



for the Improvement of Mine Safety and Health, Inc.

THE ALPHA FOUNDATION AND THE NORA MINING COUNCIL

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*SME Annual Meeting
Salt Lake City, UT, February 23-26, 2014*

Objective

- ▣ **Introduce the Alpha Foundation**
- ▣ **Present a brief update on Alpha activities**
- ▣ **Compare and Contrast the Alpha Foundation and the Nora Mining Council:**
 - **Visions**
 - **Missions**
 - **Research Priorities**

Genesis

- ▣ **April, 2010:** Upper Big Branch Explosion
- ▣ **June, 2011:** Alpha buys Massey
- ▣ **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.”*

Genesis

- *“During the two-year period commencing on the date of this Agreement, Alpha will pay a total of \$48,000,000 into the trust,”*
- *“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.”*

Foundation Progress

- ▣ **April 2012:** Incorporated
- ▣ **May 2012:** Inaugural Meeting of Directors
- ▣ **Summer, 2012:** Organized the Business
- ▣ **October 2012:** Stakeholder Meeting
- ▣ **January, 2013:** Call for Concept Papers
- ▣ **June, 2013:** Request for Full Proposals
- ▣ **September, 2013:** Awarded 16 Projects
- ▣ **October, 2013:** Call for Short-Term Proposals

Management

- ▣ **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

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Funded Projects

■ Safety

- Burst Potential in Coal Mines - CSM
- New Rock Dust Sampling Instrument - CSM
- Flooded Bed Scrubbers on Longwalls – UK
- Control of Spon. Com. - U of U
- Sensitivity of TTE Comm. - VT
- Integrated Surface Mining Safety - WVU

Funded Projects

■ Health

- Whole Body Vibration Surface Coal - NE
- Diesel Exhaust in Non-Metal Mines – UCB
- Integr. of Existing Data Systems - U of I-C
- Dust Characteristics in UG Coal - Pitt

Funded Projects

■ Safety and Health Management

- Eff. Hazard Control Programs MNM - USW
- Impl. of Risk Management Programs - U of A
- Mining Health Workplace Program – UConn
- RISKGATE in US UG Coal – VT

■ Training

- Effective Mining Safety Training – U of A
- Mobile Equipment Safety Technology - WVU

Mining Sector Council

- ▣ **2005:** The CDC/NIOSH National Occupational Research Agenda (NORA) established a Mining Sector Council.
- ▣ **2009:** NIOSH renewed the membership organization and charge.
- ▣ **February, 2012:** Draft Mining Research Agenda
- ▣ **April, 2013:** National Mining Research Agenda

Mining Council Vision

- ▣ **Vision:** *“Mine safety and health research will provide a workplace where miners will have their quality of life unimpaired by accidents or disease. Benchmarks for this vision will be progressive and continuously improving, having miners’ occupational safety and health statistics better than any previous year in mining, setting the best practice world-wide, and with individual mine units – large or small – supporting the Vision.”*

Alpha Foundation Vision

- ▣ **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.”*

Comparison of Visions

- ▣ **Core Vision is identical:** Eliminate mining injury and disease.
- ▣ **Mining Sector Council Vision:** Emphasizes continuous improvement, best practice, and industry buy-in.
- ▣ **Alpha Foundation Vision:** Emphasizes funding of research projects

Mining Council Mission

- ▣ **Mission:** *“The NORA Mining Sector Council will produce a current and renewable strategic plan for national research needs in mine safety and health. Guided by developing statistical analyses that are tempered by the expertise of Council members, the plan will identify those long-term research and development goals that most likely will achieve the Vision. As the plan matures, it will provide priority for these goals. The plan will examine existing NIOSH Office of Mine Safety and Health Research goals along with future goals that may be uncovered through the operation of the Sector Council. Suggestions for action that are nested under the individual goals will be the basis for mid- and short-range research that may be performed by academia, government, and industry.”*

Alpha Foundation Mission

- ▣ **Mission:** *“To improve mine health and safety through funding research and development projects by qualified academic institutions and other not-for-profit organizations”*

Comparison of Missions

▣ Mining Sector Council Mission:

- Produce a strategic plan for research goals in mine safety and health
- Prioritize research goals
- Strategic plan serves as basis for research
- Examine NIOSH Office of Mine Safety and Health Research goals

▣ Alpha Foundation Mission:

- Fund mining safety and health research.

Comparison of Missions

- ▣ **Inherent in the Alpha Mission is that:**
 - Research goals will be developed, prioritized and will serve as the basis for the subsequent funded research
- ▣ **Mining Sector Council: Long Term**
- ▣ **Alpha Foundation: Limited Life**

Alpha Focus Areas

- ▣ **Focus Area 1: Safety**
 - Design and Technology for Prevention
 - Disaster Prevention and Response
- ▣ **Focus Area 2: Health**
- ▣ **Focus Area 3: S & H Management**
- ▣ **Focus Area 4: Training**

Mining Council Objectives

- 1. Reduce the Likelihood of Disasters in Mines**
- 2. Improve Mine Disaster Response**
- 3. Prevent Illness from Occupational Health Hazards**
- 4. Improve Atmospheric Control (Ventilation) in Mines**
- 5. Improve Health and Safety Through Behavioral Research**
- 6. Improve Mine Design, Systems Operations and Management Performance...**
- 7. Apply Ergonomics ... to Mining to Increase Health and Safety**

Comparison of Research Areas

	Alpha	Council
Areas	4	7
Sub-Areas	27	52
Sub-Sub-Areas	78	190

Alpha Focus Areas

- ▣ **Focus Area 1: Safety**
 - Design and Technology for Prevention
 - Disaster Prevention and Response
- ▣ **Focus Area 2: Health**
- ▣ **Focus Area 3: S & H Management**
- ▣ **Focus Area 4: Training**

Alpha Focus Areas

- ▣ **Primary Emphasis on:**
 - **Safety and Health Management**
 - **Training**

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- 7. Apply Ergonomics ... to Mining to Increase Health and Safety**

Mining Council Objectives

- ▣ **Primary Emphasis on:**
 - Atmospheric Control
 - Ergonomics

- ▣ **Secondary Objectives:**
 - 98% Overlap

Mining Council Objectives

- ▣ **Secondary Emphasis on:**
 - **Disaster Prevention:** Impacts of Depth
 - **Disaster Response:** Improving Command and Control, Improving SCSRs, Impact of Fire
 - **Health:** Non-Respiratory Exposures, Stress-Based Diseases
 - **Atmospheric Control:** Air-Borne Chemicals, Stopping and Seal Performance, Deep Mine Ventilation.

Mining Council Objectives

- ▣ **Secondary Emphasis on:**
 - **Behavioral Research:** Optimizing Work Scheduling, Substance Abuse
 - **Mine Design and Management:** Regulation, Exploration Data Directly into Geologic Models, Power Systems, Explosive Safety
 - **Ergonomics:** Lighting, Slips and Falls

Mining Council Objectives

- ▣ **Under Emphasized:**
 - Seismics in: Mine Monitoring, Mine Rescue
 - Cardiovascular Disease in: Health

Summary & Conclusions

- ▣ **Similar Visions**
- ▣ **Overlapping Missions**
- ▣ **Research Objectives:**
 - **Mirror the Distinct Missions**
 - **Some Unique Emphasis**
 - **Overlap 98% of the Same Area**
 - **Some Outlying Sub-Objectives That Should be Considered for Inclusion in the Future**

Website and Outreach

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

- ▣ **Outreach:** The Directors are active in outreach activities and always interested in input to the research agenda of the Alpha Foundation

QUESTIONS?

