

DEVELOPMENT OF A HOODED LOW PROFILE FILTER SELF-RESCUE DEVICE MEETING NIOSH CBRN CRITERIA

Robin Howie¹, Duncan Wood²

¹) Robin Howie Associates, Edinburgh

²) Trilateral Group Ltd., London

NIOSH has published a standard for hooded filter devices for self-rescue in CBRN situations. However, a number of available such devices are effectively too bulky to be carried easily on the person or to be stored in the necessary numbers in locations such as underground trains, aircraft or school classrooms.

The NIOSH criteria are more stringent than those specified in corresponding CEN standards such as EN 405 and some criteria also have to be met under more stringent test conditions than specified in the CEN standards, e.g. gas capacity tests are carried out at 64 +/- 10 litres/min, 25 +/- 5 °C at 25 +/- 5 and 80 +/- 5 % relative humidity. In addition, all classes of device must meet a 5 min minimum breakthrough at 100 +/- 10 l/min at 25 +/- 5 °C at 50 +/- 5 % relative humidity.

The presentation will describe the further development of an EC marked low profile hooded device to meet the NIOSH CBRN criteria and the potential for a trade-off to further reduce the profile.