

Physiological Evaluation of Air-Fed Ensembles - FY12 (927ZKRF)

Objective

The primary objective of this study is to evaluate the metabolic and respiratory responses of wearers of air-fed ensembles at rest and during low- and moderate-intensity exercise on a treadmill. Findings will be provided to the PSD Branch in support of module development.



Applicable standards

- NFPA 1991-2005
- DOE-STD-1167-2003
- EN1073-1:1998

Key Partners

- PSD Branch

Stakeholders

- Manufacturers
- Wearers



Project Scope

Men and women wore two different manufacturer's air-fed ensembles and one 2-piece SAR while inhaled gas concentrations, pressures, metabolic and temperatures were monitored continuously at rest and during exercise. ABMS testing was also conducted on ensembles.

Milestones FY12

- Draft manuscript by 2Q FY12
- Project will be completed 4Q FY12

Outputs

- Presentation at 2011 AIHCE
- Presentation at NPPTL Stakeholder's Meeting
- Published manuscripts in peer-reviewed journals (0 to date)

Outcomes

- Results incorporated into air-fed ensembles module to be proposed for Title 42 CFR Part 84
- Outputs will be cited by other air-fed ensemble researchers

Updated: 4 April 2012