



for the Improvement of Mine Safety and Health, Inc.

The Alpha Foundation is pleased to present its 2017 Annual Report.

The report provides an update on the progress made in pursuit of the Foundation's mission to improve mine health and safety through funding research and development projects by qualified academic institutions and other not-for-profit organizations.

### **Grantmaking Summary**

Since its beginning in 2011, the Alpha Foundation has provided 58 grants to 29 different organizations totaling just under \$23 million. These grants address the four major focus areas of the Foundation, specifically:

- Safety and Health Interventions
- Mine Escape, Rescue & Training
- Safety & Health Management & Training
- Injury & Disease Exposure & Risk Factors

In 2017, the Foundation made grants through three solicitations:

#### **AFC417, Holistic Mining Safety and Health Research Efforts**

Prior to this solicitation, the Foundation focused its grant funding on single investigator research that sought to attract well-qualified experts to address a particular aspect of mining health and safety concerns. While this approach is preferred for narrowly focused research agendas, the Foundation sought to address broader problems that require multidisciplinary efforts that lead to a holistic solution. Proposed projects were required to present a cohesive, multidisciplinary approach, incorporating a blend of engineering and health science along with behavioral science and training. Three proposals from different organizations were selected for funding in November 2017.

#### **AFC518, Technology Development**

This solicitation targeted technological developments in which a short-term grant was awarded to demonstrate proof-of-concept of a proposed technology at the laboratory level. The intent and required outcome for this solicitation was to build some tangible device, instrument or machine as opposed to theoretical research or engineering design that emphasizes process or methods of engineering control. If the proof-of-concept is successful, the grantee will have the opportunity to apply for a second grant for a multi-year effort with significant additional funding to advance the concept to a working prototype and validate its capability through a

high fidelity simulated or real operational environment. Eleven grants involving ten different organizations were awarded in June 2017.

#### AFC618, Exploratory Research Projects Regarding Mining-Related Health Problems

This solicitation focused on exploratory projects intended to make progress toward the identification and control of hazardous workplace exposures causing or aggravating adverse health effects among mine workers. While the identification of causal factors and exposure-response relationships was of major interest to the Alpha Foundation, special attention was given to studies that had potential for contributing, or leading, to an intervention. Significant additional funding will be made available to fund competitive follow-on proposals from projects demonstrating promise based on convincing evidence from the exploratory effort. Seven grants involving six different organizations were made in June 2017.

A complete description of the Foundation's grant portfolio can be found at [www.alpha-foundation.org](http://www.alpha-foundation.org).

#### Communicating Project Outputs

An important element of the Foundation's vision to "enable miners in the future to be free of work-related injury or disease" is to promote implementation of all appropriate results from the projects that have been supported. The Foundation encourages grantees to engage with all stakeholders in the course of the project execution, as well as to make the results available openly to the community through presentations and publications. The Foundation's website at [www.alpha-foundation.org](http://www.alpha-foundation.org) provides for outcomes from completed projects in the form of Final Technical Reports, as well as a selection of publications and presentations. In addition, all Foundation researchers are encouraged to publish results in well-recognized and respected journals and also to present research in major national and international meetings. Finally, the Foundation also continues to encourage strong linkages between grantees and the broad mining industry, including all stakeholder communities.

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