

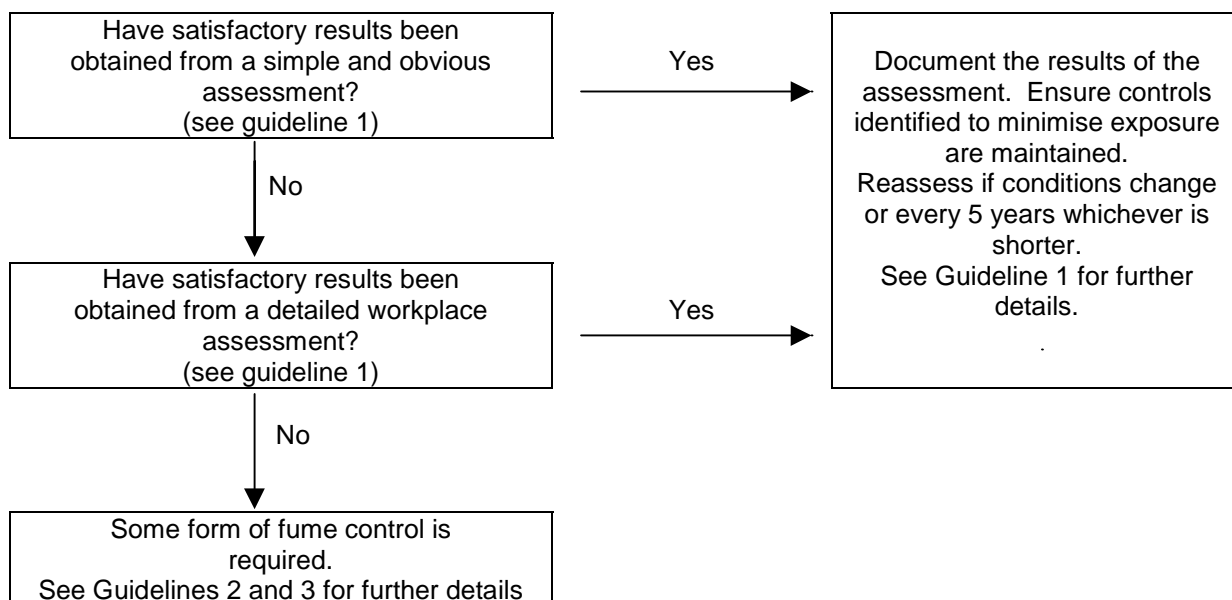
FUME MINIMISATION GUIDELINES

GUIDELINE 10:

OXY-FUEL CUTTING

An employer has a duty to ensure that a suitable and sufficient assessment is made where there is potential for exposure to hazardous substances.

It should be noted that in tests conducted under still air conditions, breathing zone fume from oxy-fuel cutting usually exceeds the recommended levels (see Figure 1). No special measures may be necessary to protect the operator provided clean air movement is greater than 0.5 m/s across the operators breathing zone. Accumulation of fumes in the workshop must be prevented by general ventilation.



Steps To Reduce The Effect Of Fumes And Gases

- **Process Alternatives**

- 1) Consider guillotining, plasma cutting, mechanical cutting or water jet cutting.

- **Process Modifications**

- 1) Arrange cutting to reduce operators exposure as shown in Figure 3. This also reduces fatigue and back problems.
- 2) Oxy-fuel cutting is easily mechanised and readily automated. Guide wheels are available for manual cutting torches.

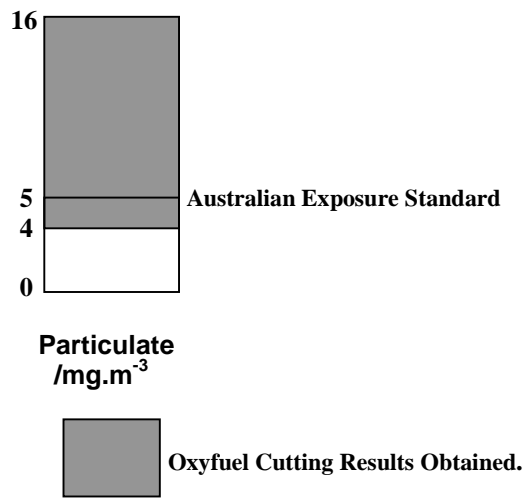


Figure 1. Oxy-fuel cutting fume production at the breathing zone under still air conditions compared to the regulations.

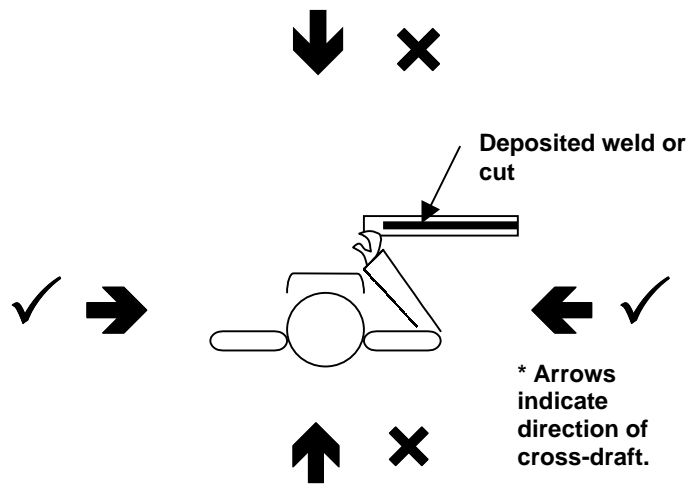


Figure 2. Preferred and non - preferred direction of cross draft for breathing zone ventilation.

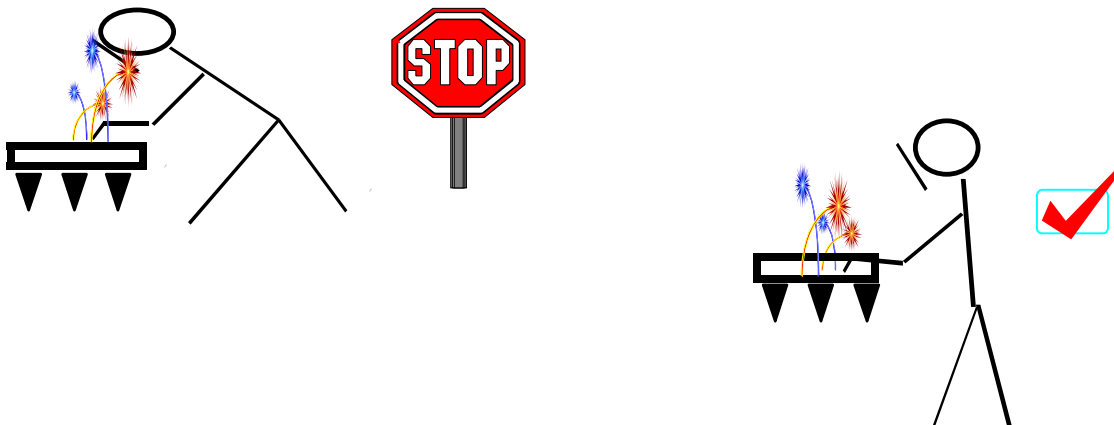


Figure 3. The welder's head should not enter the visible fume plume.