

Ultrasound in Respirators

FY 12 (927ZJPL-4)

Objective

- Evaluate the potential for ultrasound-based techniques to provide continuous, real-time information on respirator fit/leakage.
- Evaluate applicability of ultrasound measurement to assessment of respirator fit

Applicable Standards related activities

- Update to 42 CFR Part 84
- Potential ANSI/ASTM application

Key Partners

- PPT R&D
- NPPTL TRB and TEB
- R2P Partners

Project Scope

Major tasks:

- Complete design, construct and characterize ultrasound data acquisition system for use on respirators while worn
- Characterize ultrasound leakage associated with individuals wearing respirators and correlation with fit

Deliverables- FY12

- Prototype and design specifications
- Report on correlation of ultrasound leakage and its correlation with respirator fit

Outputs

- Understand the potential of ultrasound-based techniques to provide information on factors contributing to work place protection factors

Updated: 5 Apr 12