

Press Release

Alpha Foundation Awards \$3.1 Million for Research on Targeted Topics in Mining Safety and Health

June 4, 2018

Lenoir City, TN- The Alpha Foundation for the Improvement of Mine Safety and Health has announced approximately \$3.1 million in new awards to address critical topics of priority interest. The research projects are directed towards fulfilling the Foundation's mission to improve mine safety and health through funding research and development projects by qualified academic institutions and other not-for-profit organizations.

The Foundation was established as part of a non-prosecution agreement entered in December 2011 by the United States Attorney's Office for the Southern District of West Virginia, the United States Department of Justice and Alpha Natural Resources, Inc. and Alpha Appalachia Holdings, Inc. Pursuant to that agreement, Alpha agreed to establish an independent foundation with \$48,000,000 to fund projects designed to improve mine safety and health.

The Foundation's scope covers all mining sectors including both underground and surface mining and is centered on four main focus areas: 1) Health and Safety Interventions; 2) Mine Escape, Rescue and Training; 3) Safety and Health Management and Training; and, 4) Injury and Disease Exposure and Risk Factors.

In the most recent grant cycle, thirteen projects covering eight priority topics were selected from 44 submitted proposals. The project titles and lead institutions are listed below:

<u>Topic</u>	<u>Title</u>	<u>Organization</u>
Understanding the Role of Overburden Mechanics in Pillar Design and Global Ground stability	A Practical, Mechanics-based Approach to Pillar Design	West Virginia University
	Fundamental Investigation into Pillar Design and Global Stability by Integrating Pillar Load and Opening Convergence Response	University of Kentucky
	Numerical Modeling of Overburden and Pillar Mechanics for Determination of Global Ground Stability in Underground Coal Mines	Colorado School of Mines

Evaluation of Current Seal Design Criteria	Analysis of Coal Mine Seal Integrity from Explosively Driven Projectiles	Missouri University of Science & Technology
Innovative Methods of Methane Detection Near the Face and De-energizing the Longwall Equipment	Control of Hazardous Gas Emissions to Longwall Face and Bleeder System: Laboratory Experiments, Modeling and Field Monitoring	Penn State University
	Methane Watchdog Network - A Cost Effective Approach to Longwall Methane Monitoring and Control	West Virginia University
Proof-of-Concept Development of Explosion Permissible Sensory or Robotic Equipment	PoroSense: An Intrinsically Safe, Distributed Fiber-optic Gas Sensing Platform for Underground Mines	Virginia Tech
Using Refuge Alternatives as a Base of Operations	Investigation of Improved Communication from Portable Refuge Alternatives to Facilitate Mine Escape and Rescue	Rebuilding Their Future Foundation
Examination of the Relationships between Mine Environment Exposures and the Development or Exacerbation of Asthma and COPD	Asthma- and COPD-associated Inflammation Induced by Rock Dust	University of the Pacific
	Evaluation of Silicosis, Asthma and COPD among Sand and Gravel and Stone Surface Miners	Michigan State University
	Evaluating a Virtual 'Community of Practice' in Pneumoconiosis Mortality Hotspots in the United States	University of New Mexico
Identification of Mining Jobs and Operations with High Rates of Work-related Musculoskeletal Disorders (WMSD), including the Evaluation of the Effectiveness of Measures	Identifying and Assessing Risks Factors Associated with Musculoskeletal Disorders within Stone and Sand and Gravel Mining Operations	Indiana University-Bloomington

Intended to Reduce or Prevent These Disorders		
Other Topics	Assessing Noise Exposures, Hearing, and Risk of Injuries Among Miners	University of Michigan

One of the objectives of this solicitation was to engage new research teams in Alpha Foundation projects. Twelve new Principal Investigators and five organizations that had not previously received Alpha Foundation grants are represented in the above list.

Since the Foundation’s formation, over \$29 million in grants have been made for 73 projects carried out by 33 different organizations.

For additional information about the recently awarded grants, the complete Alpha Foundation research portfolio, or the Alpha Foundation in general, visit www.alpha-foundation.org or e-mail grants@alpha-foundation.org .