the appropriate personnel. These personnel must be able to determine that all risks have been eliminated or reduced to allow re-entry into the area by the local population.

- Until all risks have been eliminated or reduced to allow entry without SCBA the area should remained isolated.

Once the area has been deemed safe an all clear may be given to all other occupants by either the emergency services if in attendance, by the SCBA coordinator or the safety officer.

- Ensure that all post operational checks of equipment and cleaning of equipment occurs
- Any contaminated clothing or equipment should be disposed of or decontaminated as per the Material Safety Data Sheet or Safe Work Instructions.

6.9 POST INCIDENT DEBRIEF AND NOTIFICATION

Following an event where SCBA has been used the following should occur:

- A debriefing of the SCBA team and other personnel involved including a review of the SCBA team’s procedures.
- A Hazard / Incident report must be completed, and an investigation into the event and its causation should take place involving relevant parties e.g. Health & Safety Representative and Safety Officer. The investigation should include a review of current hazard controls to prevent the incident from re-occurring.
- Raise a BEIMS request to Facilities and Services to service the units used.
- The event, including corrective actions should be discussed at the next Faculty/Division/local OHS&E committee meeting

6.10 CLEANING SCBA

Users should be trained in cleaning and disinfection procedures.

Cleaning may be performed in a number of ways:

- Isopropanol wipes may be used to clean and disinfect the face mask area.
- The respirator can be washed with mild dilute detergent in warm water using a soft brush, thoroughly rinsed in clean water, and then air-dried in a clean place. Care should be taken to prevent damage from rough handling. This method is an accepted procedure for a small respirator program or where each worker cleans his or her own respirator.
- After cleaning, an anti-fog preparation may be applied to lenses and visors.
- Store face piece in a plastic bag to keep free of dust.
6.11 MAINTENANCE OF SCBA

SCBA need to be maintained in accordance to AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment and AS/NZS 1716:2012 Respiratory Protective Devices.

- Standard servicing of the SCBA units is conducted by the Facilities and Services Division; any unscheduled maintenance (e.g. following an event) should be lodged as a BEIMS request.
- Unit housings should be fitted with a safety tie or device to identify tampering, if a safety tie is broken the Facilities and Services Division should be contacted to check and service the unit and the safety tie or device replaced. Padlocks are not to be used to secure SCBA units.
- Cylinders shall be recharged before the contents have dropped to below 80% of full working pressure. Cylinders with less than 80% full pressure should not be used.

7. PURCHASE OF SCBA

SCBA units are to be acquired through a BEIMS Request to the Facilities and Services Division. All requests are to include details of the location where the unit is to be to be mounted. The cost of units and mounting is the responsibility of the area requesting the SCBA unit.
8. RECORDS

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<th>Record to be kept by</th>
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<th>To be kept for:</th>
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<td>Academic/administrative unit</td>
<td>Pre &amp; post operation checks</td>
<td>5 years</td>
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<td>Training records of training provided by unit/entity, including:</td>
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<td></td>
<td>• Attendees</td>
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<td></td>
<td>• Short description of training content</td>
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<tr>
<td>Facilities &amp; Services Division</td>
<td>Risk/hazard assessments</td>
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<td>Hazard/Incident reports</td>
<td>Indefinitely</td>
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<td></td>
<td>Records of regular maintenance</td>
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9. COMPLIANCE

These guidelines are written to meet the requirements of:

9.1 LEGISLATION

Occupational Health and Safety Act 2004 (Vic)

9.2 AUSTRALIAN/NEW ZEALAND STANDARDS

AS 1319:1983 Safety signs for the occupational environment

AS/NZS 1715:2009 Selection, use and maintenance of respiratory protective equipment

AS/NZS 1716:2012 Respiratory Protective Devices

10. REFERENCES

10.1 MONASH UNIVERSITY OHS DOCUMENTS

OHS Roles, Responsibilities and Committee Procedure

Work Permits

OHS Risk Management at Monash University

11. FURTHER INFORMATION

For further information contact your OHS consultant/advisor or Occupational Health & Safety by phone on 990 51016 or by email on ohshelpline@monash.edu
### 12. DOCUMENT HISTORY

<table>
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<th>Version number</th>
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<tr>
<td>2</td>
<td>November 2012</td>
<td>Guidelines for the Provision &amp; Utilisation of Self-Contained Breathing Apparatus (SCBA), v.2</td>
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<td>2.1</td>
<td>July 2015</td>
<td>Updated hyperlinks throughout to new OH&amp;S</td>
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<tr>
<td></td>
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<td>2. Reference to MFB in purpose statement</td>
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<td>3. Added Compliance section.</td>
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## APPENDIX 1: SCBA PRE & POST OPERATION TESTING CHECKLIST

**Pre & Post operation checks:**

### 1. High Pressure test

- a) Turn on cylinder valve
- b) Ensure face air release valve is closed
- c) Observe pressure
- d) Turn off Cylinder valve
- e) Wait 1 minute
- f) Recheck Cylinder pressure

If no pressure difference passes test

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### 2. Low level air pressure warning test

- a) Ensure cylinder is off
- b) Twist face air release valve to open
- c) Watch gauge drop to red zone
- d) Listen for whistle at the red zone

If Whistle system passes test

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### 3. Visual inspection of unit

- Look for any signs of misuse or tampering
- Look for any signs of broken or corroded fittings on head strap:
  - a) breaks or tears;
  - b) loss of elasticity;
  - c) broken or malfunctioning buckles or attachments; and
  - d) excessively worn serrations on the head harness which may allow the face piece to slip.

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Look for any signs of broken or corroded fittings on inhalation valve, exhalation valve:

- a) detergent residue, dust particles, or dirt on valve or valve seat (may be cleaned with soap and water);
- b) cracks, tears, or distortion in the valve material or valve seat; and
- c) missing or defective valve cover

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In the case of full face piece SCBA, valve assemblies should be tested after removal and replacement of valves.

Do not use any SCBA unit which has any visible fault. Isolate SCBA Unit and ensure repair occurs through Facilities and Services.

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