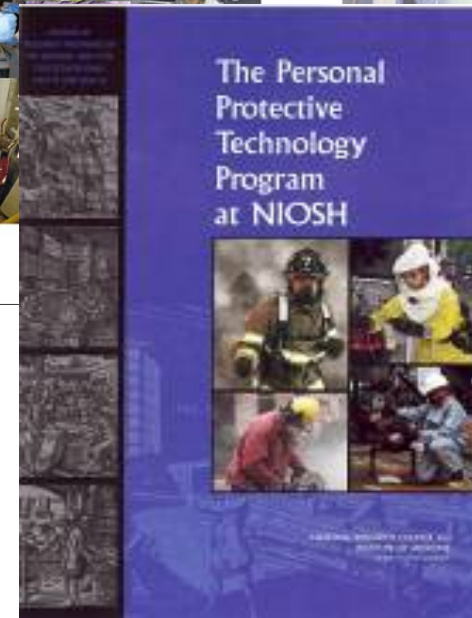
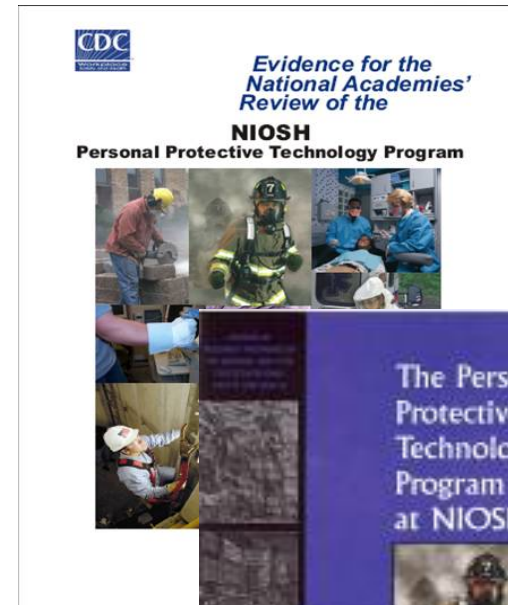


Mining Breakout Overview and Introduction

Robert R. Stein, P.E.
General Engineer, TEB
NPPTL/NIOSH

PPT Stakeholders Meeting

March 20, 2012



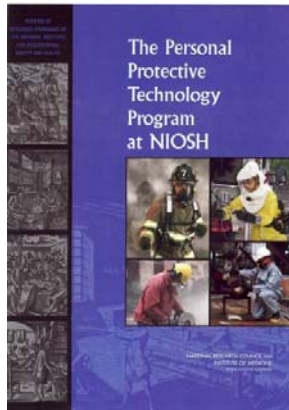
Presentation Structure



PPT in Mining

NPPTL in PPT

Today's Mining Breakout Session



PPE in Mining

- **1556 De Re Metallica**
 - Georgius Agricola
- **The definitive text on mining for over 100 years**
- **Miners using primitive forms of “respirators”**

In This Country

- **1969 Coal Mine Safety Act**
 - **An enforceable nationwide standard for mine safety practice.**

NIOSH Program Portfolio

NORA / NIOSH Industry Sectors (9)	NIOSH Cross Sector Programs (24)	
<ul style="list-style-type: none"> • Agriculture, forestry, and fishing • Construction • Mining • Healthcare and social assistance • Public Safety • Manufacturing • Services • Transportation, warehousing, and utilities • Wholesale and retail trade 	<ul style="list-style-type: none"> • Personal Protective Technology (PPT) • Health hazard evaluation (HHE) • Hearing loss prevention • Respiratory diseases • Traumatic injury • Authoritative recommendations development • Cancer, reproductive, and cardiovascular diseases • Communications and information dissemination • Emergency preparedness and response • Global collaborations 	<ul style="list-style-type: none"> • Immune, dermal and infectious diseases • Musculoskeletal disorders • Radiation dose reconstruction • Training grants • Work organization and stress-related disorders • Economics • Exposure assessment • Engineering controls • Worklife initiative • Occupational health disparities • Small business assistance and outreach • Surveillance • Nanotechnology • Prevention through design

NIOSH Divisions & Laboratories



- Office of the Director, NIOSH
- **National Personal Protective Technology Laboratory (NPPTL)**
- **Office of Mine Safety and Health Research**
- Office of Extramural Programs
- Division of Respiratory Disease Studies (DRDS)
- Division of Safety Research (DSR)
- Health Effects Laboratory Division (HELD)
- Education and Information Division (EID)
- Division of Applied Research and Technology (DART)
- Division of Surveillance Hazard Evaluation and Field Studies (DSHEFS)
- Division of Compensation Analysis and Support (DCAS)
- Research to Practice (r2p)
- Spokane Research Laboratory

NIOSH PPT Program Vision and Mission

The **VISION** is to be the leading provider of quality, relevant, and timely PPT research, training, and evaluation.

The **MISSION** of the PPT program is to prevent work-related injury, illness and death by advancing the state of knowledge and application of personal protective technologies (PPT).



An estimated 20 million workers use PPE on a regular basis to protect themselves from job hazards.

PPT Program Strategic Goals

- **Reduce exposure to inhalation hazards**
- **Reduce exposure to dermal hazards**
- **Reduce exposure to injury hazards**
- **Broad-based PPT issues**



PPT Program Activities

PPT Program Management

- Scientific evaluations
- Program evaluations
- Emergency response

Technology Evaluation

- Respirator Certification Program
- Quality Audit Program
- Certified Product Investigations
- Long Term Field Evaluation Program

Policy & Standards Development

- Enhancements to 42 CFR Part 84
- CBRN respirator standards development
- Consensus standard development
- Guidance Document Development

Technology Research

- Respiratory Protection
- Protective Clothing & Ensembles
- Integration of Sensors & Electronics
- Human Performance
- *Fall Protection*
- *Hearing Protection*

Surveillance and Communications

- Outreach
- Surveillance
- Health Communications
- Web management

Participate in policy development and standards across all types of PPT

Impact

- Research conducted to support five updates to 42 CFR Part 84
- PPT Program research and subject matter expertise contributed to three ASTM standards
- PPT Program research and subject matter expertise contributed to two NFPA standards



Participate in policy development and standards across all types of PPT

Progress

- Developed and published strategy for proposed changes to 42 CFR Part 84 in DHHS regulatory agenda in spring 2011
- Conducted six public meetings to solicit input to regulatory updates
- Established collaborative agreements with six external partners



Today

- **SCSR Capacity**
- **Physiologic Aspects of Switching SCSRs in an IDLH Atmosphere**
- **Cryogenic Life Support System**
- **Smart SCBA**
- **Future Technologies for Breathing Air Supplies**
- **Novel Knee Protection for Miners**
- **Clear, Sensible, Effective SCSR Training: For a New, High-Performance Device, Information Design Augments Safety and Useability**
- **Light-emitting Diode (LED) Cap Lamp Research**
- **Draeger SCSR/SCBA Mining System**

Quality Partnerships Enhance Worker Safety & Health



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Thank you

Disclaimer:

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