

Do You Understand Mine Emergencies?



Are You Prepared for a Mine
Emergency?

PARTICIPANT'S GUIDE

MODULE 3: CSE SR-100, SELF-CONTAINED SELF-RESCUERS

PENN STATE MINER TRAINING PROGRAM
UNIVERSITY PARK, PA
2008



MINER TRAINING PROGRAM

DO YOU UNDERSTAND MINE EMERGENCIES?

ARE YOU PREPARED FOR A MINE EMERGENCY?

Participant's Guide

MODULE 3: CSE SR 100 SELF-CONTAINED SELF- RESCUERS

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Preface

The history of underground coal in the United States is notable for its successes and failures. In the distant past, coal played a prominent role in our industrial revolution, rail transportation, iron and steel making, and heating needs. Most recently, it has been the source for affordable electricity, and for a myriad of other fuels and products. Extracting and processing coal is challenging, and the miners who work in the industry work in one of the Nation's most hazardous occupations.

Mine emergencies, such as mine explosions, fires, and inundations have been all too common. Too many miners have lost their lives over the years, and many more have suffered serious injuries doing the job that typically provides challenge, high wages, and good benefits.

Recent mine emergencies, such as Jim Walter Resources No. 5 Mine, Sago Mine, Aracoma Alma Mine No 1, and the Darby Mine No. 1 have reminded us that continuous safety and continuous safety improvement is our goal—a challenge to every miner.

Acknowledgements

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The training program, titled, *Do you understand mine emergencies? Are you prepared for a mine emergency?* is the result of a 2007/2008 MSHA, Brookwood-Sago Mine Safety Grant. This grant, one of several awarded in 2007 by the Mine Safety and Health Administration, was awarded to the Penn State Miner Training program on September 30, 2007.

The program was the result of a cooperative effort between many mining stakeholders, and consists of an achieved webcast, titled, *Escape and survive*, and the training program referred to above.

These materials are available for a limited time at www.minerstownhall.org, or through the MSHA Academy at www.msha.gov.

We encourage you to help us improve this program. Please don't hesitate to contact us at 814.865.7472, or by contacting any of the authors (See Appendix B).

INTRODUCTION

Purpose

The training program, titled, *Do you understand mine emergencies? Are you prepared for a mine emergency?* was prepared to help miners deal with mine emergencies. The purpose of the training program is to improve your capability to survive a mine emergency, primarily through mine emergency preparedness (MEP). Surviving an emergency depends on many factors, such as size of the mine, location of miners, the scope of the incident, the amount of energy released, the effectiveness of emergency plans, training and good decision-making. Some factors in an emergency can't be controlled. What you can control is your knowledge and skills in emergency preparedness and response. By improving your knowledge of emergency principles, emergency skills, and decision-making capabilities, more miners will be able to survive mine emergencies.

Format/content

This training program uses Internet webcast technology and CD ROM based PowerPoint presentations, an Instructor's and Participant's Guide. The webcast can be accessed through the Internet at www.minerstownhall.org or played from a CD. During the webcast, various expert panelists will comment on mine emergency subjects. Informational slides appear to the right of the speakers to summarize most of the main points. In addition, a series of video clips are "rolled in" at the appropriate times. These realistic clips, shot on location at a working mine, represent a simulated mine emergency and response, and feature donning/switching of the SCSR, and the use of directional lifelines.

This training program consists of six training modules that address the following major mine emergency preparedness issues:

- Mine emergencies
- Emergency response plans
- Self-contained self-rescuers
- Emergency communications and miner tracking
- Escape and evacuation
- Breathable air safe havens/refuge chambers

Each module has a pre-test and a post-test (See Appendix A). You may be given a short test before each lesson to evaluate your knowledge of key points. You may also be given a slightly longer test at the conclusion of the module to evaluate if you grasped the key concepts of the module. If you missed some questions on the pre-test, pay close attention to those parts of the training module.

A few tips to help you with the learning process:

- Take notes
- Ask questions
- Apply your training to your mine
- Talk with other miners
- Think about the layout of your mine during the training
- Make suggestions to improve training
- Ask yourself (and discuss with other miners): “If an emergency were to occur at my mine, how would I apply these principles to escape or evacuate?”

Application

Knowing how to react in an emergency is critical to your survival. Coal mining is serious business! Training is also serious business! Take your training very seriously! Pay attention to training on mine emergencies, and take it very seriously! Thoroughly prepare yourself by finding out about your mine’s most important mine emergency preparedness procedures. In a real emergency your training and your knowledge could help save your life. A few tips to help you think about how to react to mine emergencies:

- Know the contents of your mine Emergency Response Plan.
- Know the contents of your emergency escape and fire-fighting plans.
- Know the layout of your mine and where escapeways, directional lifelines, emergency supplies, extra SCSR’s and refuge chambers are located.
- Know how to report an emergency and provide accurate information.
- Know how to don and switch SCSR units.
- Know where to meet at the first sign of an emergency.
- Know how your mine tracking system works.
- Know how refuge chambers operate.

- Know where you are at all times in the mine, and how to escape from where you are located.

Of course, the best solution to mine emergencies is to have no emergencies! Your daily efforts to work safely, play by the rules, report problems and take care of yourself and your co-workers can go a long way to make “no emergencies” a reality. You must be prepared however for the unexpected and emergencies are unexpected.

Best wishes to you in your training and your mining career. Thank you for all you do to make mining a safer place to work! Never let a chance for something that could save your life pass you by. Learn all you can about mine emergency response! What you know could save your life, or help someone else save yours!

Module 3

CSE, SR-100, Self-Contained Self-Rescuers

Participant's Guide

Purpose of the Module

- To enhance your ability to understand the purpose and function of the SR 100 self-contained, self rescuer (SCSR).
- To enhance your knowledge of the care and use of the SR 100 SCSR

Pre-test

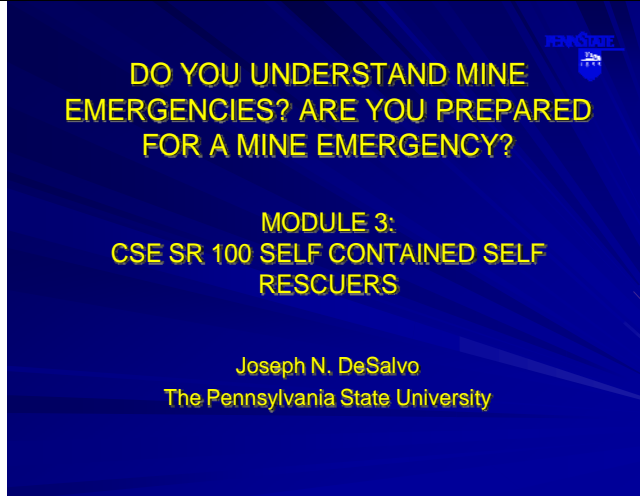
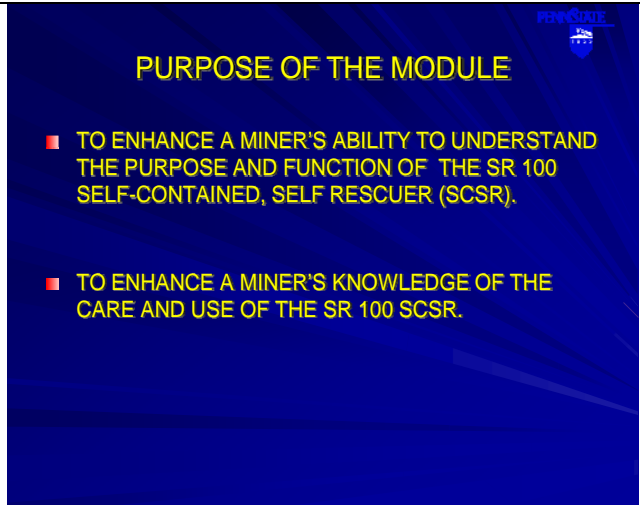
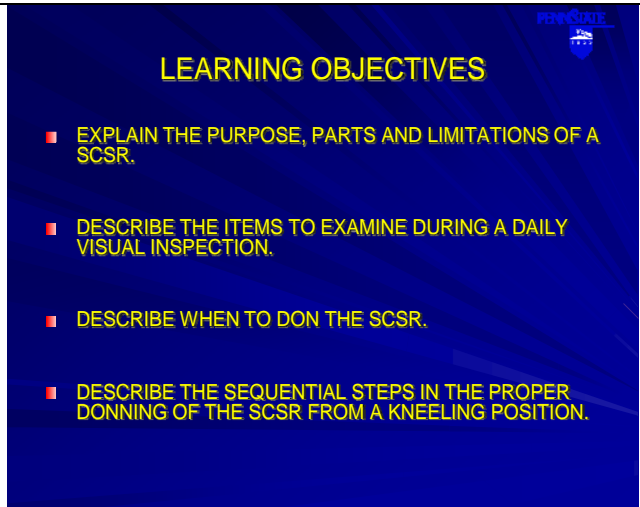
Following the introduction of this module, your instructor will ask you to complete a pre-test. The pre-test will demonstrate your knowledge and understanding of this topic.

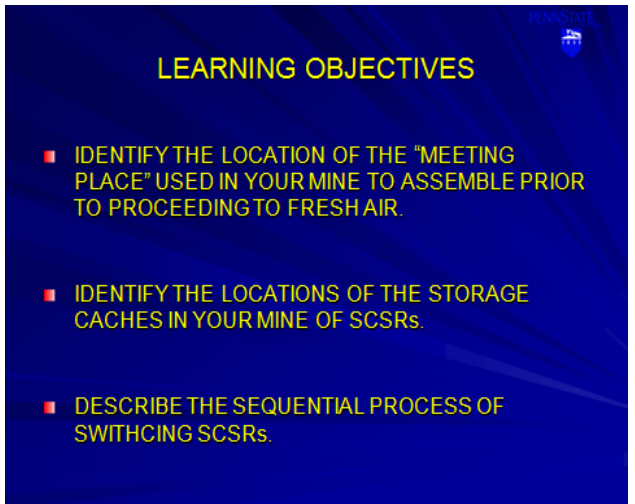
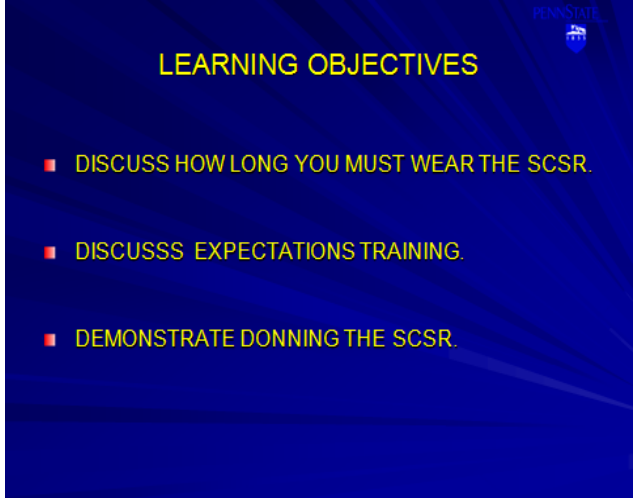
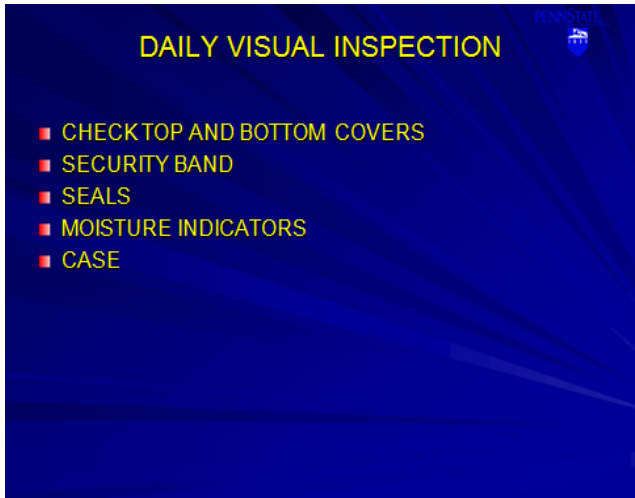
Post-test

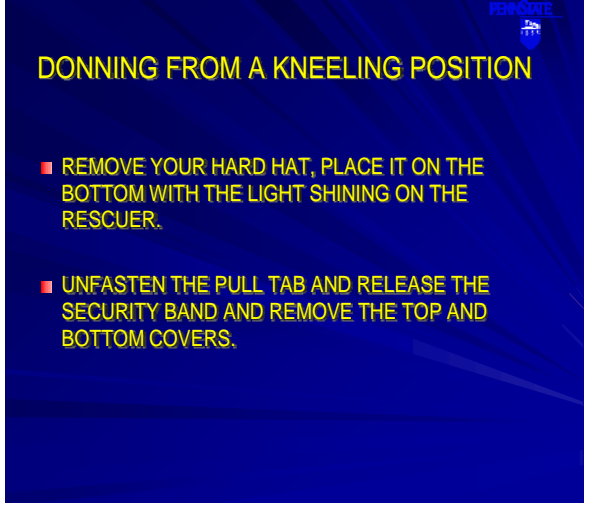
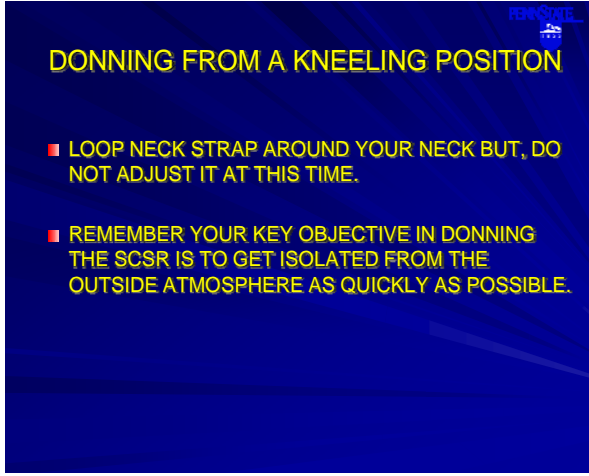
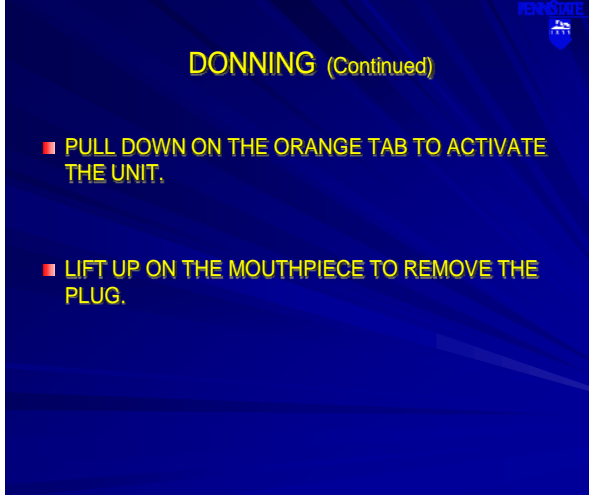
After completing this module, the instructor will ask you to complete a post-test. By comparing the group scores between the pre- and post-test, the instructor can demonstrate whether the training was effective.




Evaluation

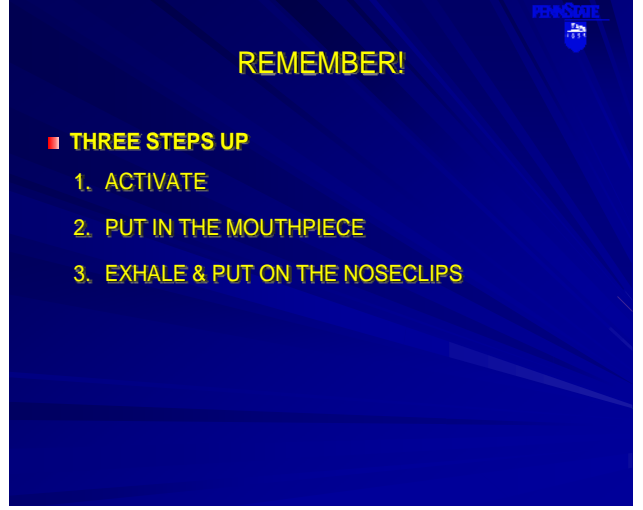
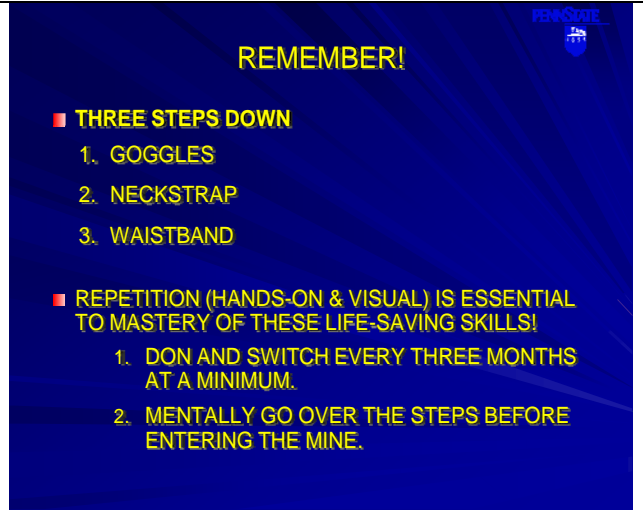
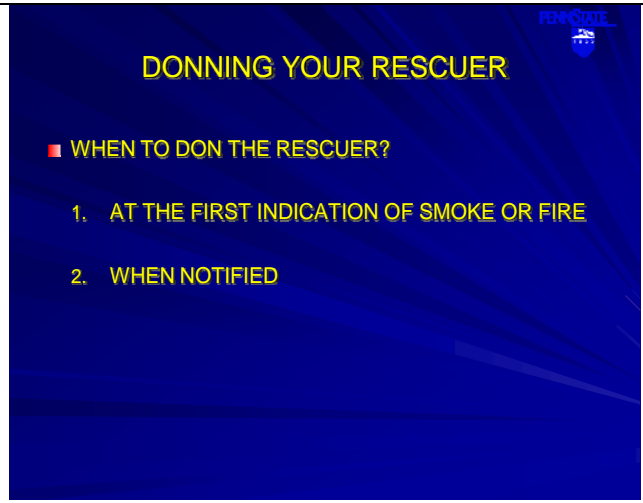
Following completion of the course, you will be asked to provide feedback to the instructor on whether you believe the course achieved its purpose. You will also be asked several questions regarding the design, and implementation of the course. An evaluation form for will be used for this purpose.

Introduction	Notes
 <p>DO YOU UNDERSTAND MINE EMERGENCIES? ARE YOU PREPARED FOR A MINE EMERGENCY?</p> <p>MODULE 3: CSE SR 100 SELF CONTAINED SELF RESCUERS</p> <p>Joseph N. DeSalvo The Pennsylvania State University</p>	<p>How much do you know about your self-contained self-rescuer?</p>
 <p>PURPOSE OF THE MODULE</p> <ul style="list-style-type: none"> ■ TO ENHANCE A MINER'S ABILITY TO UNDERSTAND THE PURPOSE AND FUNCTION OF THE SR 100 SELF-CONTAINED, SELF RESCUER (SCSR). ■ TO ENHANCE A MINER'S KNOWLEDGE OF THE CARE AND USE OF THE SR 100 SCSR. 	<p>Learning all you can about your SCSR can save your life!</p>
 <p>LEARNING OBJECTIVES</p> <ul style="list-style-type: none"> ■ EXPLAIN THE PURPOSE, PARTS AND LIMITATIONS OF A SCSR. ■ DESCRIBE THE ITEMS TO EXAMINE DURING A DAILY VISUAL INSPECTION. ■ DESCRIBE WHEN TO DON THE SCSR. ■ DESCRIBE THE SEQUENTIAL STEPS IN THE PROPER DRESSING OF THE SCSR FROM A KNEELING POSITION. 	

Introduction	Notes
 <p>LEARNING OBJECTIVES</p> <ul style="list-style-type: none"> ■ IDENTIFY THE LOCATION OF THE "MEETING PLACE" USED IN YOUR MINE TO ASSEMBLE PRIOR TO PROCEEDING TO FRESH AIR. ■ IDENTIFY THE LOCATIONS OF THE STORAGE CACHES IN YOUR MINE OF SCSRs. ■ DESCRIBE THE SEQUENTIAL PROCESS OF SWITCHING SCSRs. 	<p>You must know where to meet your crew in an emergency.</p>
 <p>LEARNING OBJECTIVES</p> <ul style="list-style-type: none"> ■ DISCUSS HOW LONG YOU MUST WEAR THE SCSR. ■ DISCUSS EXPECTATIONS TRAINING. ■ DEMONSTRATE DONNING THE SCSR. 	
 <p>DAILY VISUAL INSPECTION</p> <ul style="list-style-type: none"> ■ CHECK TOP AND BOTTOM COVERS ■ SECURITY BAND ■ SEALS ■ MOISTURE INDICATORS ■ CASE 	<p>Your SCSR will only work if it is functional-check it every day!</p>

Important Points	Notes
 <p>DONNING FROM A KNEELING POSITION</p> <ul style="list-style-type: none"> ■ REMOVE YOUR HARD HAT, PLACE IT ON THE BOTTOM WITH THE LIGHT SHINING ON THE RESCUER. ■ UNFASTEN THE PULL TAB AND RELEASE THE SECURITY BAND AND REMOVE THE TOP AND BOTTOM COVERS. 	<p>You must know how to don your SCSR. Follow all the steps your instructor provides!</p>
 <p>DONNING FROM A KNEELING POSITION</p> <ul style="list-style-type: none"> ■ LOOP NECK STRAP AROUND YOUR NECK BUT, DO NOT ADJUST IT AT THIS TIME. ■ REMEMBER YOUR KEY OBJECTIVE IN DONNING THE SCSR IS TO GET ISOLATED FROM THE OUTSIDE ATMOSPHERE AS QUICKLY AS POSSIBLE. 	<p>Mine air can be toxic.</p> <p>The SCSR isolates your lungs from mine air.</p>
 <p>DONNING (Continued)</p> <ul style="list-style-type: none"> ■ PULL DOWN ON THE ORANGE TAB TO ACTIVATE THE UNIT. ■ LIFT UP ON THE MOUTHPIECE TO REMOVE THE PLUG. 	<p>The SCSR provides approximately sixty minutes of oxygen.</p>

Important Points	Notes
<p style="text-align: right;"><small>PENN STATE</small> </p> <p style="text-align: center;">DONNING (Continued)</p> <ul style="list-style-type: none"> ■ INSERT THE MOUTHPIECE REMEMBERING TO BITE DOWN FIRMLY ON THE LUGS AND WRAP YOUR LIPS AROUND THE MOUTHPIECE. ■ PUT ON THE NOSECLIPS. ■ YOU HAVE JUST COMPLETED THE FIRST THREE STEPS OF THE 3+3 DONNING METHOD. 	<p>If the mouthpiece is not fully in your mouth, mine air can leak in when you breathe.</p>
<p style="text-align: right;"><small>PENN STATE</small> </p> <p style="text-align: center;">DONNING (Continued)</p> <ul style="list-style-type: none"> ■ NOW YOU ARE READY TO PERFORM THE NEXT THREE STEPS IN THE 3+3 METHOD. ■ PUT ON THE GOGGLES-YES YOU DO NEED THEM AND YOUR GLASSES WILL FIT OVER THEM. ■ TIGHTEN THE NECK STRAP. MAKE SURE THE UNIT IS UP HIGH ON YOUR CHEST SO THAT YOU CAN MOVE YOUR HEAD FREELY WITHOUT PULLING ON THE HOSE. 	<p>The goggles help to keep smoke from burning your eyes.</p>
<p style="text-align: right;"><small>PENN STATE</small> </p> <p style="text-align: center;">DONNING (Continued)</p> <ul style="list-style-type: none"> ■ TIGHTEN THE WAIST STRAP. DURING SWITCHING THE UNIT WILL BE HANGING FROM IT. ■ THE FINAL STEP BEFORE CONTINUING OUT THE ESCAPEWAY IS TO PUT YOU HAT BACK ON. 	

Important Points	Notes
 <p>REMEMBER!</p> <ul style="list-style-type: none"> ■ THREE STEPS UP 1. ACTIVATE 2. PUT IN THE MOUTHPIECE 3. EXHALE & PUT ON THE NOSECLIPS 	<p>3 Steps up!</p>
 <p>REMEMBER!</p> <ul style="list-style-type: none"> ■ THREE STEPS DOWN 1. GOGGLES 2. NECKSTRAP 3. WAISTBAND <ul style="list-style-type: none"> ■ REPETITION (HANDS-ON & VISUAL) IS ESSENTIAL TO MASTERY OF THESE LIFE-SAVING SKILLS! 1. DON AND SWITCH EVERY THREE MONTHS AT A MINIMUM. 2. MENTALLY GO OVER THE STEPS BEFORE ENTERING THE MINE. 	<p>3 Steps down!</p>
 <p>DONNING YOUR RESCUER</p> <ul style="list-style-type: none"> ■ WHEN TO DON THE RESCUER? 1. AT THE FIRST INDICATION OF SMOKE OR FIRE 2. WHEN NOTIFIED 	<p>Do not hesitate to don your SCSR if you think you need to!</p>

Important Points

Notes



PUT YOUR HAT ON THE BOTTOM SO THAT YOUR LIGHT IS ON THE RESCUER, THEN RELEASE THE STRAP AND REMOVE TOP AND BOTTOM COVERS.

The light on your hard hat can help you see to open the case and see the components.



UNFOLD NECK STRAP



LOOP NECK STRAP

Important Points

Notes



DO NOT ADJUST NECKSTRAP AT THIS TIME. REMEMBER YOUR PRIMARY GOAL IS ISOLATION



ACTIVATE THE OXYGEN THEN REMOVE PLUG FROM THE MOUTHPIECE.



MAKE SURE THE MOUTHPIECE LUGS ARE BEING GRIPED FIRMLY BY YOUR TEETH AND YOUR LIPS ARE WRAPPED AROUND THE MOUTHPIECE.

Be sure the mouthpiece is fully inserted in your mouth!

Important Points

Notes



AFTER INSERTING MOUTHPIECE AND PUTTING ON NOSECLIPS YOU ARE NOW ISOLATED. PUT ON GOGGLES AND ADJUST STRAPS




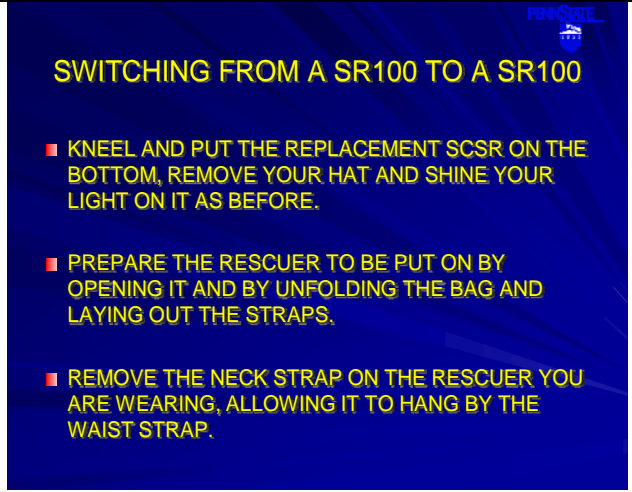
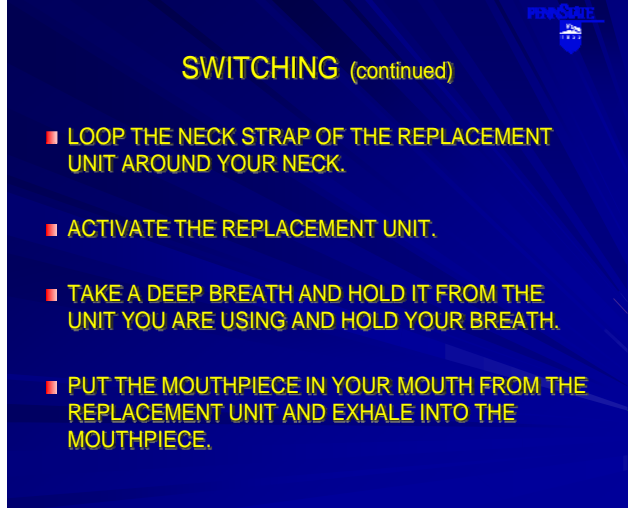
MAKE SURE NECK STRAP IS ADJUSTED SO THAT UNIT IS LOCATED UP HIGH ON YOUR CHEST AND THE WAIST STRAP IS TIGHT.









SCSRs INFLATED AND GETTING READY TO PROCEED OUT THE ESCAPEWAY.

The SCSR will give you enough oxygen to get to the next supply of SCSRs.

Where are your SCSR caches located?

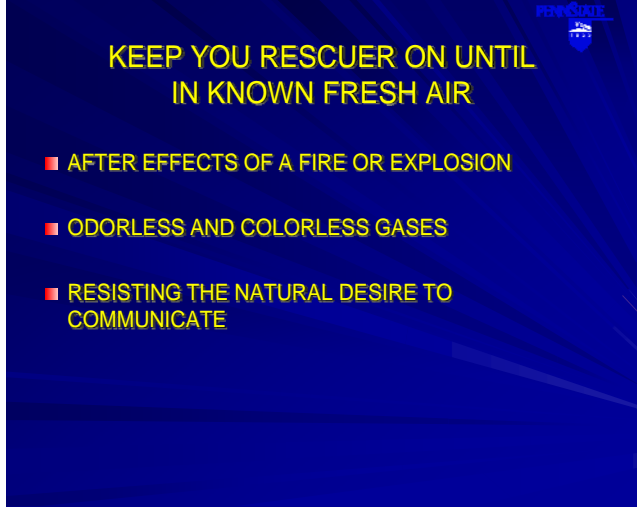
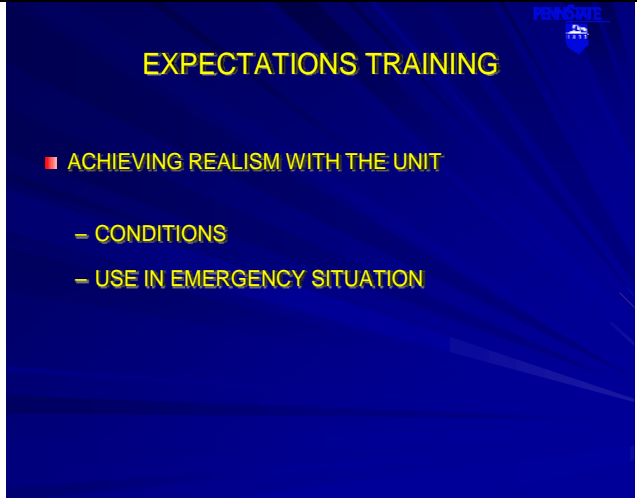
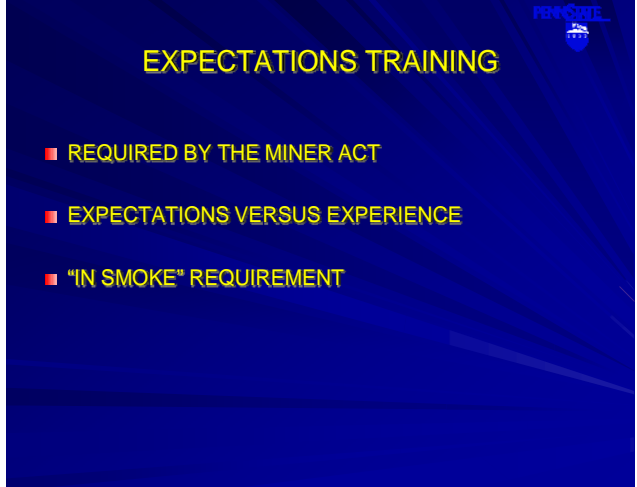
Important Points	Notes
 <p style="text-align: center;">ESCAPE</p> <ul style="list-style-type: none"> ■ COMMUNICATE YOUR LOCATION ■ KNOW YOUR MEETING PLACE ■ KNOW YOUR ESCAPWAYS ■ KNOW THE LOCATION OF THE STORAGE AREAS 	<p>You should know what to do before an emergency occurs.</p>
 <p style="text-align: center;">SWITCHING FROM A SR100 TO A SR100</p> <ul style="list-style-type: none"> ■ KNEEL AND PUT THE REPLACEMENT SCSR ON THE BOTTOM, REMOVE YOUR HAT AND SHINE YOUR LIGHT ON IT AS BEFORE. ■ PREPARE THE RESCUER TO BE PUT ON BY OPENING IT AND BY UNFOLDING THE BAG AND LAYING OUT THE STRAPS. ■ REMOVE THE NECK STRAP ON THE RESCUER YOU ARE WEARING, ALLOWING IT TO HANG BY THE WAIST STRAP. 	<p>You can switch SCSRs at the cache.</p> <p>The cache should not be more than a thirty minute walk.</p>
 <p style="text-align: center;">SWITCHING (continued)</p> <ul style="list-style-type: none"> ■ LOOP THE NECK STRAP OF THE REPLACEMENT UNIT AROUND YOUR NECK. ■ ACTIVATE THE REPLACEMENT UNIT. ■ TAKE A DEEP BREATH AND HOLD IT FROM THE UNIT YOU ARE USING AND HOLD YOUR BREATH. ■ PUT THE MOUTHPIECE IN YOUR MOUTH FROM THE REPLACEMENT UNIT AND EXHALE INTO THE MOUTHPIECE. 	<p>You must keep your lungs isolated from mine air when switching SCSRs.</p>

Important Points	Notes
<p data-bbox="358 352 636 386">SWITCHING (continued)</p> <p data-bbox="706 304 779 357"></p> <ul data-bbox="228 457 708 600" style="list-style-type: none"> <li data-bbox="228 457 516 485">■ PUT THE NOSE CLIPS ON . <li data-bbox="228 520 708 600">■ REMOVE THE WAIST BAND FROM THE FIRST RESCUER AND ADJUST THE STRAPS ON THE REPLACEMENT UNIT. 	<p data-bbox="846 380 1317 453">Follow the procedure EXACTLY as you are taught.</p>
<p data-bbox="267 877 695 1220"></p> <p data-bbox="383 1241 618 1289">FOLLOW THE LIFELINE TO THE CACHE</p>	
<p data-bbox="276 1409 695 1738"></p> <p data-bbox="318 1766 659 1814">GET A NEW RESCUER FROM THE STORAGE AREA.</p>	

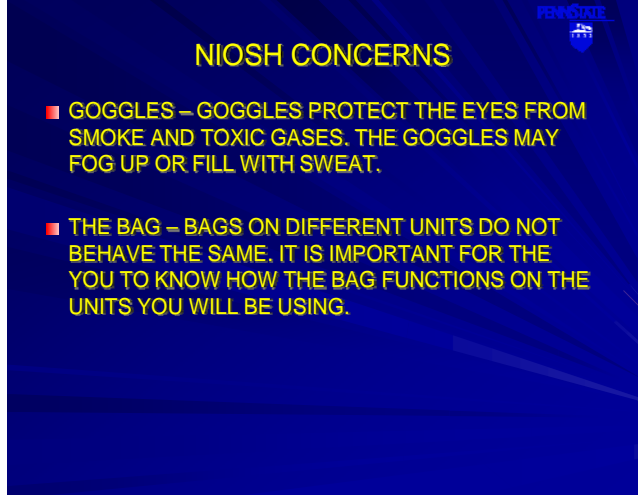
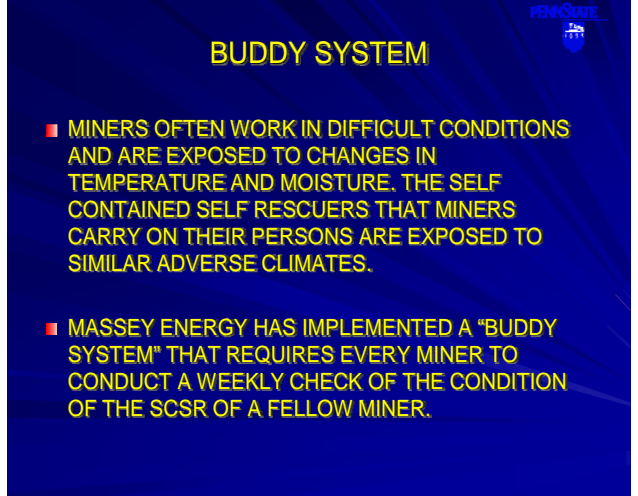
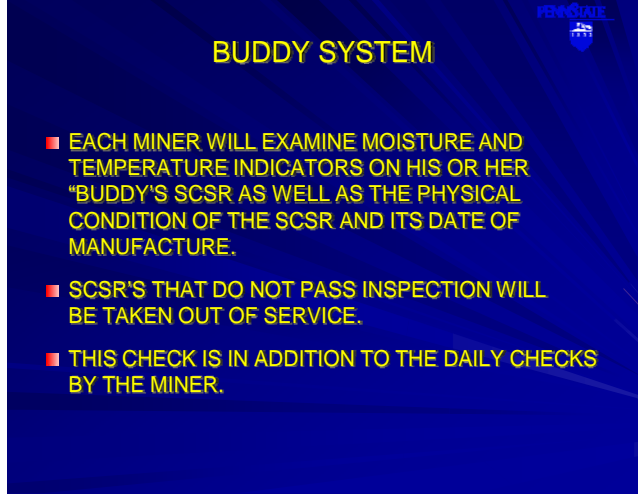
Important Points	Notes
 <p data-bbox="313 661 662 741">PREPARE RESCUER FOR DONNING BEFORE ATTEMPTING TO SWITCH. DO NOT ACTIVATE.</p>	
 <p data-bbox="313 1192 722 1297">AFTER OPENING THE UNIT, REMOVE THE NECKSTRAP FROM THE UNIT YOU ARE USING AND LET IT HANG BY THE WAISTBAND.</p>	
 <p data-bbox="293 1743 722 1848">LOOP NECKSTRAP OF THE REPLACEMENT UNIT OVER YOUR HEAD WHILE KEEPING A FIRM GRIP WITH YOUR MOUTH ON THE UNIT YOU ARE USING.</p>	




Important Points	Notes
 <p data-bbox="305 705 688 735">ACTIVATE THE REPLACEMENT UNIT.</p>	
 <p data-bbox="321 1213 669 1289">TAKE A DEEP BREATH AND HOLD IT BEFORE REMOVING THE MOUTHPIECE.</p>	<p data-bbox="850 877 1364 982">Hold your breath when switching mouthpieces to avoid breathing mine air.</p>
 <p data-bbox="295 1749 721 1824">INSERT MOUTHPIECE OF REPLACEMENT UNIT. PUT NOSECLIPS ON AND EXHALE INTO UNIT.</p>	

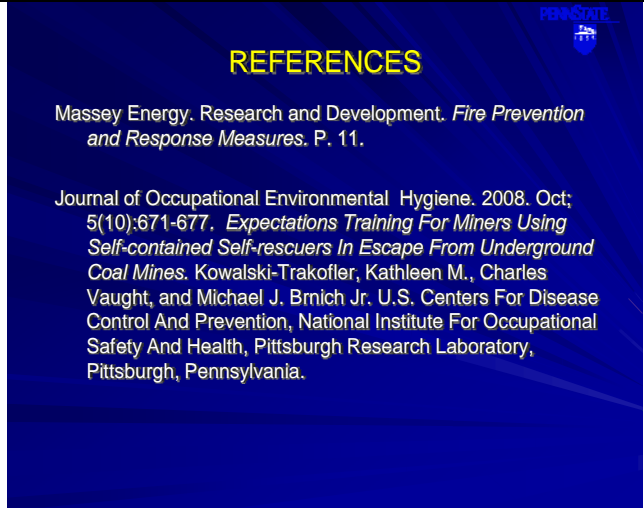
Important Points	Notes
 <p data-bbox="321 667 682 718">AFTER YOU ARE AGAIN ISOLATED, ADJUST THE NECKSTRAP</p>	
 <p data-bbox="402 1213 613 1243">ADJUST WAISTBAND</p>	
 <p data-bbox="269 1749 734 1778">READY TO CONTINUE OUT THE ESCAPEWAY.</p>	

Important Points	Notes
 <p>KEEP YOU RESCUER ON UNTIL IN KNOWN FRESH AIR</p> <ul style="list-style-type: none"> ■ AFTER EFFECTS OF A FIRE OR EXPLOSION ■ ODORLESS AND COLORLESS GASES ■ RESISTING THE NATURAL DESIRE TO COMMUNICATE 	<p>DO NOT remove your SCSR if the air looks clear. It could still be toxic.</p> <p>Leave your SCSR on until you reach fresh air outside the mine.</p>
 <p>EXPECTATIONS TRAINING</p> <ul style="list-style-type: none"> ■ ACHIEVING REALISM WITH THE UNIT <ul style="list-style-type: none"> – CONDITIONS – USE IN EMERGENCY SITUATION 	<p>Expectations training can give you an idea of what a real emergency is like through simulated exercises.</p> <p>PRACTICE! PRACTICE! PRACTICE!</p>
 <p>EXPECTATIONS TRAINING</p> <ul style="list-style-type: none"> ■ REQUIRED BY THE MINER ACT ■ EXPECTATIONS VERSUS EXPERIENCE ■ "IN SMOKE" REQUIREMENT 	<p>PRACTICE! PRACTICE! PRACTICE!</p>

Important Points	Notes
<p style="text-align: right;"><small>PENNSYLVANIA STATE UNIVERSITY</small></p> <p style="text-align: center;">NIOSH CONCERNS</p> <ul style="list-style-type: none"> ■ STARTING THE UNIT - START ALL TYPES BY PULLING A CORD OR OPENING A VALVE. ■ HEAT – ALL UNITS GROW HOT TO THE TOUCH. YOU MAY EXPERIENCE DISCOMFORT FROM THE HEAT GENERATED. ■ INDUCTION OF COUGH – MOST UNITS ARE PACKED WITH A DUST-LIKE SUBSTANCE (TALC/CORNSTARCH) TO PREVENT THE HOSES FROM STICKING TOGETHER. DO NOT REMOVE THE MOUTHPIECE BUT COUGH DIRECTLY INTO THE UNIT. THIS COULD PRODUCE A GAG REFLEX. 	
<p style="text-align: right;"><small>PENNSYLVANIA STATE UNIVERSITY</small></p> <p style="text-align: center;">NIOSH CONCERNS</p> <ul style="list-style-type: none"> ■ TASTE – COULD PRODUCE A VARIETY – RUBBERY, BITTER ,METALLIC, SALTY OR CORNSTARCH. ■ RESISTANCE TO BREATHING – ALL SCSR'S HAVE SOME LEVEL OF BREATHING RESISTANCE BECAUSE OF THEIR DESIGN. THE BREATHING HOSES BECAUSE OF THEIR DESIGN AND SIZE WILL PRESENT RESISTANCE. WITH A CHEMICAL-OXYGEN SCSR , AS THE CHEMICAL BEDS ARE USED UP THERE IS LESS SPACE FOR AIR TO MOVE THRU THEM. THIS CAUSES BREATHING RESISTANCE TO INCREASE WITH TIME. 	
<p style="text-align: right;"><small>PENNSYLVANIA STATE UNIVERSITY</small></p> <p style="text-align: center;">NIOSH CONCERNS</p> <ul style="list-style-type: none"> ■ QUALITY OF BREATHED AIR – IN CHEMICAL-OXYGEN UNITS THE AIR IS GENERALLY HOT AND DRY. COMPRESSED OXYGEN UNITS WERE FOUND TO BE HOT AND HUMID. ■ NOSE CLIPS – THE UNITS NOSE CLIP CAN BE UNCOMFORTABLE AND IT MAY TAKE SOME TIME FOR WEARERS TO GET USED TO BREATHING THRU THEIR MOUTH . MOUTH BREATHING MAY CAUSE SALIVA TO ACCUMULATE IN THE MOUTH, DO NOT TAKE THE MOUTHPIECE OUT TO EXPEL SALIVA. 	

Important Points	Notes
 <p style="text-align: center;">NIOSH CONCERNS</p> <ul style="list-style-type: none"> ■ GOGGLES – GOGGLES PROTECT THE EYES FROM SMOKE AND TOXIC GASES. THE GOGGLES MAY FOG UP OR FILL WITH SWEAT. ■ THE BAG – BAGS ON DIFFERENT UNITS DO NOT BEHAVE THE SAME. IT IS IMPORTANT FOR THE YOU TO KNOW HOW THE BAG FUNCTIONS ON THE UNITS YOU WILL BE USING. 	
 <p style="text-align: center;">BUDDY SYSTEM</p> <ul style="list-style-type: none"> ■ MINERS OFTEN WORK IN DIFFICULT CONDITIONS AND ARE EXPOSED TO CHANGES IN TEMPERATURE AND MOISTURE. THE SELF CONTAINED SELF RESCUERS THAT MINERS CARRY ON THEIR PERSONS ARE EXPOSED TO SIMILAR ADVERSE CLIMATES. ■ MASSEY ENERGY HAS IMPLEMENTED A “BUDDY SYSTEM” THAT REQUIRES EVERY MINER TO CONDUCT A WEEKLY CHECK OF THE CONDITION OF THE SCSR OF A FELLOW MINER. 	
 <p style="text-align: center;">BUDDY SYSTEM</p> <ul style="list-style-type: none"> ■ EACH MINER WILL EXAMINE MOISTURE AND TEMPERATURE INDICATORS ON HIS OR HER “BUDDY’S SCSR AS WELL AS THE PHYSICAL CONDITION OF THE SCSR AND ITS DATE OF MANUFACTURE. ■ SCSR’S THAT DO NOT PASS INSPECTION WILL BE TAKEN OUT OF SERVICE. ■ THIS CHECK IS IN ADDITION TO THE DAILY CHECKS BY THE MINER. 	

Important Points	Notes
 <p style="text-align: center;">DEMONSTRATION AND HANDS-ON TRAINING</p> <ul style="list-style-type: none"> ■ LIVE DEMONSTRATION OF THE DONNING AND SWITCHING OF THE SCSR ■ OBSERVATION OF EACH CLASS MEMBER DONNING AND SWITCHING THE UNIT 	
 <p style="text-align: center;">SUMMARY</p> <ul style="list-style-type: none"> ■ YOU MUST INSPECT YOUR SCSR EVERY DAY. ■ YOU MUST FOLLOW A SPECIFIC PROCEDURE TO DON THE SCSR. ■ THE SCSR ISOLATES YOUR LUNGS FROM MINE AIR. ■ THE 3+3 METHOD CAN HELP YOU REMEMBER THE STEPS FOR DONNING THE SCSR. ■ IF YOU THINK YOU SHOULD DON THE SCSR—DO IT! 	
 <p style="text-align: center;">SUMMARY</p> <ul style="list-style-type: none"> ■ YOU MUST FOLLOW SPECIFIC STEPS FOR SWITCHING SCSRS. ■ YOU MUST KEEP YOUR LUNGS ISOLATED FROM MINE AIR WHEN SWITCHING SCSRS. ■ YOU MUST KNOW WHERE ALL SCSR CACHES ARE LOCATED! ■ EXPECTATIONS TRAINING ALLOWS YOU TO PRACTICE UNDER SIMULATED EMERGENCY CONDITIONS. ■ PRACTICE! IT CAN SAVE YOUR LIFE! 	

Important Points	Notes
 <p data-bbox="410 281 602 310">REFERENCES</p> <p data-bbox="237 338 764 386">Massey Energy. Research and Development. <i>Fire Prevention and Response Measures</i>. P. 11.</p> <p data-bbox="237 422 781 617">Journal of Occupational Environmental Hygiene. 2008. Oct; 5(10):671-677. <i>Expectations Training For Miners Using Self-contained Self-rescuers In Escape From Underground Coal Mines</i>. Kowalski-Trakofler, Kathleen M., Charles Vaught, and Michael J. Brnich Jr. U.S. Centers For Disease Control And Prevention, National Institute For Occupational Safety And Health, Pittsburgh Research Laboratory, Pittsburgh, Pennsylvania.</p>	

APPENDIX A
MODULE 3
CSE 100 SELF-CONTAINED SELF RESCUER

PRE-TEST

This pre-test consists of five multiple-choice questions. Each question is followed by four choices. Circle the letter that indicates the best choice.

1. The first step when donning your SCSR is
 - a. looping the neck strap around your neck.
 - b. activating the unit.
 - c. putting on goggles.
 - d. removing hard hat and placing on bottom.

2. The key objective in donning the rescuer is
 - a. getting the neck strap in place.
 - b. getting the waist strap in place.
 - c. Isolation.
 - d. releasing the security band and getting the covers off.

3. Which of the following is not one of the first 3 steps of the 3 + 3 donning method?
 - a. Activating the oxygen
 - b. Tightening waist strap
 - c. Inserting mouth piece
 - d. Putting on the nose clips

4. The key to a successful switch is
 - a. getting the neck strap tight
 - b. preparing the second unit
 - c. getting the waist strap of the second unit on correctly
 - d. keeping the goggles from the first unit from steaming up.

5. One of the best ways to learn how to perform under stress is by
 - a. watching someone else do it.
 - b. watching a good video.
 - c. frequently repeating the procedure.
 - d. having a good instructor

MODULE 3
CSE 100 SELF-CONTAINED SELF RESCUER

POST-TEST

This post-test consists of eight multiple-choice questions, one True or False, and one completion. Each multiple-choice question is followed by four choices. Circle the letter that indicates the best choice.

1. Which item is not included in the daily inspection?
 - a. top and bottom cover for anything unusual
 - b. moisture indicators (blue is normal)
 - c. case for damage
 - d. date unit was put into service

2. The first step when donning your SCSR is
 - a. looping neck strap around your neck.
 - b. activating unit.
 - c. putting on goggles.
 - d. removing hard hat and place it on bottom.

3. The goggles are put on
 - a. after you are isolated.
 - b. before the nose clips.
 - c. before the mouth piece is put in.
 - d. before the unit is activated.

4. The key objective in donning the rescuer is
 - a. getting the neck strap in place.
 - b. getting the waist strap in place.
 - c. isolation.
 - d. releasing the security band and getting the covers off.

5. When switching units you should activate the unit immediately before
 - a. holding your breath and inserting the replacement mouthpiece and exhaling.
 - b. putting the nose clip on.
 - c. adjusting the waist strap.
 - d. adjusting the goggles.

6. The first 3 steps of the 3 + 3 donning method do not include
- activating the oxygen.
 - tightening the waist strap.
 - inserting mouthpiece.
 - putting on the nose clips.
7. True or False: You should don your rescuer at the first sign of a fire or explosion in the area of the mine you are working in or upon being notified that it is necessary to evacuate the mine.
- True
 - False
8. The key to a successful switch is
- getting the neck strap tight.
 - preparing the second unit.
 - getting the waist strap of the second unit on correctly.
 - keeping the goggles from the first unit from steaming u.p
9. One of the best ways to learn how to perform under stress is by
- watching someone else do it.
 - watching a good video.
 - frequently repeating the procedure.
 - having a good instructor.
10. Who is the responsible person on your shift?
-

APPENDIX B

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