



for the Improvement of Mine Safety and Health, Inc.

THE ALPHA FOUNDATION: PAST, PRESENT AND FUTURE

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*SME/PCMIA, Fall Meeting
The Hilton Garden Inn, Southpointe, PA, October 24-25, 2013*

Introductions

- ▣ **Foundation Board Directors:**
 - Dr. Michael Karmis, President
 - Dr. David Wegman, Vice Pres., Treasurer
 - Dr. Keith A. Heasley, Vice Pres., Secretary

- ▣ **Foundation Executive Director:**
 - Dr. David L. Belden

- ▣ **Foundation Technical Director:**
 - Dr. Thomas M. Barczak

Genesis

- ▣ **December 2011:** The United States Attorney's Office for the Southern District of West Virginia, the United States Department of Justice and Alpha Natural Resources, Inc. ("Alpha") entered into a Non-Prosecution Agreement
 - *“Alpha agrees to establish a trust within 120 days from the date of the execution of this Agreement to fund projects designed to improve mine health and safety.”*
 - *“During the two-year period commencing on the date of this Agreement, Alpha will pay a total of \$48,000,000 into the trust,”*

Genesis

- *“The monies will be used solely to fund research and development projects by qualified academic institutions, not-for-profit entities, or individuals associated with either of those types of entities.”*
- *“The trust will be administered by three highly qualified individuals with academic and/or professional backgrounds in mine health and safety.”*

Alpha Foundation

- ▣ **April 2012:** Primary Foundation documents are completed, including: Certificate of Incorporation, By-Laws, etc.
- ▣ **May 2012:** Inaugural Meeting of Directors
 - Alpha Applies for Tax-Exempt Status recognition, as described in Section 501(c)(3) of the Code, to the IRS (Approved December 8, 2012)

Guiding Principles of the Foundation

- ▣ **Mission:** *“To improve mine health and safety through funding research and development projects by qualified academic institutions and other not-for-profit organizations”*
- ▣ **Vision:** *“To enable miners in the future to be free of work-related injury or disease by the implementation of the results of the projects funded by the Foundation and undertaken by the best researchers from any discipline that can contribute.”*

Guiding Principles of the Foundation

- ❑ **Not an endowment:** The Foundation will expend interest and principal, aiming at an 8-year horizon.
- ❑ **All mining:** underground or surface, coal, metal or non-metal.
- ❑ **All aspects of mining Safety and Health**
- ❑ **Practical research:** want to see impact within the life of the Foundation
- ❑ **The best researchers from any discipline that can contribute.**
- ❑ **Graduate education**

Foundation Progress

- ▣ **May - September, 2012:**
 - Appointed a part-time Executive Director
 - Selected Glenmede as the Financial Advisors
 - Approved budget and financial procedures
 - Selected a Financial Auditor
 - Engaged independent Legal Council
 - Developed concept paper review process
 - Established a website
 - ▣ <http://www.alpha-foundation.org/>

Prior to the First Solicitation

- ▣ **A significant effort was devoted to:**
 - Developing research priorities
 - Engaging the scientific community
 - Encouraging a continuing dialog with stakeholders

- ▣ **The discussion was formally opened with a stakeholder meeting:**
 - Charleston, WV, October 10-11, 2012

Stakeholder Meeting

(Charleston, WV, October 10-11, 2012)

- ▣ Introduce the Foundation
- ▣ Discuss priorities and issues in mine safety and health research with the broad research community and key stakeholders
- ▣ Discuss how to complement existing research efforts and to grow new initiatives
- ▣ Address major research barriers and gaps

140 attendees from 65 organizations

Stakeholder Meeting

Research Focus Areas

▣ Focus Area 1: Safety

- Design and Technology for Prevention
 - ▣ Ventilation and Dust Control
 - ▣ Ground Control
 - ▣ Safety of Automated and Mechanized Equipment
 - ▣ Comprehensive Mine Design
- Disaster Prevention and Response
 - ▣ Emergency Response
 - ▣ Communications, Tracking and Data Integration
 - ▣ Atmospheric Monitoring
 - ▣ Fires and Explosions

Stakeholder Meeting

Research Focus Areas

▣ Focus Area 2: Health

- Hearing Loss and Other Health Impacts of Noise Exposure
- Ergonomic-Related Conditions
- Cardiovascular Disease (CVD)
- Surveillance of Health Conditions of Miners
- Respiratory Disease
- Injury and Illness Prevention Programs

Stakeholder Meeting

Research Focus Areas

- ▣ **Focus Area 3: Safety and Health Management**
 - Best Practices
 - Safety Culture
 - Risk Management

- ▣ **Focus Area 4: Training**
 - Training Methods
 - Training Modes
 - Reinforcement
 - Trainers

Call for Concept Papers

- ▣ **Issued: January 18th, 2013**
- ▣ **4 Focus Areas:**
 - **Safety**
 - **Health**
 - **Safety and Health Management**
 - **Training**
- ▣ **Approximately \$10 Million**
- ▣ **10-15, 2-Year Projects**
- ▣ **Due March 15th, 2103**

Call for Concept Papers

- ▣ **160+ Concept Papers Received**
- ▣ **Developed Evaluation Criteria and Scoring Rubric.**
- ▣ **30+ Review Teams in Various Topic Areas**
 - **2-3 Person Teams**
 - **80 External Reviewers**

Request for Full Proposals

- ▣ **June 21st, 2012**
- ▣ **30+ Full Proposals Requested**
- ▣ **20+ Institutions**
- ▣ **Due August 2nd, 2013**

Full Proposal Schedule

- ▣ Evaluate using External Experts
- ▣ Notifications: Late September, 2013
- ▣ Contracts: Early October, 2013

Funded Projects

- ▣ **16 Funded Projects**
- ▣ **\$9.5 Million**
- ▣ **13 Different Organizations**
- ▣ **6 – Safety, 4 – Health, 4 – Safety and Health Management, 2 - Training**

Funded Projects

▣ Safety

- Numerical Modeling Methodologies for Assessing Burst Potential in Coal Mines - CSM
- Development of a New Rock Dust Sampling Instrument - CSM
- The Application of Flooded Bed Dust Scrubbers to Longwall Mining Systems - UK

Funded Projects

▣ Safety

- **Control of Spontaneous Combustion Using Pressure Balancing Techniques - U of U**
- **Operational Sensitivity of Through-the-Earth Communications - VT**
- **Integrated Surface Mining Safety System - WVU**

Funded Projects

▣ Health

- **Whole Body Vibration Exposure and Injury Prevention of Heavy Equipment Operators in Open Pit Coal Mines - Northeastern**
- **Ischemic Heart Disease and Lung Cancer Mortality in Relation to Respirable Particulate Matter and Diesel Exhaust in Non-Metal Mines – UC-Berkley**

Funded Projects

▣ Health

- **Clarifying Distribution, Trends, and Determinants of Adverse Health in U.S. Miners: Exploration and Integration of Existing Data Systems and Clinical Materials - U of Illinois-Chicago**
- **Connecting Dust Characteristics and Worker Health in Underground Coal Mines - Pitt**

Funded Projects

- ▣ **Safety and Health Management**
 - **Characteristics of, and Barriers to Effective Hazardous Identification and Control Programs in U.S. Metal and Non-Metal Mines - USW**
 - **Implementation of Risk Management Programs: Identification of Best Practices to Reduce Injuries and Maximize Economic Benefits - U of Arizona**

Funded Projects

- ▣ **Safety and Health Management**
 - **The Mining Health Workplace Program (MHWP) – UConn**
 - **Improved Safety through Application of Risk Management in US Underground Coal Mines: A RISKGATE Approach - VT**

Funded Projects

▣ Training

- **Effective Mining Safety Training – Design, Implementation and Evaluation – U of Arizona**
- **Enhanced Mobile Equipment Experiential Learning and Safety Technology Demonstration - WVU**

Future Schedule

- ▣ **Short-Term Innovative Research Projects**
 - New, exploratory and developmental research studies.
 - High risk, but breakthrough potential
 - 1 Year, < \$100K
 - **Solicitation:** October 2013
 - **Funding:** 2014

- ▣ **2nd Call for Concept Papers:**
 - January, 2014

Website and Outreach

- ▣ **Foundation Website:**
 - (www.alpha-foundation.org)

- ▣ **Outreach:** The Directors are active in outreach activities and have participated in discussions at a number of regional and national meetings.

Closing

- ▣ **The Foundation and its Directors look forward to continue working with the mining safety and health research community and all stakeholders to advance projects than can fulfill the Foundation's vision of eliminating work-related injury and disease for the nation's miners**

QUESTIONS?