

## ISRP 2000 abstract

Presenter/author	Title	Abstract
<b>Bromwich, D.</b> Senior lecturer, School of Environmental Engineering, Griffith University, Qld, AUSTRALIA	<b>Chemical Permeation through Breathing Lines</b>	In many tasks using airline respiratory protection, the Breathing Lines run along the ground and in some cases they are contaminated by chemicals these will eventually enter the airline. The question is bow much and after what time. The permeation of chemicals through the breathing lines should be unaffected by the air pressure in the lines, but driven by the chemical gradient through the airline. A mathematical model of the process has been developed and a simple test to measure the permeation rate, based on this model, is presented. Experimental data demonstrates that the permeation process can be quite complex with a moving solvent front followed by near constant permeation. The implications of this data in the selection and use of breathing apparatus are explained.