Powered Air Purifying Respirator (PAPR) System User Guidance Document

I. Introduction:
The purpose of this document is to provide guidance to medical staff that may need to enter a contaminated work area which requires the use of a Breath Easy™ Turbo Powered Air Purifying Respirator (PAPR) system. This document should be used as a supplement to annual respirator training required for medical staff that have been identified by Occupational Health Services (OHS) and Hospital Epidemiology and Infection Control (HEIC) for respirator use.

II. Training Requirements:
PAPR training is required initially and annually thereafter. Only medical center employees that have received proper training are allowed to use a PAPR. Training is provided by OEH&S.
- PAPRs do not supply oxygen and should not be used in atmospheres that are oxygen deficient or immediately dangerous to life and health (IDLH).
- The battery must be kept charged. PAPR maintenance and battery charging are provided by Materiel Management. Batteries lose ~2% of their charge per day when not in use and should be maintained on trickle charge.
- Prior to use, visually examine the condition of the protective hood, head suspension, face-shield and breathing tube. In addition, ensure that the proper cartridges are in place and securely mounted (Note: remove tabs from ends of cartridges when ready to use).

III. Breath Easy™ Turbo PAPR System Assembly

a. Attaching Cartridges:
If not already attached (Figure 1), cartridges should be connected in the following manner.
- Remove screw caps from all 3 cartridges and place caps back in distribution bag.
- Screw all 3 cartridges into each of the 3 threaded inlets, careful not to over tighten and distort seal.

Figure 1 PAPR System without cartridges  Figure 2 PAPR System with cartridges
b. Connect Battery:
   - Take the three pronged plug that is already attached to the PAPR system and plug it into the top of the battery (Figures 3 & 4).

![Figure 3](image1.png)  ![Figure 4](image2.png)

Figure 3  Figure 4

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c. Flow Check:
   Prior to entering into a contaminated area, a flow check should be performed to ensure the PAPR system is providing a minimum of six cubic feet per minute (cfm) of air flow.
   - Insert the end of flow tube into the PAPR outlet (Figure 5).
   - Connect the battery to the PAPR and turn on. Green color indicates unit is on.
   - If the float ball fails to move past the 6 cfm as indicated on the flow tube, insufficient air flow is being provided (Figure 6). If this occurs, request another unit from Materiel Management.

![Figure 5](image3.png)  ![Figure 6](image4.png)

Figure 5  Flow meter connected to PAPR system outlet  Figure 6  Float ball is above 6 cfm arrow

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d. Connecting the Breathing Tube to the PAPR system:
   - Slide the black rubber end of the tubing (with hose clamp) over the PAPR outlet (Figure 7).
   - Finger tighten clamp and verify that the breathing tube is secured to the PAPR unit outlet (Figure 8).

![Figure 7](image5.png)  ![Figure 8](image6.png)

Figure 7  Figure 8
e. Connect the Breathing Tube to the PAPR Hood:
   - Connect the hose end to the white adapter on the protective hood (Figure 9).
   - It should make a clicking sound as it locks into place (Figure 10).

IV. Donning Equipment:

a. Belt
   - Attach the battery pack to the belt.
   - Place the PAPR against your lower back with the breathing tube extended upward. The battery pack can be placed on the side which least impedes workflow.
   - Fasten the belt around your waist at the front so the PAPR rests comfortably and securely against your lower back.

b. Protective Hood
   - To achieve best fit, the head cover should be worn with the head band around your forehead and the straps in the top of the head cover in contact with the top of your head (Figure 11).
   - The elasticized edge of the face seal should come into contact with your face under the chin and along the cheeks.

V. Cleaning Procedures

- Upon removal, the wearer returns the PAPR system unit and PAPR protective hood to Materiel Services. Materiel Services must disinfect the non-disposable pieces of equipment on the PAPR system unit (i.e. breathing tube, battery, cartridges, PAPR motor) using CaviCide® wipe pads, or equivalent surface disinfectant product. PAPR protective hoods are disposable and should be thrown away.
- Once the non-disposable pieces of equipment are wiped down, Materiel Services places the PAPR system back on the respiratory cart with a new PAPR protective hood.