

Design and Performance Criteria of Mine Rescue Ensembles – FY13 (927ZJGZ)

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 and NIOSH/OMSHR
- 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 FY13

- Q1 Ordered samples for Phase-II, prepared a review paper for a peer-reviewed journal, initiated Phase-II testing
- Q2 Continued data collection for Phase-II, prepare proposal
- Q3 Complete Phase-II testing, analyze data, prepare a journal paper, prepare Phase III proposal and submit
- Q4 Address reviewer comments and submit paper to a journal and proposal to HSRB review

Outputs

- Presentations at conferences (2)
- Poster presentations at conferences (4)
- Manuscripts in peer-reviewed journals (1 in eClearance and 1 in preparation)
- NIOSH guidance document

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
- Other researchers utilize the findings to initiate research on more effective healthcare worker personal protective ensembles.

Updated: 04 April 2013