Design and Performance Criteria of Mine Rescue Ensembles – FY12 (927ZKRE)

Objectives

Develop appropriate design and performance requirements for ensembles worn by mine rescue teams during emergency response. Establish best practice / guidance documents and produce recommendations for standards for mine rescue ensembles.

Applicable Standards / Regulations

- MINER Act of 2006
- 30 CFR Part 49 - Mine Rescue Teams
- 42 CFR Part 84 - Respiratory Protective Devices
- NFPA Standards on Protective Clothing and Equipment
- ASTM /AATCC Standards

Stakeholders

- Mine Rescue Teams
- Mine Operators
- Equipment Manufacturers
- Government Agencies

Key Partners

- MSHA
- Mining Technology and Training Center
- Walter Energy
- Murray Energy

Project Scope

- Identify the specific hazards and use conditions related to mine rescue ensembles
- Determine the performance properties needed
- Select available test methods
- Establish design and performance criteria for ensembles including integration and interoperability

Milestones FY12

- Q1 Award the contract, purchase materials, ship materials for testing, initiate Phase-I bench-scale testing
- Q2 Address external peer review comments, submit revised protocol to ADS for approval, receive Phase-I data & analyze
- Q3 Complete the Phase-I bench-scale testing & analysis of the data, initiate the Phase-II thermal manikin testing
- Q4 Analyze the Phase-I and II data & draft a manuscript

Outputs

- Presentations at conferences (1)
- Poster presentations at conferences (4)
- Manuscripts in peer-reviewed journals (none to date)

Expected Outcomes

- Mine rescue teams use project outputs to select and use ensembles
- Mine rescue ensemble manufacturers use project data to improve project designs
- Consensus standards development organizations, government agencies and professional organizations use recommended performance requirements to develop standards and / or guidance documents