

# **Responding to an Employers Challenges to Simulated Workplace Protection Factor Study Protocol**

**Nicole McCullough**

**Presented by:**

**Nicole Vars McCullough, PhD, CIH**

**3M Personal Safety Division**

**3M Center, 235-2E-91 | St. Paul, MN 55144 USA**

**Office: 651 575 8294 | Fax: 651 737-5247**

**nvars-mccoullough@mmm.com |**

In 2006 the United States (US), Occupational Safety and Health Administration (OSHA) assigned powered and supplied air (P&SA) respirators a protection factor of 25 per the respiratory protection regulation 29 CFR 1910.134. For P&SA respirators utilizing full hoods or helmets, the employer can use an assigned protection factor (APF) of 1000 providing the manufacturer can substantiate this claim with either simulated workplace protection factor (SWPF), workplace protection factor (WPF) data or equivalent data. One example of a SWPF study that OSHA has cited is the “ORC” study which was published in 2001 and included a number of P&SA respirator models. Models introduced since 2001 were not included in the study and certain manufacturers have generated their own data to substantiate the claim of an APF of 1000 for applicable P&SA respirator systems. Several employers questioned certain aspects of the newer protocol and resulting data with regards to how representative the exercises are of worker activity, the effect of certain other personal protective equipment and if the length of time the system is worn would affect the SWPF study results. The results of testing to explore these questions will be shared with regards to one example of an SWPF protocol.