

**Miller, Diane M. (CDC/NIOSH/EID)**

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**From:** Linda Parsons [lparsons@umwa.org]  
**Sent:** Friday, June 19, 2009 2:56 PM  
**To:** NIOSH Docket Office (CDC)  
**Cc:** Szalajda, Jonathan V. (CDC/NIOSH/NPPTL); dodell@umwa.org; rairhart@umwa.org  
**Subject:** RIN:0920-AA10 and 42CFR pt. 84  
**Attachments:** UMWA Comments on the Approval Tests and Standards for Closed-Circuit Escape Respirators.pdf

Attached are the comments of the United Mine Workers of America on the Proposed Rule for Approval Tests and Standards for Closed-Circuit Escape Respirators. Attachments accompanying these comments are being sent by separate cover via Express Mail.

Linda Raisovich-Parsons  
United Mine Workers of America

# United Mine Workers of America



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June 19, 2009

NIOSH Docket Office  
Docket #005  
Robert A Taft Laboratories MS-C34  
4676 Columbia Parkway  
Cincinnati, OH 45226

Dear Sir/Madam,

Attached are the comments of the United Mine Workers of America on the Proposed Rule for Approval Tests and Standards for Closed-Circuit Escape Respirators RIN 0920-AA10. The UMWA will forward the attachments referenced in our comments by separate cover via Express Mail. The attachments were too large to submit by e-mail.

We thank you for the opportunity to participate in this rulemaking procedure and ask that you forward our comments to the appropriate person(s) in the Agency for consideration.

Sincerely,

Dennis O'Dell, Administrator  
Department of Occupational  
Health and Safety

**United Mine Workers of America**  
**Comments**  
**on the**  
**United States Department**  
**of**  
**Health and Human Services (HHS)**  
**Center for Disease Control and Prevention (CDC)**  
**National Institute for Occupational Safety and Health (NIOSH)**  
**Proposed Rulemaking**  
**for**  
**Approval Tests and Standards for Closed-Circuit Escape Respirators**

The United Mine Workers of America (UMWA or Union) is pleased to offer these comments on this extremely important matter facing the coal miners of the Nation. The UMWA is acutely aware of the significant role that the National Institute for Occupational Safety and Health (NIOSH) plays in the daily work lives of the Nation's miners. Almost without exception the men and women of this Institution have built their careers and staked their reputations on seeing that the work done at NIOSH makes a difference in the lives of not only those who toil in the earths recesses, but for the spouses and children of these individuals. On behalf of Cecil E. Roberts, International President and Daniel J. Kane, International Secretary-Treasurer and all the members of the UMWA we recognize your efforts and thank you for your good work.

The prospect of issuing new standards for the testing and approval of Self-Contained Self-Rescuers (SCSRs), or Closed-Circuit Emergency Respirators (CCER) as they are referred to here, is a vital yet long overdue proposal. The UMWA commends NIOSH for keeping the struggle alive for years to move this process along.

However, it must be noted that the Union is deeply disappointed in the lack of effort to bring new health and safety technology to the mining industry by others. It is incomprehensible to many that miners today are subjected to utilizing breathing apparatuses, that with few small changes were developed over 35 years ago. While the industry has increased production and reduced cost at an astonishing rate in the past two decades, the health and safety of miners still remains too low a priority. The Union is confident that the efforts being made here with some modifications will help change at least a small part of that culture.

In an effort to be as concise as possible in its comments the UMWA intends to follow the draft of the *Proposed Regulation* as written. It will offer comments as they arise within the context of the published document as necessary for clarity or to offer criticism or alternatives as the case may be. The Union also intends to refer to previous comments it has made regarding this matter and enclose attachments as necessary.

**Comments for Approval and Test Standards for Closed-Circuit Escape Respirators: Proposed Rule, by the Department of Health and Human Services' (HHS), Center for Disease Control and Prevention (CDC), National Institute for Occupational Safety and Health (NIOSH).**

**Summary:**

The Union notes that the Agency's statement that, "The proposed rule would replace only those technical requirements in 42 CFR Part 84 – Subpart H that are uniquely applicable to closed-circuit escape respirators", (p-75027 column 2) is generally misleading within the context of this discussion. The fact of the matter is, with regard to mining and the use of respirators for emergency escape, this rule will greatly impact the lives of every miner in the United States. The CCER or SCSR is the only breathing device for them to rely on and all are closed-circuit. Therefore, the Proposed Rule changes every facet of the health and safety of miners within the context of emergency escape. The "disclaimer" does not alter that impact.

The document further states, "The purpose of these updated requirements is to enable NIOSH and MSHA to more effectively ensure the performance, reliability and safety of CCER's." (P-75027 column 2) The Union takes exception on this statement based on previous experience where NIOSH and MSHA share jurisdiction over approvals, acceptable standards or other overlapping duties with regard to requirements. The mining community is well aware of NIOSH's limited ability to enforce any type of compliance requirements and MSHA's unwillingness to offer such guidance in many instances. The Union would much prefer that the Agency who has the greatest technical expertise and responsibility, in this case NIOSH, be given a stronger role in seeing the necessary steps are taken to implement the Proposed Rule at the mine level, but we further believe MSHA, being the enforcement agency that can access mine property under the language of the Federal Mine Safety and Health Act of 1977 and Mine Improvement and New Emergency Response Act of 2006 (MINER Act), should aggressively enforce the rules.

**Supplemental Information:**

**II Background**

**A. Introduction**

The Document states, "The CCER, known in the mining industry as a self-contained self-rescuer (SCSR), is primarily used by miners to escape dangerous atmospheres in mines." (P-75027 column 3) The Union is unaware of any other purpose these devices are utilized at the mine. Miners have long been instructed and the Union agrees that the SCSR is to be used only for the purpose of emergency escape. To insinuate otherwise, as this document does, undermines the importance of previous training and lends the reader to determine it can be used in other circumstances. This could potentially cause miners to utilize the SCSR other than they are intended and may lead to catastrophic consequences.

This reference must be stricken and the Agency must reiterate in the strongest terms the acceptable use of the Unit.

HHS' assertion that the CCER/SCSRs "...are relatively small respirators..." (p-75028 column 1) is very disingenuous. The fact is that one component of redesigning these devices was to reduce the size while maintaining their duration. This has been a significant problem for miners that has needed to be addressed for some time.

#### C. Need for Rulemaking

"NIOSH field evaluations of certified CCER/SCSR's conducted systematically and in response to concerns of users have identified damaged respirators that failed to meet the performance criteria under which they were certified." (p-75028 column 1-2) The Union has argued and the evidence is clear that the field evaluations of these devices do not accurately demonstrate the extent of this problem.

The Union and industry are well aware that there are significant numbers of damaged or defective units that are not reported to either NIOSH or MSHA. Therefore, while there is some data on the extent of units deployed currently in the industry that do not meet the certification requirements, NIOSH's field evaluation records are not sufficient to effectively evaluate the extent of the problem that exists with respect to this matter.

The Union has previously and on several occasions demanded a system be put in place for the random testing of deployed SCSRs. It recommended after the Sago Mine Disaster that "MSHA, with the assistance of NIOSH, should conduct a random sampling of all SCSRs deployed in the field annually." (UMWA *Report on the Sago Mine Disaster of January 2, 2006*, [attached] page 12 column 1) The UMWA further stated that, "The annual sampling size should be no less than three percent of all units deployed in the field." (UMWA *Report on the Sago Mine Disaster of January 2, 2006* page 12 column 1) That important evaluation tool has never been adopted by the Agencies, but we urge this change to ensure the deployed units will be available for emergency use.

This Proposed Rule would be the appropriate place to require such evaluation criteria. Unfortunately, the proposed rule is silent on the matter. The Union demands the proposal be opened and this important mechanism for testing the effectiveness of these lifesaving devices be inserted into the final rule.

#### D. Scope of the Rulemaking

The Union would first like to establish that the scope of this Proposed Rule is restricted only by the Agency's desire to impose self-affecting limitations. Considering the proposal affects every device in the industry, that would be viewed by miners and operators alike as an emergency escape closed-circuit breathing device, the Agency has the ability to regulate all

aspects of its development, purchase, deployment, tracking and use.

However, it chose not to expand the parameter of the Proposed Rule to that logical end. They have in fact chosen to permit, in many areas, a prescriptive regulatory methodology that the Union has opposed without exception. The proposal would permit operators a smorgasbord of possible regulatory possibilities they can choose from to suit a specific need. These methods are not suitable for use in workplaces with this industry's mind set.

In many respects the Proposed Rule would offer too much latitude for compliance to mine operators who have demonstrated they are unwilling and in fact unable to self-regulate. This has been the history of mining and the proposal misses an opportunity to ensure operators do not have the ability to manipulate the system. The rule's scope must be broadened to all aspects of the CCER/SCSR, leaving nothing to speculation or discretion. The UMWA demands a regulation with regard to these devices that is proscriptive. Nothing short of such action will compel compliance.

HHS determines that the proposal would replace, "all testing and certification requirements of 42 CFR pt. 84 Subpart H, that are uniquely applicable to closed-circuit SCBAs used only for escape." (P-75208 column 3) They also stress that it would not affect other types of respirators included under Subpart H.

This type of statement establishes the Agency's unfamiliarity with the industry, especially those who perform classified (hourly) work within the mining community. The Union is concerned that this poor attempt to lump all respirators into the same class because approval is currently carried out under the authority of Subpart H displays that ignorance.

Miners do not, and never have, considered SCSR in the same class as respirators used for personal protective equipment (PRE). Such statements coupled with the previous one regarding the use of SCSR as "primarily" for escape raise serious concerns about many aspects of this Proposed Rule.

Considering this rule is being written for the protection of miners the terminology and terms-of-art used therein should be part of the content. Not doing so will induce people within the industry to misinterpret the Rule's intent.

#### E. Impact on Rulemaking and Other Activities of MSHA.

The Department of Health and Human Services stresses the fact that, "The proposed rule might require MSHA to promulgate limited, non-substantive changes to incorporate the terminology of this rule, i.e. 'CCER' versus 'SCSR' and to reflect the new capacity rating system being proposed." This represents two significant problems.

First, given the opportunity to correct the problems experienced by miners in the past by

establishing a rule sufficiently protective would seem to require more than a few word changes. Either the Agency is underestimating the magnitude of the problems that must be corrected or simply decided not to address them.

Given the history of SCSRs, whether looking back at Sago, Darby, Pyro, Aracoma or Wilberg or a list that is much longer, HHS has a duty to be as thorough as possible. The time for expansion of the regulatory authority is precisely now, when the memory of these events forces action to eliminate future such events. The "scope" must be broadened to address the failures of the past no matter how great or small. MSHA can respond with new regulations that are required by the action taken here.

Secondly, the idea that the impact on MSHA will be minimal may be a goal of the Agency. However, changing the formula which has been the benchmark for the men and women working in the Nation's mines will have a profound impact. The Union is on record numerous times objecting to attempts by anyone seeking to eliminate the "duration standard" and seeking to replace it with an archaic or less defined criterion. In September 2006, at a public meeting to discuss this Proposed Rule the Union expressed its opposition to such a move.

The UMWA is deeply concerned with the decision to insert capacity requirements rather than demand a specific duration. This is contrary to years of established practice in the industry and serves only to confuse. Miners are not interested in how many liters of oxygen a specific container may hold. In fact the UMWA is not interested in such measurements. Both are, however, extremely interested in how long that oxygen will actually last.

The current threshold of one hour is understood and accepted as a baseline. The Union believes the pretense for rulemaking was to increase that time frame, not obscure the issue with a new catch-phrase that may or may not provide adequate oxygen for escape. This must not be adopted into a final rule. NIOSH may conduct whatever testing is necessary using whatever internal terminology it sees fit. But in the end it must equate to a time duration that can be easily understood and useful to the miners.

The importance of this fact cannot be trivialized. Miners, in the event of an emergency that requires immediate evacuation, must be able to rely on certain constant factors. The bottom line is 50, 100 or 200 liters is meaningless in that circumstance. The miner needs to know how long the air will last. Is it one hour, two hours or what is the number. This not only permits some clear understanding of what they can expect from the unit, it gives the miner a clock to work with to aid in the escape.

**Provide miners with practical and valid estimates of units' capabilities.**

Variability in respirator performance between subjects is indeed substantial. Sources of variability are of two general types: the metabolic needs of the miner and the physical environment in which the respirator must be used. The miner's metabolic needs depend on his or

her weight and physical condition. Important features of the environment are the distance the miner must travel in order to reach safety and constraints on the miner's movement such as the seam height and fires or roof falls that would require additional exertion. If the miner must run or walk, whether he or she must stoop over and "duck-walk" or crawl (as is the case in most coal mines), and whether the miner is hyperventilating, which could occur in any situation in which a miner knew his or her life is at stake.

What this proposed rule fails to do is distill information about variability in performance to practical information that miners can use in deciding how to use a self-contained self-rescuer and thereby, to save their life in event of an emergency. The problem posed by variability is not only how to design a test protocol that would measure variability and its determinants, but rather what practical information a miner must have in order to develop a strategy for survival. When confronted with a fire underground, a miner needs to know how long a respirator will provide him or her with oxygen under the circumstances presented by the mine and its hazards.

We recognize that the criterion, "good for one hour," is misleading, at best. Consequently, we suggest extracting some common sense and useful information for miners that they can use and then to design a test protocol that would provide miners with that information.

We suggest that the largest single source of variability is the miner's metabolic load. The biggest contributors to the metabolic load are the miner's weight and how fast he or she has to move and what physical limitations (such as mine height, fire, roof falls, etc.) exist that would make travel more strenuous. A miner's physical condition is important but difficult to measure and awkward to include in any practical information. With this information, respirators can be tested to meet the following common sense criteria with useful information that can be conveyed as follows:

*"This respirator will provide enough oxygen for a 200 pound miner to travel by foot approximately three miles in one hour. This amount of time will be reduced if he or she weighs more than 200 pounds or if travel is difficult."*

(Normal walking speed is about 3 mph.) This language takes account of the major contributors to the metabolic load – miner's weight, distance to travel, and means of travel – and includes sufficient information to inform the miner about the respirator's limitations. It includes common sense terms: weight, distance, and time and their interactions. The purpose of the test protocol should be to provide miners with such information. As it is proposed, it seems more designed to document a respirator's structure and function. Such information is useful and essential but it does not, in the final analysis, provide miners with the information they need that would save their lives: how much time does the respirator provide and under what conditions.

This proposed change is too significant to be permitted to take effect. The Union objects strenuously to this, because it has a higher than likely chance of adversely



impacting the very person we are seeking to help, the miner. The Union demands that duration of the devices continue to be the standard by which its usefulness is determined.

Further, as we have expressed repeatedly, the one hour time duration currently contained in the regulations must be increased. The speed of modern mining techniques and the distances from the deepest penetration of the coal seam require this to be done.

### **III Summary of Proposal**

#### **Section 84.301**

The UMWA would like to point out the schedule for phasing-in the implementation of the testing and certification requirements have a far ranging impact on the miners who will be using these units. Based on the writing of this section the Union is lead to believe we are to expect an unspecified time delay in the implementation of these new requirements to permit CCER/SCSR manufacturers time to "redesign...or develop entirely new designs..." (P-75029 column 2) to comply with the proposal. This is an absurd position for the Agency to take based on the extensive public meetings and general dialogue that have surrounded this issue.

The Union is convinced that at this stage of the process, even given the rule is in the proposed stage, manufacturers are aware of what will be necessary for compliance. To suggest that they will need time to redesign current units or worse to develop entirely new technology is ridiculous. Such concession to manufacturers limits their ability to be forward thinking and proactive. Further, it thwarts a basic premise for promulgating regulations, that is that they should be technology driven to enhance their effectiveness and better protect the worker.

Phase-in should begin as this rule develops through the final stages. Manufacturers should be prepared to produce new models immediately thereafter. Miners have been waiting 50 years for new technology and any further delay is unacceptable.

With regard to a phase-in period for deployment of new units into the mining operation NIOSH has stated that, "newly approved devices would become available soon after the final rule becomes effective since current technology, with relatively minor design improvements, can meet the proposed rule." (P-75029 column 3) Based on these facts, the Union cannot and the Agency should not accept a phase-in period and certainly none as long as proposed.

The Union is very disappointed that NIOSH would seek, "...public comment on whether to establish a different balance between providing the best possible protective equipment to employees and controlling the potential economic impact on employers of

replacing deployed equipment, recognizing that in any case manufacturers will require time to develop and bring new products to market. NIOSH judges that 6 years represents a reasonable balance between public health and economic concerns..." (P-75030 column 1)

The Union does not believe there is a need for phase in given the circumstances.

With regard to the "balance" the Agency is seeking to strike between the lives of miners and the money of the operators, the UMWA is outraged that an Agency, charged by Congress with the mission of protecting workers health and safety, would offer such a callous view of this matter. The Union does not deal with these matters in the abstract. There were lives lost at Sago, Aracoma, Darby, Wilberg, Jim Walters and countless others. Who determines where the scales balance for the widows, the orphans and the families who have lost their loved ones? These are not statistics in the database. These are men and women who left for work to support their families and never returned to the arms of their loved ones.

There is no balance to be struck. The industry forfeited their rights to request such consideration long ago. And NIOSH has no right to ask for such consideration on the operators behalf.

In addition, the Union would suggest that HHS has exceeded its authority to place any time frame on device phase-in or deployment. The Union bases this understanding in the passage of the Mine Improvement and New Emergency Response Act of 2006 (MINER Act). The clear intent of Congress in passing the legislation was to force operators to take the steps necessary to improve mine health and safety. A critical portion of the MINER Act was forcing the development of new technology to accomplish the health and safety advances. The immediate implementation of these technologies into the mining environment is critical to fulfilling that Congressional mandate. Therefore, the Department of Health and Human Services cannot, through CDC, NIOSH or any other entity delay the deployment of such technology.

The Union contends that all arguments for delay and postponement are moot in the face of Congress' action in 2006. It was the determination of that body that miners receive health and safety improvements immediately. The UMWA concurs with that decision and demands immediate compliance. This technology is not to be delayed for any reason.

The Union sees no reason, based on its previous statements regarding phase-in of devices to address the prospect of 3 to 6 years implementation plans suggested in the Proposed Rule. Likewise it will not entertain the suggestion that some older units could remain in service for up to 16 years. (p-75029 column 3) Simply stated, it is not within the authority of the agencies involved to permit such an atrocity. History has shown that

with extreme conditions surrounding the manner in which CCER/SCSR's are deployed and stored, it is highly unlikely that these units would go beyond the average ten year life span as prescribed under the current standard. Because of this history of failures, NIOSH must insist miners are provided with the best protective devices modern technology has to offer.

The Union will address the Agency's desire to, "minimize potential economic costs", (p-75029 column 3) operators may experience as a result of purchasing new units in greater detail later. However, it is appropriate to say the Union does not believe this is an issue for NIOSH to be concerned with regarding this matter.

With regard to NIOSH's request for comments on, "whether there are other interests that NIOSH should consider in deciding this matter." (p-75030 column 2) the Union has responded as emphatically as is possible. It's the miner, the spouse, the child, the mother and father and all the family members who have every reason the expect that miner to return home safely after a days work. To do less could sentence that miner to death simply for going to work.

#### Section 84.302

The UMWA is in agreement that all CCER/SCSRs must be equipped with indicators to determine if they have been exposed to temperatures that could affect their ability to function properly. The final rule must require that such devices are failsafe in their application. The industry is too familiar with devices that change color to indicate material or functional degradation only to change back again once the immediate cause is removed.

These indicators therefore must be designed in such a fashion so they will become permanently altered when the event occurs. The Union would also note a concern that exposure units to lower than recommended temperatures may not be completely reversible. We are not aware of any conclusive studies that show this to be the case.

The UMWA supports the integration of moisture detection devices into all the units. The same logic should be applied to these indicators. Indicators must be permanently altered in the event moisture is detected.

The Union is uncertain regarding NIOSH's intent to, "...require manufacturers to provide users with instructions and a service life plan to accompany each unit." (75031 column 1), outside of routine training on the units, which will normally be with demonstration models. There appears to be limited useful purpose for such materials. Perhaps these should be provided for all purchasers, safety trainers and safety representatives, but we see no practical use to requiring these for rank and file miners.

In order for the miner to access such material it would almost necessitate a need to don the unit for emergency escape. Should that be the case, written instruction is of no use. Certainly a service life plan is of no relevance to the miner. This is tantamount to closing the barn door after the horse has escaped. Repetitive training is the only plausible method of ensuring successful donning and escape.

#### Section 84.303

The Union recognizes the determination based on physiological testing by Penn State University that, "Decision making was slightly impaired in some subjects after breathing 4 percent carbon dioxide for one hour." (P-75031 column 2) Based on that knowledge, the Union questions the decision by the Agency to permit this level of CO as a baseline for any length of time. Given the potential harm carbon monoxide can cause to the human body, the Union would recommend against permitting, even for testing purposes, an amount known to cause any impairment.

The basis for testing at lower than known adverse levels would ensure units are manufactured to those specifications and further enhance the health and safety protections afforded miners.

The Union does not accept that NIOSH should be required to permit testing even for brief excursions where the oxygen level is "above 15%". (p-75031 column 1) This type of departure from what an individual would require to sustain life and function properly in an escape situation is unacceptable. The Union sees no purpose to permitting this unless NIOSH intends to approve units that perform at such inadequate levels during their use. Should that be the case, the Union would be concerned manufacturers would target their device to meet this minimum threshold and place miners at risk. The industry has experience enough with these self-inflicted problems. The time to require the higher of all test parameters be employed when evaluating equipment is past due. The Agency may argue it is better than the current formula. The Union contends that is not good enough.

The fact that, "The acceptable range for these excursions was determined based on testing of pilots at various altitudes." (P-75032 column 1) is of no consequence here. Just as the UMWA will not comment on the determinations and changes the U.S. Navy may seek with regard to this rule, we are not controlled by determinations that affect the testing of pilots.

The Agency notes that, "Researchers found the highest wet-bulb temperature of inhaled air was approximately 50° C. Based on such research and NIOSH findings from testing escape respirators, NIOSH proposes 50° C as an excursion limit and 43° C as an average operating requirement." (P-75032 column 1)

The Union must again question the practical determination for using the highest threshold number when evaluating these devices. The Union makes the same argument with respect to this issue as it did with the previous one regarding oxygen requirements.

The pressure requirement of 200 milliliters on average would not immediately cause concern on the part of the Union. However, a following statement that, "Users who cannot generate these pressures may be forced... to slow the pace of their escape." (P-75032 column 2) raises a concern.

The language of the proposal indicates that some miners will not be able to generate the required pressure. The Union cannot further comment intelligently until there is more clarity offered on the specific issue. Surely in the chaos and panic that will ensue in life threatening situations like a forced mine evacuation, the authors cannot expect a miner to "slow" the pace of escape. This is not acceptable, more importantly it's not practical.

#### Section 84.304

The Union has raised concerns regarding the determination to change the time duration as the rating for CCER/SCSR efficiency previously. The inclusion of multiple testing capacities from 20 liters to 80 or more liters raises further alarms. Based on the information in the proposal it is apparent that consideration is being given to approving devices of varying capacities. The Union finds reference to this potential within a rule that has so much impact on miners to be a major concern.

The Union has witnessed, time-and-time again the practice of inserting language into a rule by Agencies under the guise that it does not apply to mining or miners, only to find out later the language has a direct and adverse impact on them. The Union holds this view of the Cap 1 – Cap 3 testing established here.

The Union believes the history of these types of determinations on the part of a federal Agency is the beginning of undermining current regulations. By determining the rating of a device in liters and subsequently recognizing the use of these different units based on escape distances, NIOSH is opening the possibility of undermining the current one hour duration standard. And while we recognize that the criteria "good for one hour" is misleading at best, consequently, we suggest extracting some common sense and useful information.

The Union finds no disclaimer that such tested and approved device are banned from use in the mining industry. MSHA history on such matters lends the Union to believe that they will eventually seek approval of such devices through a variety methods, including the 101© petition process. Therefore the UMWA would anticipate seeing these

units placed in the mine as noted in the proposal, based on escape distances. This is absolutely unacceptable.

The Union does not object to testing methods that may be necessary for assuring the quality, capacity and time duration of the unit. However, when the language lends itself to reducing a current protection, the UMWA must strenuously object. The Union demands that the Rule be very clear that units tested and approved by NIOSH whose duration is less than the current one hour requirement cannot be used as a substitute for them, based on the miners proximity to the surface.

The Union has already addressed the issue of capacity versus duration of approved units and would refer to those comments here. As for the question regarding the inclusion of a table with each CCER/SCSR that specifies capacity and duration under various workloads, i.e. walking to running, the Union does not object to the inclusion of such material. As the Union stated previously, training, including simulated disaster training, are key to affording miners the best chance of surviving an emergency requiring immediate evacuation.

In order to be consistent the Union would state it sees no useful benefit to miner from referring to unit capacities. Successful escape for a miner is based on time from the workplace to the surface. Capacity has no relevance to them in that circumstance.

The Proposed Rule states, "NIOSH finds it is appropriate to apply a work rate that represents the level of exertion sustainable by a typical wearer while using a device of a particular capacity." (P-75303 column 3) The Union understands the premise for such a statement, but is concerned that the Agency is not requiring a rigid enough formula to these units to ensure a full one hour duration. This has been a concern for some time and miners have historically complained about units that stop working prematurely or fail to function at all.

There appears to be belief on the part of NIOSH that miners will automatically pace themselves during an escape, slowing to preserve their breathable air. This assumption persists despite testimony and evidence to the contrary. In the event of an immediate emergency evacuation of a mining operation miners are going to don these units and move as fast as possible to the surface. Resting or slowing, outside a serious physical problem or blockage of the escape route will not occur. The units need to be tested with that understanding and approved based on that practical usage.

While the Union understood the methodology behind NIOSH's determination to rate the capacity rather than the duration of a CCER/SCSR everyone reading the rule can see where the decision inevitably leads. The statement that, "Since NIOSH will no longer approve CCER as one-hour devices under this proposed rule..." establishes a dangerous precedent in the industry.

The Union understands that the Agency is charged to ensure the adoption of such a change will not reduce protection miners currently enjoy. However, the Union is all too familiar with regulation changes that had that a detrimental impact on miners. In those instances miners voices were ignored and the Agency view was implemented. The Union views this move by NIOSH as a reduction in health and safety standards for all miners.

The Union demands that the Agency abandon this misguided approach. The determination of a device's duration has been and must remain the standard within the industry. Miners must be given some concrete facts in the event of a forced evacuation and "capacity" fails to do that.

With regard to testing the units for oxygen consumption based on miner of average weight (50<sup>th</sup> percentile) the Union understands the approach of the Agency. While NIOSH might not test for the most extreme examples. The UMWA believes it is necessary and would be appropriate to expand the testing parameters to meet a far more taxing set of physical factors. The Union is concerned that the 50<sup>th</sup> percentile represents an "average" subject, but that approach would adversely affect too many other miners (nearly 50%) whose life also depends on the functional duration of these units.

#### Section 84.305

The Union supports NIOSH's decision to require unit testing for the potential that units may cause hypoxia in users. This raises serious questions regarding training, deployment and use of these devices by the mining community. The Union believes the Agency must not only test but seek practical solutions integrated into the unit that prevents this condition from occurring.

This particular issue, while not the only one, gives rise to other concerns the Union has regarding CCER/SCSRs. While MSHA – and based on this proposal NIOSH – does not ban the intermingling of different manufacturer's unit's at a single operation, the Union sees this as a major concern. By its own admission NIOSH has stated, "Many CCER users are trained to exhale into a CCER upon donning it because it is an accepted practice." (p-75304 column 3) The Union is acutely aware of this fact because CCER/SCSR training has always stressed that miners must purge their lungs into the unit upon donning.

Mine operators with multiple devices on property place miners at risk because each of these models require different processes. The Agency had the ability within the context of this proposal to address this problem but failed to do so. The Union would hope that any final rule will correct this glaring problem.

The proposal notes that, "...testing cycles require more than 50 liters of oxygen...if a unit contains less than 50 liters of usable oxygen NIOSH will require the submission of additional units so the test can be completed..." (P-75035 column1-2). This language is

not viewed as benign by the Union. The fact that the proposal does not specify such devices does not meet the current MSHA standard of one hour duration is unacceptable. Further, it must be made clear that these units will not be utilized to meet the requirements for the mining industry.

The Union is again concerned the Agency has left the door open for misapplication of the rule and subsequent manipulation by mine operators to lessen protection miners currently enjoy. The Union demands that it be clear in this document any unit supplying less than one hour of oxygen not be approved, with the exception of the MSHA-approved M-20's which miners use to access their one hour devices.

This portion of the Proposed Rule and other sections that reflect a similar intention are extremely problematic. The Union has always believed the desire of all parties was to increase unit duration while using new technology to reduce the size of the unit. There appears to be at least an attempt to move in a different direction based on some of the language contained in the proposal. This is unacceptable to the Union and to all miners.

#### Section 83.308

Comments received by NIOSH express a manufacturer's belief that goggles supplied with CCER/SCSRs that do not need to meet normal standards for eye protection should not be considered. This PPE is a vital part of a miner's escape.

There can be no question that such protection must be able to withstand the rigors of the mining environment. This is true whether the PPE is carried or stored. The eye protection standard applied to these goggles should remain unchanged.

#### Section 84.309

NIOSH specifies that, "This section would provide for NIOSH to test and approve dockable CCER..." (P-75036 column 2) the Union is pleased that dockable CCER/SCSRs are part of this rulemaking. We are confident that such devices will become an integral part of the miners escape options. The Union would urge that such testing parameters and approvals necessary be carefully examined, proven and fast tracked to ensure this new generation of CCER/SCSRs are available as soon as possible.

Having expressed the Union's support for NIOSH's forward thinking initiative regarding dockables, we are a bit concerned with the limited information contained in this section. The placement of the topic within the scope of the Proposed Rule also gives rise to the question of the perceived importance of dockable within the Agency and for that matter in the industry.



The Union is aware of the existence of such devices through meetings with manufacturers and CCER/SCSR experts. Because of this the UMWA must question whether this section of the proposal is written to "force" new technology, which was the intent of Congress when it authored the Mine Safety and Health Act of 1977.

Any Agency charged as NIOSH is, to enhance and protect the Nation's workforce must keep an eye clearly focused on that goal. This is especially true with regard to the mining industry. Few, if anyone, can point conclusively to protections or health and safety enhancements that the industry has adopted voluntarily. Therefore, all proposed rules should focus on forcing improvements. They must be based on advancing technology that the industry must then employ.

The Union believes dockable CCER/SCSRs is one of those technologies. We would strongly encourage NIOSH to move as quickly as possible to have these types of units ready for safe and effective introduction to the industry. The Union believes these units represent a portion of the future of CCER/SCSRs in the industry and will drive even better protective technology.

#### Section 84.310

The Union agrees with the general premise NIOSH has outlined regarding the periodic testing of units deployed in the field. This post-certification testing is essential to determining the service life, durability and potential shortcomings of the units.

The Union has previously commented on what it believes would be a sufficient annual sample. The Union sees any such testing as a necessary cost of doing business within this industry. There should be no obligation placed on any agency to replace units removed from the mine site for post-certification testing.

The Union has expressed previously that mine operators should be responsible for such expenses. We still believe that is the most equitable solution. However, we are not wedded to how that transaction takes place. The Union simply seeks to ensure the transaction remains within the private sector, and not an additional financial burden for the government.

#### Section 84.411

The Union has commented and offered extensive testimony regarding this particular issue. We are please to reiterate our position with regard to this matter.

This is a chronic problem in the industry, however, it should not be just a manufacturers' problem. Once SCSRs are purchased by the mine operator, outside of warranty defects, they become the absolute property of the mine operator and must be treated as such.

Having noted the obvious, the Union endorses the efforts to track all these devices. We are convinced that, in order to have an effective evacuation plan, all CCER/SCSRs must be closely tracked. Therefore, we would propose that operators must be required to report, on at least a semi-annual basis all relevant information regarding the SCSR's at each operation or in the possession of the operator at any operation or facility. This requirement would include stored units not placed into service and should require at least the following information.

- Number of SCSRs at each location,
- Number of SCSRs within each company,
- Number of SCSRs stored, but not in use,
- Manufacturer,
- Date of Manufacture,
- Serial number,
- Purchase date,
- Origin of purchase,
- Sale of any Self-Contained Self-Rescuer,
- Purchaser of any Self-Contained Self-Rescuer,
- Reason for the purchase, and
- Reason for the sale.

(UMWA comments to the U.S. Department of Labor, Mine Safety and Health Administration's Emergency Temporary Standard for Emergency Mine Evacuation) attached. We also believe the tracking should include numbers of CCER/SCSR's that are stored but still deemed to be in use.

The Union must also insist that copies of all record, data or other documents be immediately be available to the Mine Safety and Health Administration and the representative of the miners' at the affected operation.

In addition, the UMWA would like to offer the following general comments:

Industry and Labor have been using CCER/SCSRs for over thirty years. As a consequence we have extensive knowledge of the unique deployment required for SCSRs in coal mines as well as the use and maintenance of existing products. Care must be taken not to compromise safety in U.S.

**Improve Donning Procedures based on miners' experiences.**

The 30-second maximum donning time requirement must apply to all CCER, including those that may require a cold start. This cold-start maneuver becomes impossible if the user needs to transition to a second device. The surrounding atmosphere is toxic and the user does not have sufficient volume in the device he is wearing. This is a known, current risk that continues to go unresolved. Because these rules are changed infrequently, any

proposed changes should be as comprehensive as possible to achieve the objectives of maximum worker protection.

The survivor of the Sago mine tragedy reported that failure of chemical devices to start properly was a critical factor in the loss of life in that incident. He reported that several miners were unable to start their devices by exhaling into the equipment. Moreover, at least one miner removed his respirator to assist a co-worker who was having difficulty, and then was unable to restart his own. Thus, tragically, we have real-world experience pointing to the need to address this concern with chemical devices, and yet the proposed rulemaking does not address this deficiency.

NIOSH states that, "many CCER users are trained to exhale into a CCER upon donning it." However, the only time miners are taught to exhale into a CCER is when the oxygen starter fails on a chemical device. According to the NIOSH Long Term Field Evaluation (LTFE) Phase 10 report, such failure requiring exhalation occurred in sixteen percent of one model of chemical CCER tested. When this failure occurs, the approved procedure is to then exhale 4 to 7 times into the device to manually activate oxygen generation. The NIOSH report shows that inhaled oxygen levels can drop to 12% when a chemical CCER is cold-started. According to a NIOSH report, it may take as long as 7 minutes for the device to build up to 19.5% oxygen.

#### **Will these rule changes benefit miners?**

As the purchasers and users of these devices, how does this rule benefit the miner? Will this new rule increase the size and/or weight of the units that the miner must wear? The requirement for a different type goggle than the one presently used may cause a packaging problem. Will these new requirements affect the training on the use and/or care of the units, given the extensive SCSR training that has been to miners for many years?

#### **Little is gained by changing the designation from SCSR to CCER.**

Incidentally, we see little gained by changing the designation for what is now called "Self-Contained Self-Rescuer (SCSR)" to "Closed-Circuit Escape Respirator (CCER). The original name is based on the respirator's purpose and as a result is self-explanatory. It is, moreover, well known and common throughout the mining industry. The proposed name is based on its structural properties (i.e., "closed circuit"), which is of interest to engineers but of secondary concern to miners. Why change?

### **IV Regulatory Assessment Requirements**

#### **A. Executive Order 12866**

NIOSH states, "The proposal would eliminate the practice by NIOSH and MSHA of approving CCER on the basis of the duration of breathing supply provided by the CCER." (p-75037 column 3 – p-75038 column 1)

The Union has commented extensively on this matter. Please see those comments for guidance.

The Agency's concern regarding excessive cost to the industry based on replacing deployed units is unfounded based on NIOSH's own review of the matter. The Agency notes, "The proposed rule is not considered economically significant, as defined in § 3 (f)(1) of the E.O. 12866." (P-75308 column 1) Therefore the Union would request any mention of this subject be stricken from the final rule.

**Comments of the United Mine Workers of America  
On the Notice of Proposed Rulemaking:  
Approved Tests and Standards for Closed-Circuit Escape Respirators  
73 FR 75027-45, (December 10, 2008)**

**ATTACHMENTS**

The following documents were referenced throughout comments of the United Mine Workers of America:

- (1) An Act Federal Mine Safety and Health Act of 1977; Public Law 91-173 as amended by Public Law 95-164 and Mine Improvement and New Emergency Response Act of 2006 (MINER Act) ; Public Law 109-236 (S2803)
- (2) The United Mine Workers of America, AFL-CIO/CLC Report on the Sago Mine Disaster of January 2, 2006.
- (3) United Mine Workers of America Testimony of Cecil Roberts before the U.S. Senate Appropriations Subcommittee on Labor, Health and Human Services, Education and Related Agencies; Wednesday, February 28, 2007 Hearing Room 124 Dirksen Senate Office Building Washington, DC.
- (4) Cecil E. Roberts, International President United Mine Workers of America Testimony before the United States House of Representatives Committee on Education and Labor Wednesday, March 28, 2007 Rayburn House Office Building Room 2175 Washington, DC.
- (5) Cecil E. Roberts, President United Mine Workers of America, International Union Testimony before the U.S. Senate Committee on Appropriations Subcommittee on Labor, Health and Human Services, Education and Related Agencies; Wednesday, September 5, 2007 Hearing Room SD-124 Dirksen Senate Office Building, Washington, DC.
- (6) Comments of the United Mine Workers of America regarding the Emergency Mine Evacuation Emergency Temporary Standard published in the Federal Register Volume 71, Number 46 on March 9, 2006.