

Game Changing Training!

2022 TRAINING RESOURCES APPLIED TO MINING (TRAM) SEMINAR

October 11 - 13, 2022

National Mine Health and Safety Academy Beaver, West Virginia

Visit the Mine Safety and Health Administration Website at www.msha.gov

Welcome

Welcome to the National Mine Health and Safety Academy and to the 2022 Training Resources Applied to Mining (TRAM) Seminar. TRAM workshops will give participants the opportunity to learn about new developments in health and safety training, to share ideas in small group sessions, and to share new materials in the exhibits.

We are glad that you can be with us and hope you will have an enjoyable and productive stay.

Acknowledgments

We wish to thank all of the presenters who volunteered their time and knowledge with others for the promotion of mine safety and health. Without the efforts of these experts, it would be impossible to present a conference of this magnitude. They always come forward so willingly to assist us with this program and for that we are grateful.

MSHA Leadership

Christopher J. Williamson Assistant Secretary for Mine Safety and Health



Christopher J. Williamson, MSHA's Assistant Secretary, was appointed by President Biden, effective Monday, April 11, 2022.

Prior to this he was the senior counsel to National Labor Relations Board Chair Lauren McFerran. Mr. Williamson, a native of West Virginia, worked at MSHA during the Obama administration, advising the assistant secretary on agency policy, operations and communications. He also has served as labor counsel to former Senate HELP Committee Chair Tom Harkin (D-IA) and as a legislative assistant to Sen. Joe Manchin (D-WV). He began his career in public service as an attorney-advisor to Administrative Law Judge Jacqueline R. Bulluck at the Federal Mine Safety and Health Review Commission.

Mr. Williamson earned a Juris Doctor from the West Virginia University College of Law, a Master of Public Policy from American University, and a Bachelor of Arts in Political Science and Economics from West Virginia University.

Jeannette J. Galanis Deputy Assistant Secretary for Policy

Jeannette J. Galanis is the Deputy Assistant Secretary for Policy, Mine Safety and Health Administration. She was appointed by President Biden, effective Monday, February 1, 2021.

2021. Prior to this, she was the owner of her own consulting firm, representing a broad array of clients including Mayor of Denver, Michael Hancock; the National Conference of Democratic Mayors; Senator John Hickenlooper; Tom Steyer, Kamala Harris and Michael Bloomberg. She also served as the Public Affairs Director for the Denver Public School District, Chief of Staff of the U.S. Mine Safety and Health Administration under President Barack Obama, and the National Deputy Field Director for the AFL-CIO, managing political and organizational matters for the federation in 23 states in the Eastern and Southern U.S.

Ms. Galanis holds a Bachelor's degree from the University of Colorado at Boulder and two Masters degrees from Harvard University, School of International Affairs and the University of Denver, School of Communications.



Patricia W. Silvey

Deputy Assistant Secretary for Operations



Patricia W. Silvey is the Deputy Assistant Secretary for Operations, Mine Safety and Health Administration. She was appointed to the position in December 2010.

Before her appointment as Deputy Assistant Secretary for Operations, Mrs. Silvey served as the Director of Standards, Regulations and Variances for MSHA. Prior to this, Mrs. Silvey served as the Deputy Administrator for Metal and Nonmetal Mine Safety and Health, and on an Intergovernmental Personnel Act assignment to the National Safety Council.

In October 1998, she held the position of Director, Office of Administration and Management. In July 1983, she was appointed to the Senior Executive Service as Director of Standards. In early 1978, she played an integral role in the

transition of MSHA from the Department of the Interior to the Department of Labor and the establishment of the Office of Standards.

Mrs. Silvey earned her B.S. degree from Tuskegee Institute; M.A. degree from the University of Alabama; and J.D. degree from Georgetown University Law Center. She is a member of the District of Columbia Bar.

Lincoln (Link) Selfe

Superintendent

National Mine Health and Safety Academy

Lincoln (Link) Selfe began his mining career in 1974 as a Management Trainee with Clinchfield Coal Company. He worked as an Engineer, Industrial Engineer, Safety Specialist and Staff Assistant to the Vice President of Operations. He also served as a Section Foreman, Out-By Foreman and Assistant Mine Foreman while at Clinchfield Coal Company.

Mr. Selfe began his career with MSHA in 1982 as an Inspector and Accident Investigator in District 5, Norton, VA. From 1989 until December 2018 he served in various capacities within management. He served as a Field Office Supervisor in District 6, Staff Assistant, Field Office Supervisor and Roof Control Supervisor in District 3. He served for 17 years as Assistant District Manager in District 4 and also did temporary details as District Manager in District 3, 4 and 5.

Mr. Selfe became a member and Team Captain of MSHA'S Mine Emergency Unit in February 1991 and continued on the Mine Emergency Unit until April 2005. During this time he worked numerous Mine Emergencies such as fires, explosions, inundations and other emergencies in West Virginia, Virginia, Kentucky, Illinois, Pennsylvania, Alabama, Utah and Colorado while under oxygen in irrespirable atmospheres and in several elevated methane situations. He also responded to the Pentagon after the 9/11 attacks and to Hurricane Katrina, working with

OSHA in 2005. Mr. Selfe also was selected from MSHA's Team to work with the Fairfax County Structure Rescue Team in Morgantown, WV when a coal silo collapsed and fatally injured one person.

Mr. Selfe has represented the United States internationally in various Mine Rescue roles. He served as a Mine Rescue Advisor in Ontario, Canada and Krakow, Poland. He competed as a map man on MSHA's Team in the International Mines Rescue Contest in Louisville, KY in 1999 where they won First Place. He also competed on MSHA's Team in Glogow, Poland in 2004.

Richard B. Pagan

Deputy Superintendent

National Mine Health and Safety Academy

Dr. Richard Pagan is the Deputy Superintendent of the National Mine Health and Safety Academy. He has extensive experience from higher education, business, and the military having held positions as vice president of academic and student affairs, corporate senior vice president, campus director, division chair (dean), program coordinator, faculty, senior noncommissioned officer in the military, and as a military advanced systems technical instructor. He has over 25 years of teaching and administrative experience in higher education in the operational and business aspects of running complex organizations.

In addition to his academic and student services experience he has experience in fiscal affairs, facilities management (including multiple campuses and sites), accreditation, assessment, workforce development, community engagement, shared governance, working with state legislatures, and community leaders. Prior to his career in academia, he served over twenty years on active-duty service in the United States Air Force retiring as a Master Sergeant. During his military career, he attained the highest certification under the Air Education and Training Command as a Master Instructor. Additionally, he has served on and chaired on a myriad of institutional and statewide committees.

Dr. Pagan holds a Doctorate in Education with an emphasis in Higher Education Leadership Studies, a Master of Science in Aeronautical Science, a Bachelor of Science in General Studies, and associate degrees in Avionics Technology, and Instructor of Technology. He is certified by the Federal Aviation Administration in Airframe and Powerplant Systems, the Federal Communications Commission, and holds certificates in Aerospace Human Factors and Aviation/Aerospace Safety. Dr. Pagan is dedicated to fulfilling the mission of the Mine Safety and Health Administration and the National Mine Health and Safety Academy.

Agenda

Tuesday, October 11

| 7:00 a.m. – 4:00 p.m. | Conference Registration Classroom Wing Entrance |
|-------------------------|---|
| 8:00 a.m 5:00 p.m. | Exhibitors SetupElevator Entrance - Cafeteria |
| 11:00 a.m. – 12:00 p.m. | Presenters MeetingC-100 |
| 11:30 a.m. – 1:00 p.m. | Lunch |
| 1:30 p.m. – 3:00 p.m. | Opening Ceremonies Auditorium |

Welcome and Introductions

Mr. Lincoln L. Selfe, Superintendent National Mine Health and Safety Academy

Opening Address

Christopher J. Williamson, Assistant Secretary Mine Safety and Health Administration

| 3:00 p.m. – | 3:30 p.m. | Training Material | s Competition Awards | Auditorium |
|-------------|-----------|-------------------|----------------------|------------|
|-------------|-----------|-------------------|----------------------|------------|

Materials Competition Award Presentation

Katie Kimbrell, Competition Coordinator

4:30 p.m. – 5:30 p.m. Joseph A. Holmes Safety Association Meeting G-214

Wednesday, October 12

| 7:00 a.m 4:00 p.m. | Conference Registration | . Classroom Wing Entrance |
|------------------------|-------------------------|---------------------------|
| 8:00 a.m. – 11:30 a.m. | Workshops | See Workshop Schedule |
| 11:30 a.m. – 1:00 p.m. | Lunch | |
| 1:00 p.m. – 4:30 p.m. | Workshops | See Workshop Schedule |
| 4:30 p.m. – 5:30 p.m. | Meet & Greet Reception | Cafeteria |

Thursday, October 13

| 7:00 a.m. – 9:30 a.m. | Conference Registration Classroom Wing Entrance |
|------------------------|--|
| 8:00 a.m. – 11:30 a.m. | Workshops See Workshop Schedule |
| 8:30 a.m. – 11:30 a.m. | State Grants MeetingG-214 |
| 11:30 a.m. – 1:00 p.m. | Lunch |
| 1:00 p.m. – 4:30 p.m. | Workshops See Workshop Schedule |
| 3:15 p.m. – 4:30 p.m. | Exhibitors Breakdown Elevator Entrance - Cafeteria |

Training Materials Competition

The year 2022 marks the 27th year that TRAM's Training Materials competition has been conducted. For more than a quarter century, the materials developed and entered in the competition have made lasting, positive impacts on health and safety training at mining operations.

Entries which met the highest standard of performance were awarded an MSHA Blue Ribbon of Excellence. The top scoring entry was awarded the Grand Prize.

This year's winners will be announced during opening ceremonies on Tuesday, October 11.

TRAM 2022 Training Materials Competition Entrants

Entrants:

- Ash Grove Cement Plant Louisville, NE (A CRH Americas Material Company)
 - MSHA Annual Refresher Education Vol. XIII (Gamification)
- Capitol Aggregates
 - Speak Up Don't Press Your Luck
- Florida Mine Safety Program (MSHA State Grants)
 - Hurricane Preparedness for Surface Mining Operations
- Marshall University
 - Design and Deployment of an Emergency Belt Pull Cords
- Ohio Department of Natural Resources Mine Safety
 - Ohio Surface Mine Training
- University of Texas Health and Safety Training Center
 - We Are Miners

TRAM 2021 Materials Competition Winners

Blue Ribbon Awards

- Ash Grove Cement Plant Louisville, NE (A CRH Americas Material Company) – Improving Communication
- Cementation USA, Inc. Supervisor Mine Act Training
- Florida Mine Safety Program (MSHA State Grants) Stop the Fire in Its Tracks!
- Ohio Department of Natural Resources Ohio Surface Mine Training
- South Dakota MSHA State Grants Program
 Hazard Awareness Virtual Reality Training

Grand Prize

Ash Grove Cement Plant (Louisville, NE (A CRH Americas Material Company)
 -- Improving Communication

Previous Grand Prize Winners

- ★ 2021 Ash Grove Cement Plant (Louisville, NE (A CRH Americas Material Company)
- ★ 2020 Blackhawk Mining, LLC
- ★ 2019 Florida Mine Safety Program
- ★ 2018 Florida Mine Safety Program
- ★ 2017 South Central College Center for Business & Industry
- ★ 2016 Virginia Department of Mines, Minerals and Energy
- ★ 2015 South Central College Center for Business & Industry
- ★ 2014 Virginia Dept. of Mines, Minerals and Energy
- ★ 2013 Kentucky Office of Mine Safety and Licensing
- ★ 2012 Virginia Dept. of Mines, Minerals and Energy
- ★ 2011 South Central College
- ★ 2010 Lafarge North America, Inc.
- ★ 2009 Alliance Coal
- ★ 2008 Kentucky Coal Academy

- ★ 2007 Safe Steps Training, LLC
- ★ 2006 AGC for Heavy Equipment Operations, Vermont Chapter
- ★ 2005 Colorado Division of Minerals and Geology
- ★ 2004 Virginia Department of Mines, Minerals and Energy
- ★ 2003 Colorado Division of Minerals and Geology
- ★ 2002 Commonwealth of Virginia
- ★ 2001 Commonwealth of Virginia
- ★ 2000 Colorado Division of Minerals and Geology
- ★ 1999 The Illinois Office of Mines and Minerals
- ★ 1998 Pittston Coal Company
- ★ 1997 Zeigler Coal Holdings, Inc.
- ★ 1996 The Pennsylvania State University

Exhibits

First floor of the administrative building – The exhibit area features a wide variety of health and safety training materials, including videos, PowerPoint presentations, printed materials training materials developed by MSHA, State Grant recipients, and the mining industry. Exhibits also showcase a number of innovative health and safety-related products.

Exhibitors

- CAB Products
- Catamount Consulting
- Colorado Mine Safety and Training Program
- Educational Field and Small Mine Services
- Energy, Mining and Construction Industry Safety Program Colorado School of Mines
- Joseph A. Holmes Safety Association
- Matrix Design Group
- McCraren Compliance
- NIOSH Mining
- South Dakota School of Mines and Technology
- TRAM Training Materials Competition
- University of Texas Health and Safety Training Center
- Western Mining Safety and Health Training Resource Center University of Arizona
- Wolf Creek Trainers

Workshops

A Hit In Regulation Will Have All Your Bases Covered; And Get You Home Safe And In Time

Presenters: Garland Moffett, Brittanie Phillips

PLAYBALL!!! In Mining, as in Baseball, it's the number of times you REACH HOME SAFELY, that counts!!! Garland and Brittanie with the University of Texas will show you how to get your students running the bases and scoring big with regulations. This training is interactive, exciting and entertaining. These activities will add meaning to your instruction and literally get your students involved.

Accessible Tech: Online and Mobile Apps for Training

Presenters: Leonard D. Brown, Glenna Smith, Tuan A. Bui

Smartphones and tablets are great facilitators of active learning, particularly in classrooms where technology access is limited. In this talk, we discuss 3 new mobile apps for training: 1) Mining Strong Online, an adventure game focusing on health, hygiene, and exposures; 2) Coming Home Alive, a mystery game that addresses moving equipment, traffic patterns, and worker fitness for duty; and 3) Harry's Hazardous Day, a streaming virtual environment that considers workplace exams, hazards, and mitigations. We look at the key characteristics of each game, showing how the game mechanics have been applied to health and safety training. Workshop participants will have an opportunity to test games, provide feedback, and deploy them in training.

Advancements in Virtual Reality Mine Rescue Simulations

Presenters: Brendan Macdonald, Jason Navoyski

Virtual Reality (VR) Mine Rescue Training is software created by NIOSH in collaboration with MSHA. VR Mine is a more realistic virtual environment compared to traditional field problems—a participant wears a head-mounted display showing an underground coal mine with equipment, hazards, and people. It supports flexibility in its simulation based on participant actions, which are tracked and displayed on a debriefing tool shown upon completion of the problem. It supports a team of mine rescuers within the same environment, either all together in the same room or connected through the internet. This presentation describes the design decisions, demonstrates the capabilities, and discusses future implementation.

Annual Refresher Gamification Ideas Using Clickers, Zoom, Both or Neither

Presenters: Robert Weston, Terry Weston, Cory Weston

This interactive session will show any instructor how to use some basic tips and tricks to "spruce up" their annual refresher or new miner training whether it is done face to face or virtually via Zoom. We will also show ways to use clickers to make an entire 8-hr day a competition which can aid in personal motivation for that long timer. If you think the older workers may not buy into these techniques, you may be right. But getting them actively involved in training with their younger counterparts is pivotal for their survival. We will even share some of the latest research to prove it.

Are You REALLY Prepared for a Fire?

Presenter: W. Ben Hart

Most people have never experienced a loss by fire and may not ever experience one. This interactive presentation will discuss a fire in which most all possessions (furniture, clothing, automobiles, electronics, photographs, professional registrations and documentation, etc.) were lost, and the ordeal of finding a place to live and dealing with insurance companies. Attendees will be guided through exercises and activities which will better prepare them for such an unexpected disaster. The presenter will share his "adventure" dealing with his unexpected disaster, and many positive lessons learned.

Being Winston Wolfe

Presenter: Richard Wobby

THE WOLF - I'm Winston Wolfe. I solve problems.

We read the trades and attend panel discussions on our workforce situation. We learn things about the safety aspect of our workforce, the need for more or a buildout of our present workforce and how to win through better engagement. But there's something mine owners and contractors almost never discuss: How to be a better manager.

We have excuses. Teams/packs come together, work intensively, then scatter. Training? No time. Budget? Always tight. We got into this to avoid "the man." It is him (not us) who reads books from the "management" aisle. The only career advice we need is what we got: "Work."

But nothing is worse than working for a bad manager. And in our business, bad managers abound. Collectively we'd all have more fun, create better work and make more money if we could get our act together. Mine owners and managers need to be better communicators and better operators.

Fortunately, we need only to look to Quentin Tarantino, Harvey Keitel and "Pulp Fiction" for a role model: Winston Wolfe. Here are a few management lessons from a guy who knows how to get it done.

- Be 100% reliable.
- Prioritize.
- Bad news first.
- Take things off your manager's plate then own it.
- Write things down.
- Strategy is for amateurs, tactics are for professionals.
- You can't manage what you don't understand.
- Start tough, then soften up.
- If it's not working, end it.

Can You Hear Me!?

Presenter: Jacob Drenth

With many presentations, the videos, presenter's voice, and/or other audio sources are too loud, too quiet, muted, too much bass, contain feedback or other extra noise. This can cause noise fatigue and create intelligibility problems, making hearing hard for the hard of hearing, and more. This presentation demonstrates the difference between bad sound and good sound, and how to sound good without breaking the budget or having to carry in a lot of gear.

Developing Substance Use Prevention Training Resources for the Mining Industry

Presenter: Carol Nixon

The primary aim of this session is to garner feedback about:

- Existing substance misuse training curricula and resources attendees have used or are familiar with,
- Challenges OSH professionals and others have encountered in addressing substance misuse in the workplace, and
- Unique contexts, work design, and cultures in mining that must be considered in adapting existing and/or developing new resources.

The feedback will directly inform the development of an MSHA Resource Guide and training curriculum which is a collaborative effort of MSHA, NIOSH, and the NIEHS over the next year. In this session, we intend to actively engage attendees in conversation in a town hall or roundtable type format.

Development of New Safety Videos

Presenter: Richard Begley

This presentation will demo new safety training videos produced from a Brookwood Sago grant awarded to Marshall University and Blackhawk Mining LLC.

Do You Have Time to Prevent An Accident?

Presenters: Steve Hoskinson, Brad Gover

Start to finish on when potential accidents begin, till when they happen, and the investigation. Day in the life of an average worker and the things that led up to a tragic event.

Eliciting Input from Underground Coal Miners on Interventions to Facilitate Better Self Escape: Lessons for Training

Presenter: Eugene Gyawu

This research sought to elicit feedback from underground coal miners on interventions required for self-escape in underground coal mines. This work sought miners' views on the usefulness of 21 proposed interventions to improve confidence in self-escape knowledge, skills, and abilities (KSAs). Miners ranked interventions related to the functionality and useability of self-contained self-rescuers (SCSRs) high on usefulness ratings. This presentation will discuss the result of the survey and how it can inform training and the interplay between training and good human-centered design.

Engagement: The Secret Power of a Great Safety Program Safety Second!

Presenter: Scott McKenna

The age-old saying "Safety First" can be misleading or flat out wrong. Simply put, safety is merely a byproduct of a highly engaged culture. According to Gallup, one of the Nation's largest analytic companies that studies workplace excellence, when an organization places "Employee Engagement First", the result is 48% fewer safety incidents, a 37% decrease in absenteeism and a 25% decrease in employee turnover. They also estimate that \$450-\$500 billion is lost each year in the US due to unengaged employees. Having the appropriate knowledge and tools necessary to develop compassionate, emotionally agile teams within your organization is the key to a successful safety program.

Hurricane Preparedness for Surface Mining Operations/Build Your Preparedness Disaster Bucket Experience

Presenters: Karen Miller, Sherri Nix

Prepare, Act, Recover – Video and Interactive Experience. Video focuses on 6 major flaws that Mine Supervisors Identify in "Storm Emergency Plans" - how to avoid: Inadequate Power Supplies, Lack of Flood Zone Identifications; Manpower for Storm Preparation; Training on Storm Strength; Storm Preparation of Homes; Failure to Hold Post Storm Meetings. Pre-Storm Planning, Practice & Usage; Power Supplies; Flood Zone Identifications; Inadequate Manpower; Inadequate Storm Strength Education; Employees properly preparing & evacuating homes; Failure to Hold Post Storm Meetings:

<u>Build Your Bucket Experience</u> - Get Ready to Make a Plan! Learn What Goes into Being Prepared by gathering supplies through our hurricane preparedness checklist; Local Resources & Staying Connected.

<u>Limited to Class Attendees Only</u> – Trainees will receive a copy of our latest video, "Hurricane Preparedness for Surface Mining Operations" via a USB Flash Drive, in addition to a "Build Your Bucket Disaster Experience" pail consisting of a variety of survival/disaster items and materials.

Incorporating Games in Part 48 Training

Presenter: David Lauriski

Safety training can often be considered tedious, but trainers can maximize its effectiveness by embracing approaches that enhance engagement and knowledge retention. In other words, they can make it fun. Participation and interaction lead to better learning outcomes, and the use of games or game concepts in training situations is becoming more popular as a way to engage trainees. This presentation provides an overview of gamification—incorporating games or game mechanics into learning situations—and outlines the many benefits of using games as a training method, including best practices and potential challenges, examples of gamification in the workplace, and overviews of the games used in Part 48 training at the Colorado School of Mines.

Is Your Brain Keeping You from Recognizing Hazards?

Presenter: Koretta Vault

Hazard recognition research shows that workers only identify about 45% of hazards in their workplaces, primarily due to how our brains process information, as well as not using our tools to slow our pre-job processes. Of the 55% of missed hazards, approximately 35% are missed because of cognitive biases and blind spots. Simply put, a cognitive bias is a break in our normal, rational judgement. While there are literally dozens of reasons why we stray from our rational thinking, in this presentation we will look at some of the cognitive biases and blind spots that could influence us into making an error. To be safer at work, we must be consciously aware of our biases and act against them when needed.

MSHA Sports: Using Football and Baseball to Evoke Discussion and Synthesis

Presenter: Danny C. K. Lee

Spectator sports can provide a lively setting for discussion and assessment of health and safety (H&S) topics. In particular, sports games often resonate across demographics, offering new ways to reach 2nd language learners and learners with lower literacy. In this talk, we discuss our experiences using football and baseball as synthesis activities to increase learner participation and engagement. We discuss how sports can be gamified using simple props and easy-to-learn rules, with reflections and insight from seasoned trainers. Furthermore, we show how these activities are easily refreshed with new content that is relevant to current H&S issues in the mining industry. Samples and group activity demonstrations will be provided.

Post Incident Training Facilities and Readiness

Presenters: Paul Schmidt, Linda Chasko

The Emergency, Rescue and Training Team at NIOSH has conducted a survey of Post-Incident Training Facilities. The first part of this presentation will summarize the results of these efforts to identify publicly available resources. It will conclude with a request for information on privately available Training Facilities. The second part of the presentation will identify Mine Operator facility considerations and preparations for post-incident operations.

Showing Your Hand: Card-based and Tabletop Games for Training

Presenters: Michelle Reiher, Rustin Reed, Leonard Brown

Driven by the younger generations, there has been a substantial rise in the popularity of cardbased and tabletop games. We have created a variety of tabletop games for training which capitalize on this trend. These activities use shared artifacts and cooperative or competitive tasks to increase discussion, provoke critical thinking, and improve learning. In this talk, we outline some successful approaches for tabletop games and provide tips for trainers to create or adapt their own content. We look at several examples, including Four in the Hole, Jenga, Mineopoly, Mining Strong, Very Good Day, and You Blew Up My Haultruck. Participants will have an opportunity to sample these games and take supplies home for use in their training.

Sleep Deprivation and Stress in the Mine Site

Presenter: Irvin Gill

Sleep Deprivation describes the cumulative effect of a person not having sufficient sleep. Insufficient sleep adversely affects the body, brain, mood and cognitive function. All aspects of health can be impacted by sleep deprivation. This presentation will focus on the realities of how sleep deprivation affects the mental and physical health of the mining industry's most crucial component - the miner.

SMARTer Compliance = Better Training: Enhancing Workflows for Training, Tracking, and Reporting

Presenters: Ngan Pham, Leonard D. Brown, Tuan A. Bui, Purushotham Tukkarajaf

Small operators face many challenges to implement the training and reporting requirements of Parts 46, 48, and 50. Working with MSHA, state grants programs, and operators, we have developed the Small Mine Activities Reporting Tool (SMART), a light-weight app providing workflows, tutorials, and templates to address 4 key main points: 1) tracking of training records; 2) reporting of accidents; 3) notification of opening and closing; and 4) tracking of repairs. The app also provides reminders of training and filing deadlines. In this talk, we outline SMART's capabilities and discuss its use in management and training workflows. Workshop participants will have an opportunity to try the app, provide feedback, and use it in their training.

Speak Up Don't Press Your Luck

Presenter: Chuck Ross

Presenting the fatality of a miner in the industry is difficult. However, if done frequently, the unfortunate teaching of death (let's call it what it really is) can numb miners to forget how important a part they play in preventing fatalities, even if it happened somewhere else to somebody else. The presentation was designed to get miners to defend what they will do to not let a similar fatality happen at their facility/location. A combination of Miners' Rights, Fatality Review and a fun game where Powered Haulage is still the "Whammy", you do not want to have, can establish a miner to speak up. Designed for Annual Refresher, it starts with the importance of mining, miners' rights, fatality prevention, team competition and ends with a game.

Spice Up Your New Miner Training Material

Presenter: Ashley Gillund

New Miner Training is long, but it doesn't haven't to be boring! If you want to engage your audience, increase interaction, and help participants retain information, this session is for you! Ashley will share training materials provided to new miner students in a folder that is handed out during in-person sessions or mailed out in advance when running live-online.

Training Realism and Mineworker Confidence in Self-Escape KSAs: A Case Study of CONSOL Energy's Enhanced Training Program

Presenters: Cassandra Hoebbel, Jason Diamond, Angela LaFollette

In 2017, the National Institute for Occupational Safety and Health (NIOSH), Pittsburgh Mining Research Division (PMRD) conducted survey research to identify and characterize gaps in self-escape knowledge skills and abilities (KSAs) from 895 underground coal miners from eight mines in the Appalachian region. Results from the survey revealed that a surprising number of mineworkers reported being less than fully or highly confident in their ability to demonstrate or explain a number of critical self-escape tasks. As a result of mine-specific feedback provided by NIOSH, all participant mines have reported implementing new procedures to increase the realism and/or complexity of their emergency response training activities. Now, five years after receiving the initial feedback, one company has invited NIOSH to assist in the detection of any change in worker perceptions as they relate to the mine's annual self-escape training and/or levels of perceived competence in critical self-escape KSAs. Preliminary results of this effort suggest that there have been significant improvements in worker perceptions of the realism of self-escape training as well as increases in confidence in miners' abilities to demonstrate or explain the critical self-escape KSAs.

Tough Conversations and Dealing with Difficult People

Presenters: Heidi Williams, Stacy Frederick Spector

A recent poll reported in Forbes Magazine showed that more than 80% of employees are actively avoiding a difficult conversation in their workplace. Another study showed than nearly 70% of Leaders avoid having difficult conversations with their employees. A strong argument can be made that an organization that falls within these statistics, is more likely than not, to struggle with its culture and employee engagement. When we understand and practice vulnerability, empathy and the growth mindset, we can be more efficient at providing feedback to our teams. In life as much as in work, it's important to have a skillset that allows us to take on difficult conversations and provide effective, constructive feedback to others.

Using Gamification as a Change Agent in Annual Refresher Training

Presenters: Joe McGuire, Lucas Simpson

Active learning can be emphasized during training by using case studies, group discussions, and hands-on activities. Additionally, in today's corporate training world, using "games" and "gamification" are proving to be more successful at getting employees engaged in training events. Gamification is the practice of integrating game principles and mechanics into a nongame experience, such as safety training. Research has shown that gamification can be fun, create friendly competition, and improve learning retention. Specific to the workplace, gamification may contribute to a culture where workers are more engaged, feel like they are part of a team, and make learning a pleasant experience. Based on this trend and company objectives to enhance worker safety training and engagement, Ash Grove Cement, Louisville, NE Plant's safety manager asked for their company's 2022 MSHA annual refresher training to be developed using gamification as the primary delivery process. Within the training a variety of topics were provided such as powered haulage, leadership, lockout/tagout, and task training. For each topic the updated training guidebook presented several "challenges" in which teams worked together to answer questions or perform tasks to see who could score the highest number of points. This process, which follows the principals and mechanics of gamification, allowed workers to take control of what they wanted to learn. After completing the challenges and discussions, 117 Ash Grove Cement workers completed a 6 items survey from which was learned:

- 93% to 97% agreed they learned new information on the topics covered during training.
- 94% believed they learned more from being active during training than from just watching PowerPoint slides and listening to lectures.
- 93% indicated using "games", "gamification" or "challenges" to deliver training kept them involved and engaged.

These evaluations demonstrate that games or gamification can provide a delivery process companies need to engage workers and help them move skillset or safety performance to a higher level. This presentation discusses the details of this updated training with gamification mechanics more in-depth, including how to deliver and facilitate this type of training.

VR: The New Age Training

Presenters: Clint Kling, Purushotham Tukkaraja

To support an advancing world and the alpha generation workforce that has grown up immersed in technologies, safety training in mining needs an overhaul. For decades we have trained a certain way, which does not grab the attention of the present age. More mining is needed for the world's advancements in technology, meaning more people need to be trained. For the last two years at South Dakota State Grants Program we have been developing and researching virtual reality safety training modules that we created. Come find out how the new way of training for a new age is doing compared to traditional methods.

Water Survival & Rescue

Presenter: Matthew Bunner

In this course we will demonstrate the safe and effective methods of survival and rescue from the water. A look into PPE, types of rescue, and the gear needed to teach water safety. Want to participate? Wear your swim trunks or clean work clothes and bring a towel. This course will make a real safety concern of dredge and water work to a necessary training ground... the water.

We Are Miners

Presenter: Brittanie Phillips

The University of Texas Health & Safety Training Center (HSTC) in collaboration with Castleview Productions has produced an insightful documentary about the mining industry titled "We Are Miners." The documentary focuses on the global benefits of mining, the opportunities within the industry, the unyielding adherence to safety protocols, the technological advancements that have evolved and how vital supporting this industry is to our collective future.



Virtual Reality (VR) Mine Rescue Training is new software created by NIOSH in close collaboration with mine rescue experts from MSHA. VR Mine offers a more realistic and immersive virtual environment compared to traditional field problems. VR Mine Rescue Training supports a 5-man team of rescuers, either in the same room or joining remotely using an internet connection. In this training, participants wear a VR headset to visualize an underground coal environment complete with equipment, hazards, and people. The simulation dynamically responds to participant actions, that are also tracked and displayed on a debriefing tool. Upon completion of the virtual mine rescue problem, a trainer can then review the team's actions and movements for further discussion.

VR Mine Rescue Training is now being demonstrated both at NIOSH's Pittsburgh campus and as a demo available at the National Mine Health & Safety Academy. In the demo, you can explore and interact with the VR Mine, performing a simulated mine rescue problem.

Visit the Academy Gym to experience this VR demonstration.



Presenters

Begley, Richard – Dr. Begley has M.S. and Ph.D. degrees in Mining Engineering from WVU and is a former underground production foreman. He has also taught mine foreman and new miner training classes prior to becoming a Professor at Fairmont State University and Marshall University.

Brown, Leonard D. – Mr. Brown is an Assistant Research Professor at the University of Arizona's Mel and Enid Zuckerman College of Public Health. He has over 10 years of experience in instructional design and technology innovation for health and safety training. He currently serves as a Co-Director for the University's Western Mining Safety and Health Training Resource Center, where his team uses innovations in VR, gaming, and data analytics to improve miner safety. Dr. Brown has more than two decades of experience in human computer interaction and the gamification of learning, topics on which he has published numerous papers. He also teaches courses on these topics and supervises student research for UArizona's School of Information.

Bui, Tuan A. – Mr. Bui is a research and development software engineer at the University of Arizona's Mel & Enid Zuckerman College of Public Health, where he develops mobile applications and data analytics programs for training and evaluation. His work uses serious games and machine learning to discover insights into human performance and operator safety trajectory. Mr. Bui has a background in Management Information Systems (MIS) with experience in both game development and data analytics. He holds a Master of Science degree in Information.

Bunner, Matt – Mr. Bunner, Safety Manager for Mulzer Crushed Stone, has a vast knowledge of working on or near the water. He has a B.S. from Western Kentucky University in Industrial Technology, Occupational Safety path in 1994. He is a Certified Safety Professional and Certified Mine Safety Professional. For the past 22 years he has worked with water safety for Mulzer Crushed Stone. This course has also been shared with many state associations, civic groups, and marine/dredge companies. He trains his river/dredge employees on safe procedures for working near the water, survival in the water, and rescue from the water regularly.

Chasko, Linda – Ms. Chasko is a Physical Science Technician in the Human Systems Integration Branch of the Pittsburgh Research Laboratory, NIOSH. Since 1996, she has been involved in planning and conducting training simulations for mine emergency responders and developing various technologies to assist responders during emergency operations. Recently she has been documenting the availability of mine rescue training facilities in the US and assisting with development of virtual reality training for mine rescue teams.

Diamond, Jason – Mr. Diamond is formerly a PGA Golf Pro. He graduated with a B.A. in Business from the University of Delaware and an A.S. in Mining Technology from The Pennsylvania State University. He began his career at Consol in 2008 as a Foreman Trainee at Bailey Mine. In 2010, Jason moved to the safety department and four years later was promoted to Bailey Mine's Coordinator of Training and Development. In 2016, Jason was promoted to Consol Energy's Coordinator of Training and Development for all coal operations. In this position, Jason began working with NIOSH on self-escape research efforts including the testing of Mine Emergency and Escape Training (MEET), and most recently "The Improving Self-Escape from Underground Coal Mines Training Initiative."

Drenth, Jacob – Mr. Drenth has been a mine safety trainer for 20+ years and has more than 45 years in audio, PA, and mixing live sound.

Frederick, Stacy – Ms. Frederick is a trainer and coach with Catamount Consulting as well as a practicing attorney in the Glens Falls, New York area. She spent nearly 15 years, along with her teacher husband and fellow Catamount team member, Jason Spector, in the areas of Empathy and Social Emotional support for students and teachers. She now uses the empathy space as a foundation for her work in leadership training for all organizations. Stacy's unique background and experience offers a broad range of value to many individuals and groups in relation to employee engagement, culture building, and mindset mastery. Stacy's mission is to help people provide compassionate empathy for each other in any environment.

Gill, Irvin – Mr. Gill is the president of Catamount Consulting of Pennsylvania in Reading. He has over 25 years of experience in the mining industry as well as safety management and training, most recently serving as the area coordinator for a large mining company overseeing all aspects of their open pit mining operations. His combination of knowledge, real world experience and expertise bring our clients a unique perspective in both training and consulting. Irv is also a certified trainer or instructor in a broad range of disciplines.

Gillund, Ashley – Ms. Gillund will also review games and other interactive techniques she has successfully used. She is a Safety and Health Instructor with the Workforce Development Solutions division of Northland C & TC in Minnesota. Ashley worked in the construction and mining industry for 10 years and discovered a passion for safety and training in the workplace and has now been with WDS for 5 years. Her approach to training engages participants by keeping the tone of the class light and fun while ensuring the content is educational and effective. She is the type of trainer that encourages participation throughout the entire session using hands on activities that can be used during in-person or online training sessions. Ashley is an active board member with the national Joseph A. Holmes Safety Association and the state chapter, MN Mine Safety Association.

Gover, Brad – Mr. Gover has 25 years' experience with APAC Shears, A CHS Company.

Gyawu, Eugene – Mr. Gyawu is a Ph.D student graduate teaching assistant at the Mining and Nuclear engineering department at Missouri S&T. He holds a Master of Science degree in Geology and Geophysics and Bachelor of Science degree in Geological Engineering. Eugene have over 11 years mining industry experience in geotechnical, mining and exploration in metal deposits. He is currently a member of the mine sustainability modeling team at Missouri S&T and his research is a NIOSH sponsored project to investigate environmental and human factors that affects miners' ability to safely self-escape a mine in an emergency.

Hart, W. Ben – Mr. Hart has been a mine trainer since 1988, and a Certified Mine Safety Professional He resides with his wife, Virginia and two "Fur Babies - Dolly and SweetPea - in Tallahassee Florida. Ben was the Florida MSHA Grantee from 1988-2013, retiring in September 2013. After 4 days of "retirement", he began W. Ben Hart & Associates, a full-

service mine safety consulting firm, providing training and auditing throughout the United States and Internationally. In his "spare" time, he enjoys flying his 1946 Piper Cub, and riding his Honda Goldwing. He and Virginia became great grandparents in late August.

Hoebbel, Cassandra – Ms. Hoebbel is a Behavioral Research Scientist for the National Institute for Occupational Safety and Health (NIOSH), Pittsburgh Mining Research Division (PMRD). As a member of the Human-Systems Integration Branch, Escape, Rescue, and Training team, Cassie's research focuses on the characterization and improvement of the mine emergency escape system. Of specific interest to Cassie is how mineworker competence might be improved through enhanced self-escape training and assessment. Trained in psychology and school counseling, she received her B.A. in Psychology from the State University College at Buffalo, and her Ed.M. and Ph.D. from the Graduate School of Education at the State University of New York at Buffalo.

Hoskinson, Steve – Mr. Hoskinson started in 1998 working for a federal grant program and worked for Hutchinson Community College for 10 years under Lee Gramm as a mine safety trainer. For the past 15 years he has been involved with industry or working on his own as a consultant. Mr. Hoskinson is an MSHA approved instructor for surface and underground, currently working in 7 states.

Kling, Clint – Mr. Kling is a mining engineer with certificates in occupational safety, explosives and blasting, management and leadership. Clint has led teams safely and effectively throughout his career. He has a wide array of knowledge not only in mining but also in the oil fields as well. He has worked as a directional driller, civil engineer, and a contractor for the underground science lab. Clint is currently pursuing his Ph.D. in mining engineering at SD Mines. He has been helping with the initial phases of the Caterpillar and Mines consortium; a research effort in technology development, assessment, and improvement. A recent development of Clint's is a hazard recognition VR module that is enhancing industry to train personnel more effectively.

LaFollette, **Angela** – Dr. LaFollette is an Information Technology Specialist for the National Institute for Occupational Safety and Health (NIOSH), Pittsburgh Mining Research Division (PMRD). She holds a Doctorate in Management in Organizational Leadership with a specialization in Information Systems and Technology (DM/IST) from the University of Phoenix: School of Advanced Studies. Dr. LaFollette also has an M.B.A. in Technology Management, a B.S. in Information Systems Technology, and an A.S. in Computer Science. As a member of the Escape, Rescue, and Training team at NIOSH, Dr. LaFollette's focus is to use research findings to develop e-learning training modules and to share results with the mining industry. Training module development involves data collection, data entry, programming, and field testing. She has expertise in the e-learning development tool Lectora and in creating e-learning that adheres to 508 standards, so it is accessible to all learners.

Lauriski, David R. – Mr. Lauriski is a member of the research faculty at the Colorado School of Mines. He has 15 years of experience in higher education, in both faculty and administrative staff roles, plus five years of experience in the occupational safety technology field. Mr. Lauriski has authored and co-authored several articles on topics relating to occupational safety in publications such as Mining Engineering, Rock Products, and The Journal of Emergency Medicine. He is an alumnus of the University of Denver and of City, University of London.

Lee, Danny – Mr. Lee started his safety career in 1984 as a Safety Consultant with the MA OSHA Consultation Program. He has held several health and safety leadership roles, which include serving as Safety Supervisor for the MA OSHA Consultation Program and as Field Safety Supervisor for the \$6.6B MWRA project, responsible for cleaning up Boston Harbor. In addition to field work, Mr. Lee has taught safety classes as adjunct faculty for Northeastern University and Keene State College. He is an OHSA Authorized Trainer (General Industry and Construction) and holds numerous Certifications. He also works as a trainer for the MSHA State Grants Program (MA). As a seasoned safety professional, he is eager to share his experience with other trainers.

Macdonald, Brendan – Mr. Macdonald is a Mechanical Engineer at the National Institute for Occupational Safety and Health. His work includes the implementation and maintenance of virtual reality technology and the research and implementation and testing of illumination technologies. He received his Bachelor's degree in Mechanical Engineering from Vanderbilt University and his Master's degree in Entertainment Technology from Carnegie Mellon University.

McGuire, Joe – Mr. McGuire holds a B.A. from Benedictine College, an M.S. from NW Missouri State, and obtained his Ph.D. from Iowa State University. He retired after 36 years in the construction aggregates production, in both surface and underground mines. Throughout his career, Mr. McGuire presented over 135 seminars on safety and environmental educational events at Aggregates Association events in IA, IL, WS, S D, KS, MO, WY, NE, IN, TX, MI, CO and NSSGA. He is lead author on two zoning permits guides published by NSGGA and NAPA and lead author on 13 MSHA Annual Safety Training Guides which have received several education/training awards from MSHA/TRAM. Additionally, Joe has had 44 articles on safety training and environmental compliance published.

McKenna, Scott – Mr. McKenna is the President of Catamount Consulting. He is a certified instructor with the Mine Safety Health Administration, and an OSHA Certified Trainer. He has over 24 years' experience in the mining and construction industries and is active in multiple organizations. Catamount provides expertise in all facets of construction, mining, firearms and leadership development. Scott has been a varsity wrestling coach at Warrensburg Central School for over 20 years. In the last 7 years, they have had over 150 wins & 7 years of Championship Seasons. He believes that we are all coaches within the People Business. You must have high levels of emotional intelligence to assure everyone around you is coached to their level of high performance.

Miller, Karen M., *ACA, CMSP* – Ms. Miller is the Mining Program Manager of Florida's MSHA State Grants Program (Florida Mine Safety Program), which provides creative and interactive learning programs and training modules to mining operations and contractors by bringing exciting new ideas to life and real-life examples to every training class. She works with miners and contractors as they look into innovative ways to approach safety, health and mine rescue challenges in the mining industry. Ms. Miller is a Certified Mine Safety Professional (CMSP) and holds MSHA IN and IS Trainer Qualifications, Notary Public for the Great State of Florida, Accredited Claims Adjuster and ASHI/Medic First Aid Instructor for First Aid, CPR and AED Training. Ms. Miller introduced Mine Rescue Training Programs and Surface Competitions

as part of Florida's Regional current program developments, providing ERT Teams with an opportunity to demonstrate competency, and identify potential gaps in knowledge and training through a wide range of realistic emergency response scenarios. Ms. Miller coordinates, scripts, develops and produces many award-winning Video productions for the Florida MSHA State Grants Program.

Moffett, Garland – Mr. Moffett has over 25 years of experience in the mining Industry. He is currently Supervisor of Instruction for The University of Texas at Austin. Garland's additional ties to the industry consist of: President of The Texas Mine Rescue Association, active member of all Joseph A. Holmes Safety Associations within the State of Texas, national participant of JAH Safety Association, Holmes Mine Rescue Association, actively assists MSHA in Mine Rescue events throughout the U.S., actively performs speaking engagements for various conferences involving "Spring Thaws etc." and MSHA, South Central Joint Mine Health Safety Conference Committee Member, Motivational Speaker.

Navoyski, Jason – Mr. Navoyski is a 3D graphics developer working for NIOSH on VR (virtual reality) related projects. He has extensive experience creating assets for virtual reality related to mining.

Nix, Sherri K., *CMSP* – Ms. Nix is an MSHA Approved Instructor and Certified Mine Safety Professional. Ms. Nix is responsible for environmental, safety & health compliance duties such as compliance audits (internal, external & regulatory), employee training development & delivery, policy/procedure writing/review, hazard assessments, regulatory monitoring (dust/ noise), contractor compliance management, incident/accident investigation & reporting, health assessments, management of regulatory mandatory programs, acting as liaison between clients and regulatory agents, workers compensation carriers, etc.

Nixon, Carol, Ph.D. – Ms. Nixon is an Associate Service Fellow in the Spokane Mining Research Division in the National Institute of Occupational Safety and Health. She has over 20 years of experience in the design, implementation, and evaluation of health promotion and prevention. She co-leads strategic development and implementation of the Miner Health Program designed to holistically address occupational health and safety or workers in the mining industry.

Pham, Ngan – Ms. Pham is from the University of Arizona and is a research assistant at the University of Arizona's College of Public Health, where she designs and prototypes applications for interactive training and performance assessments. She co-designed SMART, an app to help small operators with MSHA compliance tracking, training, and reporting. She's also a user experience assistant at the University Libraries, where her work focuses on developing UI prototypes for digital web products, conducting user research, and performing usability tests. Ms. Pham is graduating in December with a Bachelor's in Information Science.

Phillips, Brittanie – Ms. Phillips is a University of Texas HSTC Senior Field Trainer/Analyst. She has a Bachelor of Science in Occupational Safety, as well as her associates in Applied Science Oil and Gas Production. Brittanie has over 8 years of hands-on experience in the safety sector and is a certified MSHA, OSHA, and First Aid Instructor.

Reed, Rustin – Mr. Reed is a Certified Industrial Hygienist with over ten years of industry experience that includes mining, construction, and manufacturing. He currently serves as a Co-Director for the University of Arizona's Western Mining Safety and Health Training Resource Center. Reed has contributed to numerous research projects related to miner safety and health, including evaluating health and safety outcomes of training, assessing alternative fuels in underground mining, and improving noise exposure mitigation methods. Reed teaches public health courses in academia, as well as OSHA 10- and 30-hour trainings and supervisory leadership workshops. He is a former Chair of the American Industrial Hygiene Association's Mining Working Group.

Reiher, Michelle – Ms. Reiher is a certified industrial hygienist and certified safety professional with over 20 years of safety and health experience in general industry and mining. She holds the MSHA IS, IU, and IN certifications and has developed and conducted safety and health training within the MSHA Part 48 New Miner, Annual Refresher, and Instructor Training courses. She has a passion for health and safety training and believes everyone should be given the knowledge to make choices that will keep them safe.

Ross, Chuck – Mr. Ross was born at the mine first aid annex at the remote mining location where his father worked. He has over 30 years of industrial experience in Steel, Pulp & Paper and Mining. He is a veteran of the United States Marine Corps, a Certified Mine Safety Professional, and is a Certified Safety & Health Official in both OSHA General Industry and OSHA Construction. He is currently the Director of Safety for Capitol Aggregates (Zachry), located in San Antonio, Texas.

Schmidt, Paul – Mr. Schmidt is a Research Engineer in the Escape, Rescue, and Training Team at NIOSH's Pittsburgh Mining Research Division. He has 10 plus years in Mine Rescue and over 15 years' experience in Mine Post-Incident Operations and Technologies. Prior to joining NIOSH, Paul was an Electrical Engineer and a Branch Chief with MSHA's Mine Emergency Operations.

Smith, Glenna, *CMSP*, *University of Arizona* – Ms. Smith is a dedicated safety professional with a career spanning multiple decades. As the Director of Consulting and Training with McCraren Compliance, Glenna develops training curriculum, works with field safety professionals, and operates the Four Corners Office. Glenna's passion for safety is evident by her numerous training certifications and deep connections to the safety community, both national and international. She has served as a safety professional in the private, public, government and consulting sectors. Her training and experience cover the mining, construction, general industry, and energy sectors.

Tukkaraja, Purushotham – Dr. Tukkaraja is an Associate Professor, holds a B.S., M.S., and Ph.D. in mining engineering and specializes in underground ventilation and air conditioning, mine safety and health, rock fragmentation, and bulk materials handling. He is the Director of the South Dakota MSHA State Grants Program at South Dakota Mines and MSHA-approved mine safety and health instructor for surface and underground mines. He is an ABET Program Evaluator (PEV); and Qualified Professional (QP) Member of the Mining and Metallurgical Society of America (MMSA). He has organized the 2021 North American Mine Ventilation Symposium. He serves on the University Research Committee at SD Mines and SME's

Underground Ventilation Committee (UVC) Executive Board. He is the advisor for the South Dakota Mines student chapter of the International Society of Explosives Engineers (ISEE). He is also an Associate Editor, Editorial Board Member, and Reviewer for several Mining Engineering Journals. He served as the President of the Black Hills Chapter of ISEE. He is an active member of SME, MMSA, BHISEE, and ISEE.

Vault, Koretta "Korky" – Ms. Vault has more than 30 years of health and safety training experience in both the environmental laboratory and mining industries. She holds the MSHA IS, IU and IN certifications and has developed and conducted training for MSHAPart 48 courses and OSHA courses on Fall Protection, Confined Space Entry and Hazard Communication. In addition to believing that proper training will help prevent injuries and fatalities, she has a passion for understanding how our individual brain make-up can impact our daily lives, including safety in the workplace.

Weston, Cory – Mr. Weston has been a Safety and Health professional with the Customized Workforce Education group (CWE) a division of South Central College in North Mankato, MN for the last 5 years. Cory is a subject matter expert for CWE in the areas of First Aid/CPR and CDL. He is working towards being credentialed by the Board of Certified Safety Professionals as an Associate Safety Professional (ASP) and as a Certified Instructional Trainer (CIT). Cory has taught numerous Part 46 Annual Refresher courses during his time with CWE, and plans to obtain his Certified Mine Safety Professional (CMSP) certification.

Weston, Robert – Mr. Weston has been a Safety and Health professional with the Customized Workforce Education group (CWE) a division of South Central College in North Mankato MN for the last 18 years. He has presented at numerous local, regional, and national events. He is credentialed by the Board of Certified Safety Professionals (CSP & CIT) and the Society for Mining, Metallurgy, and Exploration (CMSP). Robert is a subject matter expert for CWE in the areas of OSHA Safety and Mine Safety training

Weston, Terry, *CSP, CIT, CMSP* – Mr. Weston is a Workplace Safety Consultant CWE at South Central College. He has been a Safety and Health professional with the Customized Workforce Education group (CWE), a division of South Central College in North Mankato MN for the last 20 years. He has presented at numerous events including ISMSP, TRAM, and Joseph A. Holmes National conferences. He is credentialed by the Board of Certified Safety Professionals (CSP) (CIT) and the Society of Mining, Metallurgy, and Exploration (CMSP). Terry is a subject matter expert for CWE in the areas of OSHA Safety and Mine Safety training. Terry is also certified to train specialty programs such as PowerLift® and Safety DNA®.

Williams, Heidi – Ms. Williams is the Office Manager for Catamount Consulting offices. Catamount Consulting provides training in all facets of OSHA, MSHA and Work Zone safety as well as On-Site Drug and Alcohol Testing, On-Site Hearing Testing, Noise and Dust Testing, company management training and motivational presentations. Heidi's primary objective is to oversee all offices for the Catamount Group, the online training portal and development of future Catamount offices. Catamount Consulting has offices throughout the Northeast. Catamount has developed several national seminars including Supervisor Seminars and ACRI Training. Heidi has over 15 years of experience in the mining industry and is active in many safety associations. **Wobby, Richard** – Mr. Wobby is Executive Vice-President of the Associated General Contractors of Vermont (Ranked the #1 AGC chapter in the country for 2021). He has over 20 years' experience in the construction and mining industries as a safety management consultant and professional speaker, helping more than 100 companies or associations in their safety systems. Constantly in demand, Richard speaks to an average of 50 associations, companies, trade shows and conventions each year teaching his philosophy across New England. He continues to consult with an average of 50 clients annually, assisting in and improving their safety performance. He has developed both virtually and in-person programs and policies for the construction and mining industries.