

-----Original Message-----

From: Linda Raisovich-Parsons [mailto:lp Parsons@umwa.org]

Sent: Friday, August 15, 2008 5:19 PM

To: zzMSHA-Standards - Comments to Fed Reg Group

Subject: RIN 1219-AB58

Attached are the comments of the United Mine Workers of America on the .
Proposed Rule for Refuge Alternatives for Underground Coal Mines.

AB58-COMM-11

August 15, 2008

Ms. Patricia Silvey, Director
Mine Safety and Health Administration
Office of Standards, Regulations and Variances
1100 Wilson Boulevard, Room 2350
Arlington, VA 22209-3939

Dear Ms. Silvey,

The attached comments represent the views and concerns of the United Mine Workers of America regarding the Agency's Proposed Rule Refuge Alternatives for Underground Coal Mines. The Union will be happy to answer any questions that these comments raise with appropriate representatives of MSHA or to expand on any comment that requires additional clarification. There are attachments to these comments that cannot be filed electronically because they are too large to e-mail. However, we will forward them to you via courier by the end of the day on August 18, 2008.

I thank you in advance for your immediate attention to this matter.

Sincerely,

Dennis O'Dell
Administrator of Occupational Health & Safety
United Mine Workers of America

United Mine Workers of America
Comments
on the
Mine Safety and Health Administration's
Proposed Rule
Refuge Alternatives for Underground Coal Mines
"RIN 1219-AB58"

The United Mine Workers of America (UMWA or Union) is pleased to have the opportunity to offer these comments on the Mine Safety and Health Administration's (MSHA or Agency) Refuge Alternatives for Underground Coal Mines; Proposed Rule. The Union will attempt to place its comments on the record in a manner that corresponds to the Agency's writing of the Proposed Rule, as reported in the *Federal Register / Vol. 73, No. 116 / Monday, June 16, 2008*.

I. Introduction

"This proposal would implement section 13 of the Mine Improvement and New Emergency Response (MINER) Act of 2006." (p-34141, column 1)

The Union contends that the Agency has made a technical assessment with regard to meeting the mandate of Congress that is not accurate. The processes by which MSHA intends to permit mine operators to comply with the mine refuge requirement leaves too much latitude for interpretation and creates multiple scenarios for compliance that could lead to confusion and delay. There is as much potential for the proposed rule as written to adversely impact miners caught in an emergency situation as there is to assist in their survival.

The Union will seek to have these issues corrected by addressing each concern individually as they arise in the proposal. It is our hope that by doing so the rule can be corrected. In order to do so it will be necessary to eliminate the confusing and complicated refuge "alternatives" currently proposed.

"New requirements for testing and approval of refuge alternatives and components of refuge alternatives;" (p-34141, column 1)

The Union is not aware of any requirement for human testing any of the refuge devices at this time. Such testing must be a prerequisite for the approval of any chamber or shelter that is designed to preserve human life in the event of an emergency. Simulation and studies on these devices may serve as a starting point for evaluation, however, there is no substitute for extensive testing with human subjects to ensure proper function and durability.

This situation is further complicated by the inclusion of “alternative” or “component” based refuges that must be constructed on-site after the accident has occurred. The Union is convinced that this approach will do more to undermine miner safety than enhance it. MSHA has approached this rule-making with a fundamental misunderstanding of what Congress anticipated in Section 13 of the MINER Act: whereas MSHA has focused on refuges and alternatives to refuges, Congress was more interested in the “use of refuge chambers in underground coal mines: as both Senator Kennedy stated (“Our bill requires MSHA and NIOSH to test refuge chambers to see if they should be used here to protect miners in a fire or explosion”) and as the Senate Committee report confirmed. In fact, in the Consolidated Appropriations Act of 2008 Congress made clear that the Secretary had to propose regulations pursuant to section 315 of the Federal Coal Mine Health and Safety Act of 1969, consistent with the recommendations of the National Institute for Occupational Safety and Health pursuant to section 13 of the MINER Act requiring rescue chambers, or facilities that afford at least the same measure of protection in underground coal mines. The UMWA believes that refuge chambers are required, as opposed to the rule’s proposal for what essentially is nothing more than enhanced barricades. Stated otherwise: Congress was interested in learning what different kinds of refuges would be feasible, while MSHA has considered refuges, as well as other options and alternatives to refuges. We think that MSHA’s approach is contrary to the language and intent of the MINER Act contrary to what Congress demanded in the 2008 Appropriation, and is not sufficiently protective of miners.

In fact, MSHA’s proposed “alternative” would be no more than barricade supplies. In NIOSH’s Research Report on Refuge Alternatives for Underground Coal Mines, they confirm that “NIOSH has no evidence to support the practice of barricading in modern mining operations. Barricading is not considered to be a viable refuge alternative.” MSHA’s proposal for “refuge alternatives” defeats the purpose of Section 13 of the MINER Act and would not meet the protections that Congress intended then and has re-affirmed in 2008.

“Requirements for miners to be trained in the location, use, maintenance, and transportation of refuge alternatives.” (p-34141, column 2)

The Union will elaborate extensively on concerns regarding training as they arise in the writing of the preamble and proposed rule. However, it is clear from the language that the Agency has drafted that the proposed rule does not adequately address the issue.

“MSHA issued Program Policy Letter (PPL) No. P06-V-10 (October 10, 2006 to implement section 2 of the MINER Act.” (p-34141, column 2)

Prior to the issuance of that PPL the Union submitted extensive comments (attached) regarding implementation of section 2 of the MINER Act. Those comments expressed our understanding of the intent of Congress and cautioned the Agency against taking too broad a view of what would be acceptable for promulgation into regulation.

The Union believes that MSHA chose to ignore these recommendations. In doing so, the Agency is proposing a diluted and confusing rule that does not offer miners the level protection intended under the MINER Act.

I Section-BY-Section Analysis

A. Part 7 Approval

Pre-fabricated Self-Contained Refuge

We do not draw a distinction between the “hard-shell”, solid metal shelter or the “soft-shell” vinyl or cloth type (self-inflating) shelter. It is understood that each of these will fulfill a vital function and would be purchased for use based on the conditions at each particular operation.

The Union believes these types of self-contained units represent the only practical solution for sustaining miners near the active working area in the event of an emergency situation in which they could not exit the mine. These systems would require extensive training of each miner to ensure they could immediately access the unit and begin to operate its life sustaining components. These refuges do not require construction of the shelter.

Considering the design of such units the approval process should be straight forward and comprehensive. Approval should require more than manufacturers’ or operators’ certification that the units meet the MSHA criteria. As NIOSH indicated in its report, independent testing is necessary. In fact, although four different shelter models were approved by the WV program, NIOSH found that three needed further improvements before they would satisfy NIOSH recommended criteria. The necessary components (oxygen, food, communications, etc.) will already be integrated into a self-sustaining unit that would be required by design to operate as a stand alone refuge. Therefore, testing of the unit would include all necessary devices in an operational mode, all at the same time. This would ensure component function, compatibility and ease of use.

Refuge Alternative Component

While the Union would not remove or reduce current requirements concerning life sustaining materials that must be made available, this should never be used in place of self-contained refuges. The Union supports the installation, training and use of pre-fabricated self-contained refuge chambers. The Union does not believe the alternatives that would require construction during an emergency represent a viable solution for miners seeking refuge in the event of an emergency.

The potential for major problems to arise during the setup of an “alternative” structure,

the integration of the various components and the operation and maintenance of devices necessary to sustain life render this approach infeasible and unuseable. Considering the stress and panic that ensues after a mining disaster, the possibility that an alternative refuge could be properly constructed in an inhabitable and expedient manner is speculative at best. It is also necessary to consider the potential that some of the miners necessary for constructing and maintaining this facility would be rendered incapable of doing so, thereby greatly diminishing the potential for the unit to ever become operational.

The Union is also convinced that testing individual components for specific operation would not establish that these components would be compatible after construction is complete. The potential for damage during handling or construction, especially given the circumstances that would exist in an emergency, is too great for this type of system to be relied upon for use in a mine emergency.

The Union would also raise the fact that the potential for manufacturers of component devices to routinely discontinue certain products or create a new product line would cause considerable problems. The possibility that older devices could not be replaced as necessary or newer units are not compatible raises serious operational challenges for component refuge alternatives. The potential for continuous component approval that does not lead to an overall refuge approval also exists given this scenario. Further when you depend on multiple separate components there is the increased likelihood that some components will either be missing or malfunctioning when the emergency event arises. It has been all too common for brattice or other barricade materials to be taken from emergency supplies to supplement what may be needed on the working section during production. This means miners don't have what they need when emergency strikes.

The Union believes that Congress wanted regulations requiring self-contained refuges, so long as NIOSH determined they were feasible. As NIOSH found that "barricading is not considered to be a viable refuge alternative" (NIOSH report at page2) MSHA should not include this concept in its regulations and would request that "component refuge alternatives" that require on-site construction be eliminated from the rule.

"The proposal would: Provide for alternatives for satisfying the requirements; provide performance based approval criteria,..." (p-34142 Column 1)

The Union does not favor affording operators or mining equipment manufacturers significant latitude in the development or deployment of equipment, devices or components that are to be used in the industry. Far too often permitting a performance-based approach leads to the implementation or installation of equipment or standards that do not meet the minimum requirements for ensuring protective health and safety practices.

The Union understands MSHA desires to force new and innovative technology, but would caution against permitting too much latitude in this area. The Agency must exercise

proper oversight and place clearly prescribed limitations on what operators and manufacturers are and are not permitted to do to comply with the rule and protect miners. NIOSH recommended certain standards for chambers and nothing less than those recommendations can be accepted.

“The proposed requirements would assure that the refuge alternatives could be used safely and effectively in underground coal mines and that the components could be used safely with each other.” (p-34142 column 1)

With regard to self-contained refuge chambers the Union is comfortable that meeting this requirement is achievable. As noted previously, testing of a unit that is self sustaining and designed for immediate occupation and use should be straight forward. Therefore, demonstrations by the manufacturer as to the functionality of the refuge be a useful first step. However, in no case should MSHA accept any manufacturer’s internal test results as a basis for granting approval. The Agency must determine if the refuge deploys and operates according to the objective standards NIOSH recommended. Independent testing was recommended by NIOSH and the Union agrees that this must be included in the final rule.

An “alternative” refuge that requires on-site construction will not meet the MINER Act requirements or the 2008 Appropriation Act and should not be allowed. As stated previously, the Union is convinced these types of units present additional problems potentially causing a chaotic and life-threatening situation. Miners caught in life-threatening situations where visibility can be zero and the miners can be injured or panicked shouldn’t have to take time to build a shelter. In fact, it could be impossible. Congress intended that these shelters be ready for use in an instant. As pointed out in testimony by Paul Ledford, a survivor of the Darby mine explosion, such a shelter could have saved his co-worker’s lives. Each of the miners who perished had crawled more than 1,000 feet toward the mine entrance before they died from breathing poisonous gas. As Ledford pointed out, because a mine would be filled with dust, and possibly toxic gas after an explosion, miners would be unable to construct a shelter in time to save their lives. The Union agrees.

The UMWA would once again request that “component refuge alternatives” that require on-site construction be eliminated from the rule.

Section 7.501 Purpose and Scope

“MSHA solicits comments on the estimated service life of pre-fabricated self-contained units.” (p-34142 column 2)

The Union is not able to offer estimates about lengths of the service life for different refuges, but agrees this is critical information. The Union urges MSHA to affirmatively determine if refuges are maintaining their viability after they are placed underground. It is not sufficient to rely on manufacturer’s projections. And it is not adequate to depend on employers to certify. For example with SCSR ‘s miners trapped at Sago had at least one SCSR that was

beyond its stated shelf life. For these emergency protections equipment failures can have dire consequences and may mean the difference between life and death. To be protective of miners MSHA should be conservative in accepting shelf-life projections.

“In its report NIOSH recommended that the fire resistance for refuge alternatives be 300°F for 3 seconds. They based this on NFPA-2113, but advised that additional investigation is warranted.” (p-34143 column 1)

Insofar as NIOSH acknowledged in its Report that the state of knowledge and technology in this area is “rapidly changing” the union urges the rule to provide for periodic and regular re-evaluation of the established criteria and for improvements to be required in already-deployed refuges as soon as feasible. This should be incorporated into the emergency response plan reviews, and MSHA should provide the more protective improvements to be implemented as soon as when knowledge or technology permits.

Section 7.503 Application Requirements

“Under the proposal, the applicant would be required to develop a training manual for each refuge alternative or component.

Paragraph (b)(7) would require a summary of procedures for constructing and activating the refuge alternatives...This summary information would include all the steps and procedures to construct and activate the refuge alternatives...

Paragraph (b)(8) would require a summary of the procedures related to using refuge alternatives...This summary would include steps and procedures for using the refuge alternative during a substantial period of time.” (p-34144 column 1)

The Union recognizes the need for applicants seeking approval of coal mining equipment and devices to create operations and maintenance manuals for their product. We also realize such manuals can be helpful to miners when utilizing, repairing and inspecting such equipment or devices.

Based on the potential to need such materials, the Union encourages MSHA to require detailed manuals for approval purposes. However, MSHA must clearly guard against mine operators who attempt to use manuals as a replacement for any portion of the miners’ training with regard to deployment, activation, operation, maintenance or any other aspect of the refuge chambers. Miners must receive sufficient training to ensure they can use the refuge, as designed, without referencing a comprehensive manual. NIOSH recommended that miners and mine management be trained on refuge use and that recommended training should constitute the minimum amounts: quarterly motor task training (including how to and when to use refuges) as well as expectations training. Task training must also be required (in addition to the quarterly training) for those responsible for moving, maintaining and inspecting refuges.

Section 7.504 Refuge Alternatives and Components; General Requirements

“Paragraph (b)(2) would require that calculations or tests be conducted to determine the maximum apparent temperature in the refuge alternative when used at maximum capacity and in conjunction with required components calculations or test results. In addition the proposed rule would require that an application include test results and calculations to demonstrate that the apparent temperature within the refuge alternative would not exceed 95°F when used in conjunction with required components and fully occupied.” (p-34145 column 2)

The proposed rule appears to accept the determination on heat sources and heat generation calculations or tests, but it is unclear on what basis the operator or manufacturer is deriving data to make such calculations or assumptions. It is not at all clear, within the context of the proposed rule that these assumptions can be made when discussing refuge chambers.

Considering the fact that these refuges have never previously been installed in the underground workings of coal mines in this country, data not specifically germane to these units must be viewed as suspect. The Union questions MSHA’s ability to approve units based on such data and would suggest human testing on refuge alternatives would be a better method to determine the apparent heat generation. We note that NIOSH found manufacturer’s representations about their shelters were not sufficiently reliable. NIOSH recommended independent testing and we support that.

“Paragraphs (c)(1)(I) and (ii) would require that refuge alternatives accommodate a telephone or equivalent two-way communications facility that can be used from inside the refuge alternative, or a two-way wireless system when it is approved in the operator’s Emergency Response Plan (ERP).” (p-34145 column 3)

The language leaves some question as to the immediate deployment and use of two-way wireless communications in underground coal mines when those devices become commercially available. The Union understands that such devices would need to be included in the approved ERP, however, we believe that two-way wireless communication devices must be placed in the Plans as soon as they become available.

Therefore, the incorporation of these devices into the refuge chambers should occur at all underground coal mining operations immediately thereafter. While this may be the intent of the Agency the language of the proposed rule does not specify that to be the case. The Union would request such language be added to the rule.

“MSHA requests comments on including a requirement that refuge alternatives be designed with a means to signal rescuers on the surface.” (p-34145 column 3)

The Union supports the requirement to have signaling devices incorporated into refuge chambers. While the goal of the chamber is to sustain the lives of trapped miners, it is extremely important they are located and rescued as soon as possible. The signaling device would not only

assist rescue workers in locating those trapped, but would confirm that miners were indeed in the chamber.

The Union would suggest that the specific type of device would best be determined on a mine-by-mine basis with input from the mine operator and the representative of the miners.

Regarding this particular issue, it is extremely important that should this requirement be included in the rule, a provision the Union strongly supports, the Agency does not offer miners a false sense of hope. For too long, trapped miners have been trained to signal their location and for far too long no one on the surface has been listening, as happened at Sago. MSHA has an obligation to ensure that listening equipment is immediately deployed to a disaster scene to locate trapped miners; whether it is the government or the operators who obtain the equipment, it must be on site shortly after any emergency that causes miners to remain underground.

“MSHA requests comment on including a requirement that the manufacturers design refuge alternatives with a means to signal underground rescuers with a homing device.” (p-34145 column 3)

The Union supports the requirement for the inclusion of a homing device on all refuge chambers. Equipment manufacturers and mine operators must be compelled to utilize every available technology to ensure trapped miners are located and rescued as quickly as humanly possible. The Agency must require every possible means of facilitating such rescues, including homing devices.

“MSHA requests comments on the types, sources, and the magnitude of the lighting needed for the proper functioning of a refuge alternative and the needs of the occupants.” (p-34146 column 1)

The Union agrees with the Agency’s determination regarding the need for sufficient lighting to perform necessary tasks and read instructions. We also agree that any light source approved for refuge usage cannot generate significant heat or require manual power for activation and use.

The Union would suggest that the type and amount of light supplied would vary widely by the type of refuge chamber in use.

We would expect that a hard-shell unit would contain mostly integrated lighting at fixed locations within the unit. Several of these fixtures should be self activating when the chamber is opened. These light fixtures should be of the type that permits them to be rotated or turned for the specific task at hand. This would maximize their utility and reduce the number that must be illuminated at any one time. It will also be necessary to have several handheld lights available in each chamber.

The UMWA considers providing adequate lighting in a soft-shell (self-inflating) unit to be a bit more complicated. The fact that the unit will need to be inflated prior to occupancy means that any integrated lighting will be limited to the storage device. The fixtures that are integrated should be self-activating when the chamber is opened for deployment. Therefore, all additional lighting must be deployed and activated by miners entering and occupying the chamber. These light fixtures should be compatible for either handheld use or “hooked” to a fixed location as necessary. Lights should also be of the type that would rotate or turn to permit hands free operation of refuge components. It will also be necessary to have several handheld lights available in each chamber.

As expressed previously the Union believes that any refuge alternative that must be constructed on-site is not viable for use in an underground coal mine. The need to “add-on” all necessary lighting from the initial stages of construction would further complicate and delay the usefulness of this proposed option. The UMWA demands that any such refuge alternative be removed from this final rule.

Section 7.505 Structural Components

MSHA solicits comments on these minimum space and volume requirements. (p-34146 column 2)

NIOSH has recommended that refuge chambers afford each miner 15 square feet and 85 cubic feet of space. While NIOSH stated, “...these recommendations should not be considered absolute,” it made these recommendations as “reasonable starting points.” (p-34146 column 2) The Union understands that increasing the square footage could make such shelters cumbersome for some underground areas. However if the area of the mine would not support one large chamber to accommodate the number of miners affected, we would support the use of more than one chamber on the section. Because it is anticipated that miners may be required to stay in the refuge for up to 96 hours, the Union cannot accept the Agency’s decision to reduce the miners’ useable space from what NIOSH recommended. We strongly support requiring more space than what was adopted in the West Virginia Rule. From the very beginning, it was always the intent to provide not only the necessary protections for miners to sustain life while they are inside a chamber/shelter, but to also allow miners to be comfortable while awaiting rescue. This is necessary to help protect a miner’s mental stability while awaiting rescue. Some of us have been trapped on an elevator half way down a shaft with 35 other miners, shoulder to shoulder for four hours waiting for someone from the surface to safely bring us out. Even after only four hours, and without any fire or explosion, there were many miners who became “stir crazy” and increased tensions for others. We can only imagine what it would be like to be trapped for 96 hours in close quarters waiting for help from the outside, especially when the hazards and risks are much greater than a stuck elevator. During Congressional hearings, stories were told about miners trapped in other countries, who played cards to help keep their minds off of the dangers that faced them outside of their protected safe haven until help arrive. We contend it has been the intent to provide necessary physical and basic social comforts for miners in these

shelter/chambers. The Union insists the required space be large enough to provide comfort so miners are not crammed into these units like sardines.

MSHA's determination that 60 cubic feet of space would suffice, a reduction of nearly 30% does not make sense. The Union can find no justification for any reduction in useable space from what NIOSH recommended and certainly does not support such a large decrease. Given the circumstances miners may find themselves in after an accident, the Union believes that additional space would be beneficial. At a minimum, we urge MSHA to adopt the 85 cubic foot recommendation of NIOSH to all refuges. To achieve this the Union would support more than one chamber be used to accommodate the space needed.

Moreover, this decision by MSHA is particularly odd considering its statement that **“Additional space may be needed to suspend curtains as part of a passive CO² removal system. Also larger volumes seem to be more effective at dissipating heat.”** (p-34146 column 2)

The Union would suggest that a reduction in useable space would subject miners to greater risk of CO² exposure and/or excessive heat within the refuge. This is unacceptable and the Agency must establish a minimum useable space within each chamber for each miner that will best ensure they receive the maximum protection available. NIOSH recommendations should serve as the minimum standards and MSHA should not reduce them in this regulation.

“Paragraph (a)(4) would require that refuge alternatives be designed and constructed to withstand 15 pounds per square inch (psi) over pressure for .02 seconds prior to activation.” (p-34147 column 1)

The Union is concerned that an over pressure rating of 15 psi for .02 seconds is not sufficient to protect the refuge from damage. Considering the events at the Sago Mine alone it becomes apparent that the Omega Blocks did not withstand the pressure from the explosion. While the UMWA understands that the overpressures exerted at Sago were much higher than the threshold psi for seals, (at that time was 20 psi) is 5 psi greater than what is being recommended here. We recommend a higher overpressure strength be required.

“Under this provision, trained persons would need to be able to activate the structure without tools, within 10 minutes of reaching the refuge alternative.” (p-34147 column 2)

The Union will comment on the training aspects of refuge chambers extensively later in this document. However, the language in this section of the preamble raises concerns regarding “who” will be trained to activate the refuge. Given the potential devastation and destruction that a mine disaster can cause, training must be inclusive and extensive if it is to afford the greatest impact on survival. Ten minutes should be the maximum time tolerated before a refuge can be made available to protect miners from the adverse environment. We still would not accept requiring any miner to engage in physical labor to construct a protective barricade in the post-

It is unreasonable to expect an individual to remain under apparatus for 96 hours, even in the best conditions. We disagree with the Agency's determination that this is acceptable for miners after a mine emergency has occurred. Relying on respirators should not be allowed as a viable alternative to a chamber. The Union demands that references to such equipment in this context be removed from the rule.

Section 7.510 New Technology

“This proposed section would allow MSHA to approve a refuge alternative or a component that incorporates new knowledge or technology, if the applicant demonstrates that the refuge alternative or component provides no less protection than those meeting the requirements of this subpart.” (p-34155 column 1)

MSHA has the right to make such assessments and offer necessary approvals on a wide range of regulations it has promulgated. The Union does not object to this authority in general, however, such approvals must be limited in scope. We note that the NIOSH report indicated the special challenge that mines with less than 36" will face when implementing these protections. Other than these few mines, the UMWA urges MSHA to require chambers near all working sections and in-place shelters for outby areas absent compelling reasons making them infeasible at a particular operation.

The Union has objected to refuge “alternative” that must be constructed post-accident and would therefore object to approvals for components that could be used in such a fashion. The Agency must not be permitted to approve components piece-by-piece with the ultimate objective of “creating” any type of post-accident site-constructed refuge.

The Union accepts that new knowledge and technology will from time-to-time be introduced into the industry that can offer greater protections for miners. The Union believes such knowledge and technology must be immediately utilized as it becomes available. Further, in those instance where new technology, such as wireless two-way communication becomes available, it must be immediately deployed in the industry. The Union not only supports MSHA's authority to approve such equipment, but would request that it require mine operators to immediately purchase and deploy it.

“MSHA solicits comments from the public on the use of refuge alternatives in low coal mines.” (p-34155 column 1)

The Union understands that there may be instances where the deployment of a refuge chamber in a low coal seem may create some problems. However, the possibility that miners may be trapped in a low coal mine without the benefit of refuge could be a disaster.

The problems that may be encountered while determining the specific refuge needs of a particular mine pale in comparison to the alternative. The Agency must drive manufacturers and

mine operators to seek solutions to these problems and require immediate deployment of refuge chambers at all mines.

The charge of the Agency is to protect the health and safety of all miners. Miners at small mines deserve the same level of protection as those at larger mines. Likewise, miners at low coal mines deserve the same protections as those working in high seams. A miner is a miner, MSHA's charge is protecting them all.

B. Part 75 Safety Standards

Section 75.221 Roof Control Plan Information

The Union agrees with the Agency.

Section 75.313 Main Mine Fan Stoppage With Persons Underground

The Union agrees with the Agency.

Section 75.360 Preshift Examination

MSHA requests specific comments on the visual damage that would be revealed during the preshift examinations. The Agency is concerned with the feasibility and practicality of checking the status of the refuge alternatives without having to enter the structure or break the tamper evident seal.” (p-34155 column 2)

The practice of visually examining equipment on a routine basis is an essential first step in assuring it is in operational condition. These exams could reveal any number of problems that may exist. Properly trained examiners would be able to detect potentially dangerous conditions that could result from collision with other equipment or damage sustained while moving the refuge. These could be as minor as a sheared bolt or dent to something that could compromise the chamber's functionality.

Doing these preshift examinations may lead to additional examinations and repairs or replacement. The Union strongly supports the practice of performing a preshift examination on all refuge chambers, as well as any in-place shelters.

Section 75.372 Mine Ventilation Map

The Union agrees with the Agency.

Section 75.1200 Mine Map

The Union agrees with the Agency.

Section 75.1202-1 Temporary Notations, Revisions and Supplements

The Union agrees with the Agency.

Section 75.1500 Emergency Shelters

The Union agrees with the Agency.

Section 75.1501 Emergency Evacuations

The Union agrees with the Agency.

Section 75.1502 Mine Emergency Evacuation and Firefighting Program of Instruction

“Paragraph § 75.1502 (c)(10) would be new and require a summary of the procedures related to constructing and activating refuge alternatives.” (p-34156 column 1)

The Union adamantly opposes allowing refuges that would require construction in a post-accident situation.

However, we support regular training and reviews of the procedures for activation of hard-shell and soft-shell self-activating chambers, and proper procedures for using an already constructed in-mine shelter.

Section 75.1404 Mine Emergency Evacuation Training and Drills

“MSHA and NIOSH have found that training is necessary to instill the discipline, confidence and skills necessary to survive a mine emergency.” (p-34156 column 1)

“In a series of studies from 1990 through 1993, the U.S. Bureau of Mines, University of Kentucky, and MSHA researchers measured skills degradation. In one study, the proficiency dropped about 80 percent in follow-up evaluations conducted about 90 days after training.” (p-34156 column 2)

“In another study researchers concluded that “companies should adopt a hands-on training protocol.” (p-34156 column 2)

These statements in the preamble provide some insight into the level and frequency of

training necessary to ensure miners are prepared to utilize a refuge chamber in the event of a mine emergency. The Union would agree with each statement individually and note that viewed as a whole they make a compelling argument for new and innovative training models.

Unfortunately, the Agency does not appear to be taking that approach. The fact that expectations training is required only once a year is inconsistent with the data presented. Further, there is no requirement for hands-on training to be conducted with a refuge chamber.

The Union would request that the Agency require demonstration models of the refuge chamber(s) being utilized at an operation be available for hands-on training every 90 days for all miners employed at the operation. These demonstration models could be purchased on a mine-by-mine basis or on a company-wide basis and deployed as necessary for training.

To adequately protect miners in the post-accident situation, the training protocol must require hands-on training at least every 90 days.

“NIOSH is developing a refuge alternative training program that is expected to be available by the end of 2008. MSHA plans to include a delayed effective date in the final rule.” (p-34156 column 3)

The Union is deeply concerned with any further delays in issuing and implementing a final rule for rescue chambers. Miners in this country have been waiting for MSHA to require chambers since 1969. Considering the importance of this rule the Union would request that the Agency require the final rule to take effect immediately. While training must be an element of the final rule, it is not necessary for MSHA to delay the rule’s effective date just because NIOSH may later be able to offer useful training materials. Operators should be required to provide training even if more convenient or better training tools may later become available. There is no reason to delay deployment of chambers because of this.

“Properly constructing and activating a refuge alternative can be a relatively complex procedure that must be done correctly to establish a breathable environment in a smoke-filled mine.” (p-34156 column 3)

The UMWA agrees with this assessment by the Agency. However, the Agency does not seem to understand the gravity of the situation to its fullest extent. In a smoke-filled life threatening environment, with the potential for hazardous or poisonous gases, the possibility of a second explosion, or promulgation of a fire, dealing with sick and injured miners and countless other problems how could anyone expect miners to be able to perform the task of building a shelter? This is simply not a reasonable solution to the refuge problem. Once again the Union demands references to these types of refuge alternatives that require post-accident construction be removed from the rule.

“MSHA solicits comment from the public on the Agency’s proposed approach to

expectations training.” (p-34157 column 1)

The Union agrees about the need for hands-on training, but feels it is necessary for MSHA to add requirements for the quantity and quality of such training and re-training.

All miners must be familiar with their escape route out of the mine. Therefore, walking portions of the escapeway every 90 days is a necessity. Expectation training, including walking through a smoke-filled environment (at the mine or in a simulated mine) while breathing through a mouthpiece that simulates an operating SCSR must be done annually.

Deploying and activating a chamber when escape is cut-off is a critical task that must be performed accurately the first time if miners are to survive an emergency situation. Given the grave circumstance miners would face if these tasks are not done correctly the Union strongly recommends hands-on refuge chamber training be completed by every miner every 90 days. Every miner should be trained to perform all aspects of activating and maintaining a chamber. During an emergency some miners may be incapacitated so it is not sufficient to train only some miners on the various tasks. For maximum protection, all miners should be capable of performing all tasks.

We recommend that this training be done using refuge demonstration models.

Section 75.1506 Refuge Alternatives

MSHA solicits comment from the public on the Agency’s proposed approach to refuge alternative capacity.” (p-34158 column 1)

The Union believes that outby shelter chambers can offer important protections. However, we urge MSHA to consider the mine’s work cycles when determining such matters. For instance, a large operation with many miles of belt line may routinely have two or three beltman assigned to one area. However, based on the need to keep the entire belt line clean, the operator may assign other miners to assist the beltman on a routine basis. Chambers must possess enough capacity to accommodate these miners also.

MSHA is proposing to allow, depending on mine specific conditions, refuge alternatives with boreholes to be located up to 4,000 feet from the working face. MSHA solicits comments on this proposed alternative to locating refuge alternatives in inby areas.” (p-34158 column 2)

The Union opposes placing the primary chamber miners may need as a refuge at a distance greater than 1,000 feet from the working face. Insofar as MSHA suggests that a chamber can be located up to 4,000 feet from the working face, such a refuge may serve to complement a refuge near the face, but it should never be used in place of a chamber near the

face. Shelters located at a distance of 4,000 feet outby with a borehole would serve a different purpose.

The Union supports having additional stationary refuges placed at different locations outby to provide shelter if an escape is interrupted; however, the primary chamber must be within 1,000 feet of the working face. In fact it would be desirable to have stationary refuge shelters located along the miners' escapeway. Otherwise, the primary chamber is the only such refuge located near the working face, miners whose escape may be blocked in the escapeway would be forced to retreat to the section to reach the refuge shelter. However, if such shelters are required along the escape route, miners would have a place to go should their escapeway be blocked. This was the recommendation of NIOSH in the December 2007 Research Report on Refuge Alternatives for Underground Coal Mines. NIOSH recommended that "A refuge chamber or in-place shelter should be available and readily accessible from each active working section. Additionally, refuge alternatives such as in-place shelters may be desirable in more "outby" locations, e.g. between the mouth of the panel and the shaft, to facilitate escape or handling of injured miners." Such refuges along the miner's escape route would provide a place to shelter should their route of escape be blocked. Often miners are several miles underground. If they should encounter a blockage halfway on their journey through the escapeway to the surface, they would be forced to retreat into the face of a fire, explosion or other emergency to get to the shelter on the working section. It would be safer if additional shelters would be located along the escape route, so miners could shelter there if needed. The Union would therefore recommend that, in addition to the refuge chamber within 1,000 of the working face, other in-place shelters also be located along the mine escapeways.

MSHA also solicits comments on the proposed requirement that refuge alternatives be located between 1,000 feet and 2,000 feet from the working face and from areas where mining equipment is being installed or removed." (p-34158 column3)

The Union believes chambers must be located within 1,000 feet of the working face or where mining equipment is being installed or removed in order to protect miners in an emergency. MSHA must look at this issue from a practical perspective: If the chamber is located 1,000 feet outby the face of a longwall section, and the shear operator is at the tailgate, then that individual could be nearly one-half mile from the chamber. In a smoke-filled environment or after an emergency situation develops traveling this far already is a lot to ask of miners. As Paul Ledford recounted his ordeal at Darby mine, dust was so thick "you can hardly see your hand in front of your face." Ledford said he prayed as he crawled 1,500 feet along the mine's rocky bottom, then lost consciousness. He added "I just knew I was going to die in there that night." Ledford believes most of his co-workers would have survived if the federal government had required protective chambers stocked with oxygen supplies.

Based on this Darby scenario alone, MSHA must require a 1,000 foot maximum distance. Those who perished in the Darby explosion were able to crawl a distance of 1,400 feet before succumbing to the toxic atmosphere. Had a shelter been available within 1,000 feet they all

would likely have survived.

“Proposed paragraph (b)(4) further provides that the operator may request and the District Manager may approve a different location in the Emergency Response Plan.” (p-34158 column 3)

The Union opposes permitting alternative locations for outby refuge chambers being approved by the District Manager. The UMWA believes that to request an alternate location the operator must show compelling need, such as adverse roof conditions that cannot be corrected. Further, the alternate location must be in as close proximity as possible to the original location. Finally, this decision should not be made at the MSHA District level. Such determinations create too varying a policy across MSHA nationwide. It also has become clear over the years that some District Managers do not make sound judgements when dealing with mine management on these types of issues. Crandall Canyon would be only the most recent affirmation of this flaw. The DOL internal investigation of the Crandall Canyon disaster found numerous problems of MSHA procedures at the District level. Instead there should be a small group of individuals within MSHA who must develop special expertise to consider all such requests.

“Refuge alternatives that have materials and components stored on transportable equipment, such as a skid would require care to assure that they are not damaged while in storage.” (p-34159 column 2)

The Union opposes the deployment of these types of refuges under any circumstance. Post-accident construction of a refuge is not feasible and will not offer miners the protection required in the MINER Act or the 2008 Appropriation Act. The Union demands the final rule prohibit the use of these units.

Section 75.1507

Emergency Response Plan; Refuge Alternatives

“One type is a pre-fabricated self-contained unit. The unit is portable and may be used in outby applications as well as near the working section. This unit has all the components built-in.” (p-34159 column 3 – p-34160 column 1)

The Union is convinced that these are the only types of refuge chambers that should be permitted near a working face in the mine.

“MSHA solicits comment from the public on the 96 hour duration.” (p-34160 column 2)

The Union strongly supports the 96 hour minimum requirement for breathable air.

“The proposal includes locations for refuge alternatives that are consistent with NIOSH’s

topics now required by MSHA in Part 48 cannot possibly be adequately covered in the time allowed by that regulation.

Every aspect of training outlined in this proposed rule must be wholly separate from and in addition to, any other training currently required. The information and practical application of this training is of vital importance. Miners lives will literally depend on the adequacy of this training. MSHA must require mine operators to provide sufficient time and adequate resources to ensure the training is as successful as possible.

UMWA Overview

The United Mine Workers of America is deeply disappointed with much of the contents of the *Refuge Alternatives for Underground Coal Mines; Proposed Rule*. To say the least the Union finds the proposal to be confused, overly broad, impracticable to enforce, and not within the mandate set down by Congress in the MINER Act, and the Consolidated Appropriations Act of 2008. US miners have waited nearly forty years since passage of the 1969 Coal Mine Health and Safety Act for MSHA to provide these protections. After the Farmington Disaster, Congress clearly intended that Emergency Shelters be provided to miners in this country and that mine health and safety take a clear new direction. Unfortunately, that Act's mandate for Emergency Shelters was never implemented. MSHA historically accepted simple barricade supplies to suffice for emergency shelter protection. A simple barricade has never been adequate to protect miners facing a mine emergency. For MSHA to propose the continuation of such "alternative shelters" is unacceptable and does not meet the mandate of the most recent directives by Congress in the MINER Act and the Consolidated Appropriations Act of 2008. It is completely unacceptable for MSHA to continue to ignore the directives of Congress again as it has since 1969. The number of lives that may have been saved had miners had these protections is appalling. Some of those include:

DATE	MINE	LOCATION	NUMBER KILLED	CAUSE
12/30/70	Finley Coal No. 15 & 16	Hyden, KY	38	Explosion
7/22/72	Blacksville No. 1	Blacksville, WV	9	Explosion
12/16/72	Itmann No. 3	Itmann, WV	5	Explosion
3/9/76	Scotia	Whitesburg, KY	15	Explosion
3/11/76	Scotia	Whitesburg, KY	11	Explosion
4/4/78	Moss No. 3	Duty, VA	5	CO Inundation

DATE	MINE	LOCATION	NUMBER KILLED	CAUSE
11/7/80	Ferrell No. 17	Uneeda, WV	5	Explosion
4/15/81	Mid-Continent Resources Dutch Creek #1	Redstone, CO	15	Explosion
12/07/81	Adkins Coal Mine # 11	Kite, KY	8	Explosion
12/8/81	Grundy Mining Co. Mine #21	Whitewell, Tn	13	Explosion
1/20/82	No. 1	Craynor, KY	7	Explosion
6/21/83	Clinchfield Coal McClure #1	McClure, VA	7	Explosion
12/19/84	Emory Mining Co. Wilberg Mine	Orangeville, UT	27	Fire
9/13/89	Pyro Mining Co. No. 9 Wm. Station	Sullivan, KY	10	Explosion
12/7/92	Southmountain Coal Mine #3	Norton, VA	8	Explosion
9/23/01	Jim Walter Resources, Inc. #5	Brookwood, AL	13	Explosion
1/2/06	Sago Mine	Upshur County, WV	12	Explosion
5/20/06	Darby Mine No. 1	Harlan County, KY	5	Explosion

Although a safety chamber may not have saved all of the lives involved in these disasters, had a safety chamber been available, it is fair to say that some of these miners would not have perished. The Union and the miners in this country are tired of waiting for protections that should have been available to them in 1969. In those countries which do provide such protections to miners, the safety chambers have proven to save lives. One such accident was the mine fire in the Mosaic Co. potash mine in Saskatchewan in 2006. Seventy-two Canadian miners walked away from a toxic underground fire after spending the night locked inside such a

safety chamber. The miners had plenty of oxygen, food and water and simply sealed themselves inside and waited for help to arrive. Had it not been for the safety chamber, potentially seventy-two victims would have been recovered from this mine. Another such two incidents happened in the gold mines in Perth, Australia in 2007. Twice in less than two months miners in the Australian hard rock mines were rescued from mine safety chambers. (Articles attached). So safety chamber are proven to save lives. It is long overdue for the United States to provide the same protections to our miners.

Post-Accident Construction of Refuge

The Union opposes the inclusion of any refuge alternative that is not a self-contained and self-deploying chamber, or an already fully constructed and supplied shelter. Miners, including those who may be injured in an accident, must be assured they have immediate access to a refuge chamber. They should not be concerned that they will perish in the aftermath of such an accident because they are required to construct their own safe haven.

The Union demands that any reference to permitting the creation of such refuges from stored materials be stricken from the final rule.

Oxygen Tank and Face Masks

Likewise, the Union opposes the Agency's suggestion that mine operators could deploy an oxygen tank and face masks to constitute a suitable refuge. A miner trapped after a fire or explosion might have facial injuries precluding him from wearing such an apparatus. How could the miner who is severely burned and suffering great pain can keep the face piece on until rescue is facilitated? This is not, a refuge by any definition moreover, this is contrary to NIOSH's recommendation and to the direction from Congress.

The Union demands that any reference to this ridiculous provision be removed from the final rule.

Training

In an effort to create a "performance-based" rule MSHA has failed to ensure miners will be able to utilize the refuge chambers. The Agency has not established adequate criteria for training miners on the deployment and activation of refuge chambers.

The Agency must specify in the rule that all miners at the operation must be trained in all aspects of chamber deployment, activation, maintenance, emergency repair and other essential tasks. It would not be sufficient to train specific persons on specific tasks that would be assigned to them in the event of an emergency situation. The potential for one or more miners to be seriously injured or worse is a real problem that would render training limited to some miners useless. The remaining miners would not be sufficiently familiar with the operational aspects of

the chamber, and they would suffer as a result.

Training should be done at-least every 90 days and include hands-on training. The Union has suggested this can be accomplished by the mine operator by means of a refuge demonstration models.

Other

The Union is concerned that the Agency has only completed part of the necessary work with regard to refuge chambers. While it is clear that if the Agency cleans-up the proposed rule, as the Union has suggested, there may be times when miners seek safety in a refuge chamber. These miners will be capable of surviving for a period of at-least 96 hours. The Agency should also include provisions to facilitate the miners' escape from the chamber and ultimately the mine.

Such provisions must take into account all the possible scenarios mine rescuers and trapped miners may encounter during such an event. The Agency must consider that extraction may occur in a hazardous atmosphere, requiring trapped miners to don breathing apparatus. There is also the possibility that post-accident fires and smoke will affect extraction and escape.

These scenarios must be looked at by the Agency and means must be developed to deal with these issues. The bottom line is getting the miners into the refuge is not the end of the story. Getting them out and to safety is the ultimate goal. MSHA must include provisions for doing so in the final rule.

West Virginia

Following the tragic events of January 2006, legislation was passed by the West Virginia legislature and signed by Governor Manchin in record time establishing a Task Force which made recommendations to the Governor and the Office of Miners Health Safety and Training regarding available technology to comply with the Governors Bill. It is important to remember that this group worked diligently to meet established timelines at a time of intense pressure immediately following the tragedies at Sago and Aracoma.

The Union commends the work that was done in West Virginia and believes the Task Force should be applauded for being the first State in the Country to require chambers/shelters for miners. The 1969 Mine Act adopted language for the use of safety chambers into law at the insistence of the UMWA, but promulgation of these regulations was left up to the Secretary of the Interior and the Bureau of Mine's to implement. Miners might still be waiting for shelters/chambers if West Virginia had not forced the issue and moved forward to implement these protections.

The UMWA's comments to MSHA recommend more stringent requirements for

shelters/chambers than are currently required in West Virginia. We urge MSHA to adopt our recommendations in the final rule. If MSHA's final rule is more stringent than the current requirements of West Virginia, the UMWA recommends grandfathering the operations in West Virginia that are complying with that state law as of the date MSHA's rule is promulgated or December 31, 2008, whichever is sooner. However, if any such shelters need to be replaced, units must meet the new requirements that are adopted under this final rule. In any event, no grandfathered shelter should be allowed to remain beyond 10 years of their original purchase

The Union has already commented on other areas of West Virginia's regulation where we agree, such as supporting West Virginia's requirement of shelter placement within 1,000 feet of the nearest working face in each working section. We agree with West Virginia in their conclusion that the first and preferred option for miners in an emergency is to escape without delay. These units are to be taught to be used as a last resort if miners have been forced to return to the shelter/chamber to await rescue. Such a unit may have saved the lives of the miners that became trapped at the Sago mine. The Union also believes that MSHA should take further steps to require placement of additional shelters/chambers in outby areas throughout the mine in case miners need to access them on their way out or, miners that are assigned regular work duties in outby areas would need a safe haven to utilize if they become trapped while trying to escape.

Review

Though most of these issues are addressed in these comments to the Section by Section analysis, we wish to re-iterate these items of concern in the rule, as proposed:

7.503 Application requirements

(a) All references to "components" should be removed to the extent they refer to items that would be provided for purposes of post-emergency construction of a barricade or shelter. This is acceptable only if this refers to items that are included within a pre-fabricated chamber or outby shelter that is already fully stocked AND protected for post-emergency use - so that any supplies intended for post-emergency use cannot be taken from it for mining, etc... At a minimum, this section of the rule suffers from ambiguity.

(e) The certification process is not sufficiently reliable nor is it protective of miners. As written, it anticipates that operators simply "sign off," that is, inform MSHA that what they have purchased will meet the regulatory standard. Even if they "swear" to this, the Union contends MSHA must independently determine if what refuge protections the operator has for its miners' use meet all the regulatory minimum standards. While having an operator "certify" may be a component of the process, MSHA cannot simply take the operators' word on this. Having this be a paperwork verification by inspectors fails to acknowledge that improper compliance may mean the difference between life and death in an emergency. Learning that some operator's certification was over-stated cannot be discovered only after an emergency arises. The Crandall Canyon submissions by the operator indicated everything met MSHA standards, yet after the disaster MSHA discovered that the operator's submissions were substandard. At the outset,

MSHA must take a hard and complete look at what refuge protections the operator is making available to its miners, and not rely on an operator's certification.

7.505

(a)(1) The 60 cubic feet of volume per person is inadequate. NIOSH recommended 85 cubic feet and the UMWA supports 85 cubic feet as the minimum for the final rule.

7.506

(a) Breathable air. Relying on fans and compressors installed on the surface cannot take the place of breathable air supplies placed underground.

(g) (4) While having ample supplies of breathable air is advisable, there should be no proposal that expects miners to wear breathing apparatus for even most of the time while they await rescue, much less the full 96 hours otherwise required in this proposed rule. We agree that 96 hours constitutes a reasonable standard as for the duration of post-emergency protections that should be made available to miners, but oppose any rule that would expect miners to wear breathing apparatus for a prolonged period of time.

75.1504

(b)(6) This provision anticipates miners will construct their refuge place after the emergency develops. We oppose this concept; the language in this section must be changed to eliminate construction as an acceptable option.

75.1506

(a)(1) "60" should be replaced with "85" (regarding the minimum cubic feet allotted per person)

(3) Refuge alternatives for outby areas should be large enough to accommodate not only "persons assigned to work in the outby area" but also "the maximum number of persons that can be expected on or near" the outby area. In the same way that subsection (2) provides for all those who may be present "on or near the section at any time" the outby areas should also anticipate that persons other than those assigned there may be present when emergency strikes.

(1) Between 1,000 and 2,000 is too far; a maximum of 1,000 feet is needed to protect miners.

(2) Any exceptions to the standards set forth in the final rule should be allowed only upon approval from MSHA headquarters, not at the District level. The post-Crandall Canyon investigation of MSHA's handling of operator requests revealed too many problems with the existing system whereby the District is given such discretion. Even if MSHA attempts to correct the particular problems Crandall Canyon brought to light, the Agency's history of problems make this a hollow promise. After each recent major accident (JWR in 2001, Sago, Aracoma and Darby in 2006 and Crandall Canyon in 2007), post accident investigations have uncovered problems with the existing system. MSHA has promised to correct the problem too many times for a promise to satisfy us as miners' advocates. If there shall ever be any exceptions granted, the authorization should come from MSHA headquarters, and only based on compelling reasons.

(g) We suggest that word "REFUGE" be placed on each side of the protective area to provide maximum protection for miners who may approach the shelter from different directions. It should be visible from each direction.

75.1507

(a)(1) This section contemplates miners constructing their shelter after an emergency arises. This is unacceptable. NIOSH found that barricading is not protective, and we agree. We have grieved for too many miners' deaths after barricading failed them.

(c) This whole section must be struck because it anticipates post-emergency construction of a refuge.

(d) A 48 hours system is not sufficiently protective and should not be allowed at all, so language dealing with how protections will be made available after the initial 48 hours should not be included in the final rule.

(e)(1) While the UMWA urged greater quantities of food and potable water (as well as breathable air) in our comments to Section Two of the MINER Act (attached), we agree that the minimums NIOSH recommended are the minimum amounts that should be required in the final rule.

75.1508.

The Union's concerns with a system that depends on an operator's certification to determine compliance (as set forth in comments to 7.503(e), above) apply equally to these provisions that provide for operators' certifications about training required under the final rule. Certification by an operator is not reliable and cannot be the basis for determining that the required training has taken place. At a minimum, MSHA should be provided notice prior to each training session (in advance so the inspector may observe) and its inspectors should observe such training for at least 80% of the workforce no less than once each year. While we believe MSHA should affirmatively confirm that every miner is fully trained on these (and other) protections, this level is recommended to accommodate the reality that it may pose unreasonable scheduling problems to ensure that MSHA observe this kind of training for every miner; yet by setting a high percentage, it would ensure that most miners will know the kind of training that is expected and required and the standards will more likely be maintained throughout the workplace.

Conclusion

Based on the language of the proposed rule The United Mine Workers of America adamantly urges significant improvements, as described in these comments, before the rule is promulgated as a final rule.

Commenter: Dennis O'Dell, United Mine Workers of America

These following documents were submitted as attachments to Mr. O'Dells comments. As they are currently available on the web, we are providing links to these documents. This will help save on the size of this submission.

- [Aracoma Fatal Investigation Report](#) January 19, 2006
- [Report of Investigation Darby Mine No. 1](#) May 20, 2006
- [UMWA's Report on the Sago Mine Disaster](#) January 2, 2006



GOLD NEWS

BALLARAT INCIDENT

Refuge chamber used as 27 Lihir gold miners rescued

For the second time in less than two months modern mine safety practices being applied in Australian hard rock mines paid off with 27 trapped underground miners recovered from a mine in the historic gold mining centre of Ballarat.

Author: Ross Louthean
Posted: Monday, 19 Nov 2007

PERTH -

Lihir Gold Ltd (ASX: LGL) said the cause of a rock fall on a mine development in the Ballarat goldfield in Victoria which led to 27 miners being trapped underground was still to be assessed and operations would not resume until there is a safety clearance.

There was a rock fall in the early hours of this morning at around 700 metres into the upper level decline of a mine being developed by subsidiary Ballarat Goldfields.

"The fall was not in a mine working area and no injuries were sustained," said Lihir's general manager-corporate affairs, Joe Dowling.

Mine rescue procedures were applied and all miners made their way to the mine's safety refuge chambers to await evacuation.

They were all brought to surface in a crane-hoisted large kibble via a ventilation shaft.

The incident replicates Barrick Gold Corporation's experience at the Kanowna Belle gold mine near Kalgoorlie last month when an underground vehicle caught on fire and the underground miners went immediately to underground refuge chambers before being given the all-clear to return to surface.

The Ballarat incident may provide raw nerves for some Lihir shareholders, as there were mixed market reactions to the big Papua New Guinea gold miner taking over Ballarat Goldfields Ltd which had been making slow progress on re-opening the Ballarat field.

At the close of trade today Lihir's shares slipped to \$A3.85 (\$US3.43) down about 10 cents on Friday's close, but on a sliding trend since early this month as the gold price stuttered.

One party not happy with today's incident was the Australian Workers Union (AWU) which claimed the company had "put mine operations ahead of safety in the past."

Cesar Melham, Victorian secretary of the AWU told *The Age* newspaper that in June a controlled blast was carried out "but correct procedures were not followed."

He called on Lihir and the Victorian Government to put a safety system in place to ensure safety was top priority at all mining sites.

The Age reported that the men extracted in the kibble on heading to surface were in good spirits and quoted rescuer Brian Kane: "If you're in the industry, you know what's going on. We knew they were ok."

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boston.com

THIS STORY HAS BEEN FORMATTED FOR EASY PRINTING

72 Canada miners safe after fire

The Boston Globe

Refuge rooms seen as primary factor

By Beth Duff-Brown, Associated Press | January 31, 2006

TORONTO -- Seventy-two Canadian potash miners walked away yesterday from an underground fire and toxic smoke after spending a night locked inside airtight chambers packed with enough oxygen, food, and water for several days.

The company said the textbook case of safe underground mining was due to those chambers, extensive training of rescue workers, and support from the rural community.

"I'm almost getting choked up thinking about how well this team worked together," Marshall Hamilton, a spokesman for Mosaic Co., the Minneapolis-based owner of the mine, said after he got word that all the men were evacuated safely.

Greg Harris, one of the miners, said he was never concerned about his safety as he played checkers with colleagues in the refuge room waiting to be rescued. They drew the checkerboard on the back of a map and used washers as chips.

"Everything is good," Harris told The Canadian Press from his home. "Communication was excellent. We had no problems whatsoever."

Analysts said the rescue could serve as a lesson for the mining industry in the United States, China, and other countries.

"It really looks like a textbook recovery to me" said Davitt McAteer, head of the US Mine Safety and Health Administration under President Bill Clinton.

McAteer is leading the investigation into the deaths of 12 miners earlier this month at the Sago coal mine in West Virginia.

In a telephone interview, McAteer said the safety chambers in the Mosaic mine in Canada's central Saskatchewan province were key to the miners' survival.

"I think that the question of the existence of the chamber that provided oxygen, food, and protection is fundamentally important in any kind of a mine," he said. He acknowledged, however, that potash mines are not nearly as dangerous as those for coal, where an initial explosion can provoke a secondary one 10 times as strong.

There are no safety chambers in US mines, he said, because in the late 1970s, the US government determined there was no material strong enough to withstand the secondary explosion. ■

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AB58 - COMM-11-2

Blacksville Nine Died Needless

By Rex Lauck

Assistant Editor, the Journal

The nine men killed in a fire at Blacksville No. 1 Mine, Consolidation Coal Co. on July 22 should have lived. This statement was made by Vice President Leonard J. Pnakovich as Acting Safety Director to the *Fairmont Times—West Virginian* and later implemented by an August letter from Pnakovich to Secretary of the Interior Rogers C. B. Morton. The letter states:

"It is without question that proper implementation of the Federal Coal Mine Health and Safety Act of 1969 would have prevented the tragic death of nine coal miners in the Blacksville No. 1 Mine of Consolidation Coal Company. As W. A. Boyle, President of the International Union, United Mine Workers of America advised the Congress, as early as April 1969, 'Our bill provides for the establishment of safety chambers. These chambers, properly sealed and ventilated, would provide a place where men could go to be protected from deadly carbon monoxide in the event of a mine explosion.' That was the first time the concept of safety chambers was ever enunciated. The International Union, United Mine Workers of America was pleased when that proposal was incorporated as Section 315 of the Act as finally enacted. The importance of that new provision and concept is immediately apparent. The presence of such safety chambers in which miners could have sought refuge during the tragic fire at the Blacksville No. 1 Mine would have saved the lives of nine men and eliminated another tragic chapter of unnecessary death in the coal mines.

"A clear reading of Section 315 of the Act discloses a precise duty imposed upon you, as Secretary, with regard to implementation of that Section. As you are fully aware, Section 315 of the Act authorizes that the Secretary 'may prescribe in any coal mine that rescue chambers,

properly sealed and ventilated, be erected at suitable locations in the mine to which persons may go in case of an emergency for protection against hazards.' The Section requires that the chambers be properly equipped with first-aid materials, an adequate supply of air and self-contained breathing equipment, an independent communication system to the surface, and proper accommodations for the persons while awaiting rescue. Likewise, the Section provides that 'A plan for the erection, maintenance, and revisions of such chambers and the training of the miners in their proper use shall be submitted by the operator to the Secretary for his approval.' I have been informed that even though the Act has been in effect for almost 32 months, there has not been one chamber erected in any coal mine in the United States, nor are we aware of any specific plan or specification for such emergency chambers. It appears vividly clear that implementation of this Section of the Act continues to be bogged down in administrative red tape and time consuming programs of research. Needless to say, time is of the essence in this matter, as clearly demonstrated by the unnecessary loss of nine lives.

"Accordingly, demand is hereby made for immediate action by the United States Department of the Interior to cause the requirements of Section 315 of the Federal Coal Mine Health and Safety Act of 1969 to be meticulously adhered to without further delay. The Act's provisions must be implemented immediately.

"One wonders what magnitude of shock is required to cause the Secretary of the Interior to invoke the authority with which he is empowered by the specific provisions of the Federal Coal Mine Health and Safety Act of 1969. Is not the loss of nine more coal miners' lives sufficient?"

As the *Journal* went to press,

only routine patrol duty and air sampling was taking place at the actual disaster site at the mine which is located in Monongalia Co., W. Va. It was sealed July 24.

An investigation by U.S. Bureau of Mines ended August 8. Results of that investigation will be published by the Bureau in a formal report on the disaster sometime in the future.

Newspaper reports indicated that a public hearing by the West Virginia Department of Mines would be held at Morgantown on August 15. Witnesses were expected to include Consol officials and rank-and-file coal miners. Included in both categories will probably be the men working underground at the time the fire started who were able to escape.

Newspapers indicated that efforts to collect money for the nine widows of the dead miners and their 22 children were disappointing. The *Journal* will inform its readers where money should be sent when that information becomes available.

Newspaper reports didn't reveal how many of the 350 employed at the mine were to find work. One report stated that 30 men remain work at Blacksville No. 1 another source indicated 43 men had found news job Blacksville No. 2. The A President of District 31, An Morris, says the Union is operating fully in the effort find employment for these displaced by the disaster.

As this was written all mines in District 31 had returned to work. An impromptu walkout of the miners in mourning for the disaster victims closed several mines in Northern West Virginia.

Public figures were harsh in their criticism of the U.S. Bureau of Mines and Consol. Robert C. Byrd (D., W. Va.) said "Laxity on the part of the Bureau of Mines has been indicated."

Byrd added, "Early evidence indicates the disaster should never have occurred."

A Young Consol Coal Miner Is Killed After 12 Days On Job

Consolidation Coal Co. strikes again. On June 14, 22-year-old Thomas M. Ball, shotfirer and timberman, was killed in a roof-fall at the Franklin No. 25 Mine, Hanna Coal Co., Division of Consolidation Coal Co., at New Athens, Ohio.

Mr. Ball, a member of UMWA Local Union 1360, District 6, had 12 days of underground mining experience. This is what U.S. Coal Mine Inspector Paul J. Gregor reported as the cause of the accident:

"The general laxness on the part of management, its supervisors, and employees to follow sound proven roof support and roof testing practices precluded the detection of a dangerous roof condition and its ultimate failure. Although not listed in

chronological order, this fall and death were a result of a culmination of:

"1. Installed temporary roof supports being in many instances more than five feet apart, more than five feet in by permanent supports, of improper length, loosely set.

"2. Thomas M. Ball (victim) having never received a formal course of instruction designed to train him in the performance of his duties as a shotfirer and timberman.

"3. The victim with only 12 days underground mining experience being permitted to work alone while installing temporary roof support in face areas.

"4. Management's failure to enforce the company's approved

(Cont. on Page 3, Col. 1)