

Implementation of the MINER Act Is Proceeding Too Slowly

An Interim Staff Report

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Introduction

This staff paper is the first in a series of progress reports on the implementation of the Mine Improvement and New Emergency Response Act of 2006 (the MINER Act).¹ The paper includes some references to various legislative proposals, including H.R. 5389, to illustrate other possible initiatives that should be considered in addition to last year's enactment of the MINER Act.² It also reviews legislative and administrative actions in several states, some of which are more protective of workers than federal standards.

The MINER Act is intended to improve certain aspects of safety in the nation's mines after a series of coal mining fatalities in 2006.³ Following a careful examination of available information,⁴ we conclude that while the Mine Safety and Health Administration (MSHA) is making some progress, it is moving too slowly in addressing the critical risks targeted by the MINER Act. Delays put miners' lives at unacceptable risk and must be avoided. Accordingly, we recommend that during the 110th Congress, the Education and Labor Committee continue to closely monitor implementation of the MINER Act to ensure it is completed promptly and correctly.

¹ P.L. 109-236. The Act was developed by the Senate, S.2803. The Senate Committee on Health, Education, Labor and Pensions issued a report on the Senate bill six months after enactment, S.Rpt. 109-365 (hereinafter "the Senate committee report"). The bill was taken up and passed without amendment by the House.

² H.R. 5389 (109th Congress), was introduced in the House by Mr. Miller and others (Rahall, Owens, Chander, Holt, Davis of Alabama, Mollohan, Brown of Ohio, Costello, Murtha). Other bills were introduced in the Senate.

³ Three multi-death accidents took place in quick succession: 12 deaths at the Sago Mine in West Virginia on January 2-4, 2006; 2 deaths at the Aracoma Alma mine in West Virginia on January 19, 2006; and 5 deaths at the Darby #1 mine in Harlan County, Kentucky on May 20, 2006.

⁴ The status information in this report is current as of the cover date. The information was derived from staff briefings by the Department of Labor's Mine Safety and Health Administration (MSHA), the National Institute for Occupational Safety and Health (NIOSH), the General Accounting Office (GAO), and the Department of Labor's Office of the Inspector General (OIG) in late 2006 and early 2007, from a meeting with the MSHA Acting Assistant Secretary and his top staff in early 2007, and from the responses to numerous questions addressed to MSHA during that time period. The NIOSH web site on the MINER Act www.cdc.gov/niosh/mining/mineract/mineract.htm provides useful research information. Information has also been collected from other sources. Committee staff are solely responsible for the interpretation of this information.

As is widely recognized, even when fully implemented the MINER Act will not eliminate myriad occupational safety and health problems in the mining industry. A list of some of these issues is included as Appendix 2 of this report.

Several states with active underground coal mines (West Virginia, Kentucky and Illinois) have recently addressed some of the same issues as the Federal MINER Act. In some cases, the requirements in a particular state are more protective of miners than are the Federal requirements. Accordingly, a limited overview of these state actions is included in Appendix 3 of this report.

Executive Summary⁵

Emergency evacuation problems still remain.

A key goal of the MINER Act was to ensure that underground coal miners have the equipment and training they need to get out of the mine quickly and safely in the event of an underground explosion, flood, fire or other emergency. But today, underground coal miners remain without the equipment and training they need to ensure safe evacuation in an emergency. The required air packs necessary for escape are not all in place, and their reliability remains in question. Miners are not yet receiving real-world training in evacuation. And adequate communication and tracking equipment for emergencies are still not in place, and will not likely be anytime soon.

Underground refuges are still not being installed.

A key goal of the MINER Act was to ensure that underground coal miners have a safe place to await rescue should they be unable to safely evacuate in an emergency. But today, underground coal miners still face the same potential fate as the miners at Sago, who suffocated while awaiting rescue. Due to delays by MSHA in providing guidance, mine operators are not yet providing breathable air supplies underground in order to sustain miners in the event of an emergency. Moreover, MSHA has not yet required mine operators to provide hardened shelters underground.

Qualified rescue teams are still not available at all mines

A key goal of the MINER Act was to ensure that all underground coal mines have rescue teams available who can react swiftly, safely and competently in emergencies. But today, many underground coal miners still face a substantial risk that, should they become trapped below ground, trained rescue teams will not be able to reach them in a timely way.

⁵ Not all the requirements of the MINER Act are examined in detail in the body of this staff paper. The implementation status of a few of the provisions are instead covered in Appendix 1, and hence they are mentioned in this Executive Summary.

Disaster communication with miner families and the public needs attention

A key goal of the MINER Act was to ensure that MSHA keeps miner families and the public fully and accurately informed about accidents and their investigations. But today, family members continue to complain that MSHA is not keeping them closely informed about accident investigations affecting their loved ones.

Key hazards revealed by the 2006 tragedies remain unaddressed

A key goal of the MINER Act was to ensure that a few specific hazards to underground coal miners revealed by the Sago, Aracoma Alma, and Darby mine disasters in 2006 be addressed. But today, deficiencies in Federal requirements that contributed to these tragedies remain real threats to miners. Fourteen thousand (14,000) walls that seal off explosive methane gas in abandoned mine areas remain at risk of failure, including more than 11,000 of those built from artificial materials, like those at the Sago and Darby mines. Conveyor belts that can readily ignite underground mine fires have not been replaced with less flammable belts, although flame retardant belts are available. Electronic detection devices that can detect fires before they get out of control, and explosive gases before it is too late, are not universally required.

Tougher penalties need to be regularly assessed

A key goal of the MINER Act was to ensure that incentives for compliance with MSHA requirements at all types of mines were increased. But today, MSHA has yet to issue a “pattern of violations” citation to a mine operator, has not finalized regulations to ensure that assessments are properly assessed, and has not addressed concerns that initial penalties assessed by inspectors are watered down during review.

Special mission support needs careful attention

A key goal of the MINER Act, and supplemental appropriations legislation during 2006, was to ensure that MSHA has the critical support it needs to carry out its mission to protect underground coal miners. This included special attention to the work of the National Institute for Occupational Safety and Health (NIOSH). But today, questions remain as to whether MSHA is properly training the new coal mine inspectors it was authorized to hire, and whether the research funding provided to NIOSH to develop new mine safety technology will produce real results.

Conclusion: The promise of the MINER Act has not been fully realized.

The promise of the MINER Act of 2006 has not been fully realized. MSHA is moving too slowly. Meanwhile, miners’ lives remain at risk. The mining industry need not wait for MSHA to act, but many mine operators are doing just that. MSHA and the mining

industry need to do better, and then move on swiftly to eliminate many other critical safety and health risks to miners.⁶

Emergency Evacuation Problems Still Remain

The rules, and when they take effect, vary mine by mine

The emergency evacuation rules established by the MINER Act⁷ are not uniform in practice; rather, the rules that MSHA actually enforces will vary mine by mine, based on an agreement between MSHA and each coal mine operator.⁸

Specifically, the MINER Act requires that each mine must have a written emergency response plan (ERP)⁹ that meets certain standards set out in the MINER Act.¹⁰ These plans must be updated to reflect changes in operations in the mine, advances in technology and other relevant considerations.¹¹ The plans must be reviewed by MSHA at least every 6 months.¹²

The specifics of the plan are what MSHA enforces. MSHA cannot require that a mine operator comply with the Act's emergency evacuation requirements, training requirements and other applicable requirements until that mine operator's plan (or portions thereof) has been approved by the MSHA. Once this approval process is complete, the mine's written plan essentially becomes the law of that mine.

Further, each plan specifies the length of time the operator has to come into compliance with the plan requirements. Until this pre-approved amount of time has elapsed, no citations can be issued by MSHA.

Plans are approved by the individual MSHA district director responsible for a mine. The mine operator proposes a plan, the district director reviews it, negotiates with the operator

⁶ This White Paper does not consider what new delays in MINER Act implementation may result from EO 13422, issued on January 18 of this year. This Executive Order amends the criteria for reviewing rules by the President's Office of Management and Budget, and requires the review and approval of some guidance documents. As indicated infra, MSHA is using both methods to implement the MINER Act.

⁷ Many parts of the MINER Act amended the existing Federal Mine Safety and Health Act of 1977 (FMSHA), as amended, 30 USC 801 et.seq. The citations in this paper to those provisions refer to the amended sections of the FMSHA. In referring to other provisions of the MINER Act, the section number of the Public Law will be used. Implementing regulations by MSHA are in Title 30, Code of Federal Regulation; several parts are involved.

⁸ According to the Senate report, the HELP committee made a deliberate decision to use the plan model since all parties were familiar with its use in other contexts. Report, p.4. The report includes a discussion of the positive features of the plan approach, and why it created an appeal mechanism. Report, p.4-5. It should be noted this report was not filed until 6 months after the legislation was signed.

⁹ The MINER Act refers to a "response and preparedness plan" and an "accident response plan". Here we use the term by which MSHA refers to this requirement. See, e.g., Policy Program Letter NO. PO6-V-10, effective date 10/24/06.

¹⁰ FMSHA §316(b).

¹¹ FMSHA §316(b)(2)(A).

¹² FMSHA §316(b)(2)(D).

in many cases, and then either accepts or rejects the plan. This process basically requires that the individual district director deems the mine operator's proposed path to compliance with the new requirements be reasonable in light of what is known about that mine.

As a result of this process, implementation of the rules set out in the MINER Act is occurring only gradually in many mines. Mine operators are normally given time by district managers to put new controls in place before enforcement may commence; and since the decision on each plan is individualized, some mines are given more time than others. Moreover, with respect to the ERPs, MSHA has not yet determined what criteria to apply in reviewing compliance with certain criteria;¹³ until it does so, these necessary protections are not being implemented. And with respect to training issues to be covered by the plans, MSHA regulations issued in December 2006 gave operators an extension of time to submit their instruction plan.¹⁴

While MSHA can use the plan approval process to exert leverage on underground coal mine operators to make safety and health improvements. Since mine operators cannot "run coal" unless MSHA approves their ventilation, roof control and emergency plans, the agency has the ability to make significant safety and health improvements. Moreover, the mine operator's plans must be resubmitted for approval on a regular basis. However, mine operators have leverage as well, since they may appeal any plan disputes or denials related to MINER Act requirements to the Mine Safety and Health Review Commission.¹⁵

The MINER Act provides that mine operators are to make emergency response plans "available" to miners and miners' representatives,¹⁶ and the Act instructs MSHA to consider all comments submitted by individual miners or miners' representatives.¹⁷ MSHA guidance on the latter point indicates the agency will follow procedures used for similar purposes in connection with ventilation plans.¹⁸ It should be noted, however, that the ventilation plan requirements are generally limited to dealing with comments from only miners' representatives.¹⁹

The thoroughness with which MSHA district offices are able to review and approve the new emergency plan requirements will depend in part upon their resources, since they have many other duties to perform. The Government Accountability Office has reported

¹³ See the discussion, *infra*, of the amount of breathable air mine operators are required to keep underground.

¹⁴ 71 FR 71430. It should be noted that many of the requirements in section 2 of the MINER Act have been implemented by MSHA through program policy letter. Some, such as those involving training and SCSR requirements, have been implemented by regulation. The requirements of Section 2 implemented by regulation generally are those which overlapped an emergency temporary standard issued by MSHA prior to passage of the MINER Act.

¹⁵ FMSHA §316(b)(2)(G). The review is generated by a citation for a "technical violation". Sen. Rept. 109-365, p.5.

¹⁶ FMSHA §316(b)(2)(A).

¹⁷ FMSHA §316(b)(2)(C) and §316(b)(2)(D).

¹⁸ PPL NO. P06-V-10, effective 10/24/06, discussion of "Policy".

¹⁹ 30 CFR 75.370.

that MSHA offices have had trouble fulfilling some requirements concerning other types of plans.²⁰ Chairman Miller recently requested the Government Accountability Office to conduct a study of how district offices are actually implementing the requirements for emergency response plans.²¹

Miners are Missing Critical and Reliable Self-Contained Self-Rescuers

The law requires that mine operators have a minimum number of air packs (self-contained self-rescuers, or SCSRs) per miner available for escape in the event of a disaster.

The number of devices required, and their capacity, has changed over time. Since 1980, each person working in an underground coal mine has been required to have immediate access to an SCSR with an hour's air.²² Following the disasters at the Sago and Aracoma Alma mines, MSHA imposed a requirement that a miner have immediate access to a second SCSR with an hour's air.²³ The emergency rule also required that additional SCSRs be available on mobile underground equipment, and that enough SCSRs be stored in caches in escapeways to ensure miners can safely evacuate the mine.²⁴ The MINER Act further clarified that these caches of SCSRs in escapeways be located not less than 30 minutes apart, with a minimum of two hours of air per miner.²⁵

The MINER Act provides that an emergency response plan is not to be approved by MSHA unless it provides for the required number of SCSRs, and initial plans were to be submitted by August 15, 2006.²⁶ Nevertheless, mines have not met these requirements.

Following a letter from Chairman Miller to Secretary of Labor Elaine Chao expressing concern about this and several other implementation delays,²⁷ MSHA has asserted that this is a problem beyond its control.²⁸ In fact, however, the problem is in part due to MSHA policies. First, MSHA considers a mine operator to be in compliance with the law if that operator has ordered the SCSRs from any manufacturer.²⁹ Two manufacturers of such safety equipment (CSE and Osenco) are currently backordered for almost a year; so, mine operators who ordered these models are in practice not required to have them in place yet. Second, MSHA does not require operators to stock an SCSR that they do not

²⁰ See, e.g., GAO-03-945 (2003), concerning problems reviewing key ventilation and roof support plans

²¹ Letter to Comptroller General of February 16, 2007.

²² 71 FR 12257. MSHA regulations provide some exceptions to this rule; §75.1714-1 and § 75.1714-2. Staff have requested further information from the agency about these exceptions, but have not received a response as of the date of this White Paper.

²³ *Id.*

²⁴ 71 FR 12270, 30 CFR 75.1714-4.

²⁵ FMSHA § 316(b)(2)(E)(iii)(II). MSHA's emergency temporary regulation at 30 CFR 75.1714-4 was revised to reflect the MINER Act, 71 FR 71454.

²⁶ FMSHA §316(b)(2)(E), §316(b)(2)(A).

²⁷ Letter of February 1, 2007.

²⁸ BNA Daily Labor Report, Feb.5, 2007, p.A-10

²⁹ Program Policy Letter (PPL) No. P06-V-10, effective 10/24/06, section entitled "Emergency Response Plan - Approval Procedure".

want.³⁰ So although the third manufacturer of SCSRs (Draeger) has a surplus of thousands of these life-saving devices,³¹ miners remain without them. On a positive note, MSHA has asked mine operators and SCSR suppliers to cooperate in filling orders in a way that equalizes protection -- i.e., by giving priority in supplying SCSRs to those mines with the worst shortages -- but of course compliance with this request is not required.³²

Reliability is another issue. SCSRs have a history of failure. In fact in January 2007, MSHA ordered certain units manufactured in recent years be pulled.³³ The agency has estimated (but does not know) that there are 250 of these units. This, of course, compounds the backordering problem for SCSRs.

MSHA now requires operators to keep an inventory of SCSR units and report problems noted.³⁴ This requirement was adopted in December 2006 because the agency was concerned that in the past it had not learned of problems associated with SCSRs in a timely way, and had difficulty locating affected SCSRs for recall.³⁵ MSHA has declined to conduct random sampling of the SCSR units stocked by mine operators, nor is it required to do by the MINER Act. HR 5389 would have required this type of random sampling.³⁶ NIOSH does run an SCSR inventory testing program, however, and as of the date of this paper, it is about to propose a revamping of that program to ensure that it obtains a random sample.³⁷

A related problem concerns proper maintenance of SCSRs, ensuring they are not stored next to high heat or in a manner that could otherwise cause normal-looking units to fail, and removing from service those units which have exceeded their official shelf life. To deal with this, the MINER Act required that each mine operator adopt a maintenance schedule for checking unit reliability as part of its mine emergency response plan.³⁸ To implement this requirement, MSHA requires each emergency response plan to adopt the manufacturer's specifications for maintenance, routine examinations, storage and retirement (which means that MSHA can then enforce these specifications as the law of that mine); and to specify a schedule for opening, initiating the breathing cycle, and

³⁰ MSHA has expressed concern that the resulting intermingling of units -- some of one type and some of another -- could lead to confusion. BNA Daily Labor Report, Feb.5, 2007, p.A-10

³¹ "Miners still waiting on air packs", Ken Ward Jr., Charleston Gazette, December 24, 2006. According to customer service representatives for Draeger, they had 5,827 in stock as of Feb. 14, 2007.

³² BNA Daily Labor Report, Feb.5, 2007, p.A-10; Asst. Sec. Stickler letter to operators of Feb.1, 2007.

³³ Program Information Bulletin No. P07-02, issued January 19, 2007, concerning Life-Saver 60 SCSR.

³⁴ 30 CFR 75.1714-8.

³⁵ 71 FR 71446.

³⁶ Section 4. A Miller proposed amendment to the Senate version of MINER Act to this end was rejected by the House.

³⁷ According to NIOSH officials, they will access from MSHA the operator inventory lists of SCSR units and select those for testing. Enough units will be selected so that randomness will still be possible even should operators refuse to participate in this NIOSH program (as they may do) or some units selected are expired or nonworking (such units would be reported to MSHA). NIOSH will use this information to identify problems with the units in a particular mine or across the board -- e.g., evidence that the manufacturer's recommended shelf life is too long. Details of the updated program will soon be published on the NIOSH website.

³⁸ FMSHA §316(b)(2)(E)(iii)(III).

establishing operational reliability for “a representative number” of units on an annual basis, although it permits units at the end of their service life to be used for this purpose.³⁹

NIOSH is funding work on a new “dockable” SCSR design and a “hybrid” SCSR design. The dockable unit would allow miners to swap out new air tanks without changing to a whole new SCSR unit, thus avoiding the real possibility they will inhale contaminated air during the switching process. The hybrid unit would turn a standard hour-long SCSR into a carbon monoxide filtering unit after the hour expires, so that a miner could continue to achieve many benefits of protection without switching. We understand it is possible these units could be in production in a few years. However, since mine operators are currently purchasing many units of existing design to meet the requirements of the MINER Act, and these units have an official shelf life of many years, it is likely to take a new mandate to move new designs into place quickly.

MSHA regulations go beyond the MINER Act in one respect, requiring that as of February 2007, some miners in each mine be equipped with handheld, multi-gas detectors.⁴⁰ When implemented, this requirement will help miners know whether or not the air around them is bad; hence, they will know whether or not they need to don their SCSRs, and when it is safe to take them off again. Many toxic gases can be odorless or colorless, and oxygen shortages are likewise difficult to detect, and the rule helps to protect miners in emergency situations from making a deadly mistake.⁴¹

Miners are still not Receiving Adequate Evacuation Training

The MINER Act requires that all underground coal miners be trained in emergency evacuation procedures,⁴² and also in the proper procedures for donning self-rescuers, switching from one unit to another, and ensuring a proper fit.⁴³

MSHA regulations require that miners be trained quarterly in evacuation fundamentals, including practicing actually putting on an SCSR and inserting the mouthpiece.⁴⁴ However, mine operators are not required to allow miners to actually turn on the SCSR and breathe with it. While this saves the cost of obtaining additional SCSRs, it also means that this quarterly training does not provide miners with the sensation of what it is like to actually use an SCSR. Nor are mine operators required to provide each miner with a simple device that simulates breathing with an SCSR – devices that sell for a mere \$5.

MSHA regulations also require that miners be trained annually in evacuation under smoke-filled or other realistic conditions, while breathing through a “realistic SCSR training unit that provides the sensation of SCSR airflow resistance and heat.”⁴⁵ While

³⁹ PPL No. P06-V-10, discussion of “Other SCSR considerations”.

⁴⁰ 30 CFR 75.1714-7.

⁴¹ 71 FR 71445.

⁴² FMSHA §316(b)(2)(E)(v).

⁴³ FMSHA §316(b)(2)(E)(iii)(IV)

⁴⁴ 30 CFR 75.1504(b)

⁴⁵ 30 CFR 75.1504(c)

this “expectations training” is an important step beyond what is required under the MINER Act; miners are not yet receiving this critical training. That is because the requirements that mine operators provide such training will take effect only after MSHA certifies that the training units which can provide a simulated experience of using an SCSR are readily available.⁴⁶

Chairman Miller has written to Secretary of Labor Elaine Chao expressing concern about this and several other implementation delays.⁴⁷ As of this date, we understand that the Agency expects that the devices will be available soon for one type of SCSR; but those mines with the other types of SCSRs may not get this critical training for some time. MSHA could have required mine operators to use actual SCSRs to fulfill this requirement, at least for those SCSRs for which training units are not readily available -- but it did not. Thus even though expectations training in a smoke-filled environment could clearly save miner lives, and has widespread support, under MSHA’s approach implementation has to await the commercial production of a device to simulate a device which already exists.

The GAO is expected to issue recommendations in March 2007 on how MSHA can improve its oversight of mine operator emergency training programs.

Miners still Lack Good Emergency Communication Systems

Ensuring miners below ground can talk to the surface in an emergency is a key component of the MINER Act. The Act phases in minimum requirements for communication systems in underground coal mines in two stages.

The Act required that as of late 2006, operator emergency plans explain the method the mine will use to provide a redundant means of communication between the surface and underground -- for example, a secondary phone line in case the first fails during a fire, explosion or other event.⁴⁸ MSHA guidance on this requirement provides that the redundant system specified in the plan “be likely” to withstand the kind of events which the mine’s history suggest may occur.⁴⁹ It also requires that the backup system be in a different passageway than the primary system, in order to reduce the chances that both will become incapacitated by a single event (e.g., explosion or roof fall).⁵⁰ The exact system that must be installed in a particular mine, and the deadline for getting it installed, is determined by the details of the mine’s emergency plan approved by the individual MSHA District Manager.

The Act requires that, no later than June 2009, operator emergency plans provide for wireless two-way communication between the surface and underground.⁵¹ Many

⁴⁶ 30 CFR 75.1504(c)(3)

⁴⁷ Letter of February 1, 2007.

⁴⁸ FMSHA §316(b)(2)(E)(i)

⁴⁹ PPL No. 06-V-10, effective 10/24/06, Emergency Response Plan-Content.

⁵⁰ Id.

⁵¹ FMSHA §316(b)(2)(F)(ii)

manufacturers already produce two-way wireless systems, and many such systems have been installed in mines around the world.⁵² Although the existing technologies do not work well in some underground mining environments, and their operation could be disrupted in some cases should a mine fire or explosion interrupt their circuits⁵³, they can be very effective in many circumstances. MSHA has reported test results for some of these systems in underground mine environments,⁵⁴ and has approved some for use in underground coal mines.⁵⁵ This means mine operators who wish to do so can install these systems in their mines right now. The National Mining Association's own Grayson commission⁵⁶ has urged mine operators to at least adopt hardened leaky feeder systems as an interim measure.⁵⁷

While MSHA could require these systems be installed prior to June 2009, it has elected not to do so. Moreover, it has elected not to require one-way communication devices either. For example, there is a personal emergency device (PED) that can text-messages warning underground miners of emergencies. These devices are able to contact trapped coal mines in about 90 percent of underground areas and about 90 percent of the time.⁵⁸ A thorough study of the 2001 tragedy at the Jim Walters Resources #5 mine in Alabama by the UMW recommended that MSHA require the installation of these systems,⁵⁹ but MSHA took no action. Some US mines use them anyway; such devices were used to warn miners of a fire in Utah in 1998 and all miners evacuated safely.⁶⁰ Section 4 of the Miller bill would have provided that such one-way devices be provided to all underground miners by September 2007, that they be provided with two-way devices as soon as NIOSH certified that they were available, and that the miners have both devices until NIOSH certified that the two-way units were as effective as the one-way devices. The MINER Act makes no provision for such interim measures; it simply requires the two-way devices be in place by June 2009.⁶¹ Some states have also adopted different approaches or earlier deadlines than the MINER Act.⁶²

NIOSH has let contracts to further the development of improved two-way systems, and appears hopeful that such systems will soon be available.⁶³ However, before new types of communication systems can be installed underground, MSHA must examine them to

⁵² Testimony of Gary Zemel, Senate Subcommittee on Employment and Workforce Safety, Committee on Health, Education, Labor and Pensions, February 15, 2006.

⁵³ See <http://www.cdc.gov/niosh/mining/mineract/communicationsandtracking.htm>

⁵⁴ Report of Findings, June 13, 2006, <http://www.msha.gov/techsupp/McElroyMineTestreport.pdf>

⁵⁵ See <http://www.maha.gov/techsupp/pedlocatingdevices.asp#existing>; the reasons for the approval process in underground coal mining is explained in the next paragraph.

⁵⁶ "Improving Mine Safety Technology and Training: Establishing U.S. Global Leadership", December 2006, Mine Safety Technology and Training Commission. The group was chaired by Prof. L. Larry Grayson (hereinafter the "Grayson commission"), and was established by the National Mining Association.

⁵⁷ Id. at 3.

⁵⁸ James Carroll, Louisville Courier Journal, March 16, 2006, reporting on preliminary MSHA findings.

⁵⁹ Report by United Mine Workers of America, issued January 22, 2003, page 128.

⁶⁰ Ken Ward, Charleston Gazette, Jan.29, 2006.

⁶¹ FMSHA 316(b)(2)(F)(ii).

⁶² See appendix 3.

⁶³ Note 48, supra.

ensure they are intrinsically safe (e.g., will not on their own create a new fire risk).⁶⁴ This “approval” process can often take 1-2 years, although MSHA has promised to give such wireless communication systems top priority.⁶⁵

Even once MSHA requires installation of advanced wireless systems, additional delays in putting them in place are very likely. This is because even though operator emergency plans must provide for wireless systems by June 2009, each plan can provide a timetable for installation.

Moreover, the MINER Act specifically permits MSHA to approve plans that do not meet the requirement for two-way wireless systems, as long as they provide for alternatives that “approximate, as closely as possible” what a two-way wireless system can do.⁶⁶ Decisions on the plans are made by individual District Managers.

No technology, however, is going to be perfect. While waiting for more perfect technology saves mine operators money, it places miners’ lives at risk.

Underground Miners Still Cannot be Quickly Located

Ensuring that miners below ground can be located (“tracked”) in an emergency is a key component of the MINER Act. Workable electronic tracking systems for miners have been around since the 1980s, are not very expensive,⁶⁷ and can assist mine management in many administrative tasks. Accordingly, Section 4 of HR 5389 would have required these wireless devices be in place by September 2007, and some states have also adopted tight deadlines.⁶⁸ As with communication systems, however, the MINER Act phases in minimum requirements for tracking systems at a slower pace.

The MINER Act required that, as of late 2006, operator emergency plans specify that they have at least some method for surface personnel to determine the current or immediate pre-accident location of all underground personnel, consistent with commercial availability and mine physical constraints.⁶⁹ MSHA guidance on this requirement provides that at this time, mine operators can satisfy this requirement by utilizing a dispatcher who keeps track of the section of the mine in which each miner is working.⁷⁰ Also under this MSHA guidance, when the miner changes location from one section of the mine to another, this fact must be recognized and noted by the dispatcher.⁷¹

⁶⁴ See the discussion of the process by Steve Luzk, Technical Support Center Chief, MSHA Approval and Certification Center, Underground Mine Rescue Equipment and Technology hearing, Docket 06-722, March 13, 2006, transcript p.17 et seq.

⁶⁵ Id, p.23.

⁶⁶ FMSHA §316(b)(2)(F)(ii)

⁶⁷ Estimates provided to committee staff in 2006 indicated that for the TRACKER system, each paging device is estimated to cost about \$200, and each beacon to detect a miner’s location about \$5000. An average mine needs 10-20 beacons, and one pager for each miner.

⁶⁸ See Appendix 3.

⁶⁹ FMSHA §316(b)(2)(E)(ii)

⁷⁰ PPL No. P06-V-10, Post Accident Tracking.

⁷¹ Q and A \$5, Post Accident Tracking, Questions and Answers issued on PPL No. P06-V-09 (the predecessor to PPL No. P06-V-10).

Knowing the section a miner was working on prior to an accident does not provide exact information about exactly where the miner is either before or after the accident, but it is better than no information at all. Of course the exact requirements in place in any mine will depend upon the content of the mine emergency plan approved by the MSHA District Manager.

The MINER Act also requires that not later than June 2009, operator emergency plans provide for electronic tracking system that will enable surface personnel to locate miners trapped underground -- i.e., their location after an accident.⁷² The situation here is similar to that for two-way wireless communication devices -- there are already approved systems that mine operators could adopt. New technologies, which need to go through the MSHA approval process, are being explored. Similarly, there are likely to be delays after the June 2009 deadline; individual district managers would determine whether an operator's plan provided for installation of an appropriate system in a timely way. And as with communication devices, district managers could permit an operator to adopt only a system that approximates the capabilities of what is required.

Underground Refuges Are Still Not Being Installed

Traditionally, miners in this country are taught to escape in the event of an emergency; indeed, MSHA continues to maintain that seeking shelter underground should be a last resort.⁷³ In other countries, however, they are taught to seek shelter in a safe place and await rescue.⁷⁴ These shelters, often called "refuges", have saved miners' lives.⁷⁵ A key goal of the MINER Act was to ensure that all underground coal miners have such a refuge where they can safely await rescue should they be unable to get out of the mine.

Refuges are an upgrade from "barricades." MSHA has traditionally required underground coal mine operators to provide materials, such as fire resistant brattice cloth, to construct barricades to protect themselves should exit not be possible.⁷⁶ The agency now specifies the amount of material required for barricading, and will require all mine operators to switch over to stronger inflatable devices once they are commercially available (which MSHA says they are not).⁷⁷

Refuges, by contrast, are designed to be put in place before an accident occurs. Here too, the MINER Act took a two step approach.

As a first step in moving toward a shelter system, the MINER Act requires that mine emergency plans require post- accident "breathable air" to be made available in quantities

⁷² FMSHA §316(b)(2)(F)(ii).

⁷³ PPL No. P06-V-10, "Policy".

⁷⁴ Statement of Nancy Hutchison, USWA, Miners' Forum, House Democratic Members of Education and Workforce Committee, Feb. 13, 2006.

⁷⁵ Id, noting that 72 miners in Saskatchewan were able to shelter during an emergency in January 2006.

⁷⁶ A list of currently approved products, pursuant to 30 CFR 7.27, was updated on January 10, 2007.

⁷⁷ PPL No. P06-V-10, "Additional Plan Content Provisions".

that are sufficient to maintain miners underground for “a sustained period of time”.⁷⁸ Mine operator emergency response plans are not to be approved unless they include provision for such air.⁷⁹

MSHA did not implement this requirement in a timely fashion, putting it into abeyance while internal deliberations continued. Implementation required MSHA to define a few terms that were left ambiguous in the MINER Act. The first is how long the air supply for trapped miners must last. HR 5389 would have required a 5 day supply of air for trapped miners.⁸⁰ Second, MSHA has to define what kind of “breathable air” meets the requirements.⁸¹

On February 8, 2007, following a letter from Chairman Miller to Secretary of Labor Elaine Chao expressing concern about this and several other implementation delays,⁸² MSHA issued a Program Information Bulletin to its district managers and mine operators providing some guidance on these points.⁸³ The MSHA approach offers mine operators alternative ways to meet this requirement that would depend upon how quickly after an accident the mine operator is capable of restoring fresh air to trapped miners (by, for example, drilling a hole to their location that could provide fresh air). If the mine operator cannot establish to the satisfaction of MSHA that quick restoration of fresh air will be possible after a major accident, the operator must provide for 4 days (96 hours) worth of air to be made available for emergencies near where miners are working. That air can be supplied by air lines or various kinds of tanks. If oxygen tanks are to be used, presumably the emergency response plan would have to address related safety issues -- e.g., ensuring that air tanks they are protected from roof falls and fire hazards so they do not explode. The PIB provides no specific guidance on this point, although there appear to be some regulations from 1971 that remain applicable.⁸⁴ Underground refuges would provide safe places for such air supplies, but MSHA is not at this time requiring them to be installed (as discussed further below).

Now that MSHA has finally provided some guidance on the breathable air requirement, it will be up to individual District Managers to determine whether the timetable and details in an operator’s proposed plan are adequate. Mine operators have a month to submit plans, but additional delays can be expected as District Managers and operators ask for clarification on a variety of alternatives, and individual plans are likely to include long implementation timelines for whatever approach is ultimately agreed upon.

⁷⁸ FMSHA §316(b)(2)(E)(iii)(I)

⁷⁹ FMSHA §316(b)(2)(A), §316(b)(2)(E).

⁸⁰ Section 4, proposed FMSHA 101(f)(1)(C). Subsequently, Congressman Miller offered an amendment to the Senate bill that was limited to requiring a 48 hour minimum supply, based on how long it took to reach the Sago miners, but even that limited amendment was rejected by the 109th Congress.

⁸¹ In August 2006, MSHA indicated it would solicit further information from the mining community through a Request for Information, a formal document published in the Federal Register, on this point before providing guidance. PPL PO-V-8, effective 8/4/06. Apparently the agency has since decided to skip this action.

⁸² Letter of February 1, 2007.

⁸³ PIB No. P07-03, issued February 8, 2007

⁸⁴ See, e.g., 30 CFR 75.1106-3.

The MINER Act's second tier requirement on refuges also stops short of requiring that they be installed. Instead, the Act requires a report to the Congress (from NIOSH) on the utility, practicality, survivability and cost of various refuge alternatives.⁸⁵ That report is due at the end of this year (December 2007). MSHA is then to advise the Congress by June 2008 on what actions, if any, it intends to take in response to the report. NIOSH is currently gathering information on how shelters are used around the world, including in coal mines. NIOSH is also studying how existing commercial refuges designed for metal and nonmetal mines to ascertain how they would need to be modified to be used in U.S. coal mines.

Mine operators do not have to wait for either MSHA or NIOSH to act. MSHA approval of underground shelters is not required; there are no intrinsic safety issues. And they would provide a safe place for breathable air supplies, as well as food and water. While MSHA and the industry wait, miner lives are at risk. It should be noted that HR 5389 would have required each operator in the country to install refuges meeting specific requirements by June 15, 2007,⁸⁶ and that some states have adopted laws that do require refuges to be installed by a date certain.⁸⁷

Qualified Rescue Teams are Still not Available at All Underground Mines

Qualified, well-equipped, and readily available rescue teams are essential for underground mines of all kinds. The 1977 Mine Act required such teams "shall be available" for rescue and recovery, and that the costs be picked up by mine operators.⁸⁸ The MINER Act took two steps to buttress this critical network of support.

First, the MINER Act required MSHA to establish (and update every 5 years) criteria to certify the qualifications of mine rescue teams.⁸⁹ Section 5(e)(2) of HR 5389 would have included in the law a number of specific items in this regard; the mining industry's Grayson commission also made a number of recommendations.⁹⁰ The Act calls for

⁸⁵ Section 13 of the MINER Act.

⁸⁶ Section 4.

⁸⁷ See Appendix III. It should be noted that Sen. Robert Byrd recently stated that the NIOSH study is not nearly enough, and that the Congress needs to require MSHA and NIOSH to find a way to make refuge chambers available to miners underground. Congressional Record, February 5, 2007, S.1552.

⁸⁸ FMSHA §115(e)(1).

⁸⁹ FMSHA §115(e)(2)(B)(ii).

⁹⁰ Grayson Commission Report, pp.4-10. A related question are the circumstances under which non-trained teams of mine employees may be used for emergency rescue and recovery, and related matters of rescue team control. The Grayson Commission has suggested mine operators be given discretion by MSHA to relax strict safety standards so rescue teams can proceed when other lives are at stake – even though this puts the lives of the rescue team members in jeopardy. See page 8, "Team Deployment". This recommendation is most likely in response to the delays in sending rescue teams into the Sago mine due to concern over their safety. In turn, those delays may have been in part due to the 2001 deaths of a dozen non-trained rescue workers at Jim Walters Resources #5 mine in Alabama who were seeking to help one trapped employee.

completion of this task by December 2007.⁹¹ MSHA has announced that rulemaking will begin this April.⁹² By contrast, HR 5389 would have required interim rules to already be in place by March 2007. Many rescue teams are highly qualified but may not have all the equipment and operational support they need to do their jobs; until MSHA completes these regulations and implements them, miner protection will not be secure. It should be noted that this requirement of the MINER Act applies to rescue teams for all types of mines, not just underground coal mines; MSHA's announced rulemaking plan, however, appears to be limited to qualifications of mine rescue teams for underground coal mines.⁹³

Second, the MINER Act imposes some parameters on how underground coal mines are to carry out the basic requirement under the current law that teams "be available for rescue and recovery work to each" mine.⁹⁴ The requirements for mines with more than 36 employees are different than for mines with fewer employees. These requirements focus on ensuring that the team is familiar with any mine for which it is responsible, since mines are each different and constantly changing shape as the work progresses, and balancing that need with the reality that rescue teams are composed of volunteers. Although the MINER Act is quite specific, the final details are to be spelled out in MSHA regulations that must be completed by December 2007. It appears MSHA will include this in the rulemaking scheduled to begin this April; by contrast, HR 5389 would have required interim rules to be in place by March 2007.⁹⁵

Many small underground coal mines rely on teams from other mines, or from teams composed of state mining agency employees, to fulfill their obligation. We understand some have expressed concern that the requirements in the MINER Act for on-site drills may reduce the number of teams willing and close enough to service these smaller mines. However, this could be just an effort by some small mine operators to press for a change in the Act that would reduce their costs. It should be noted the MINER Act explicitly clarified liability issues that were allegedly discouraging mines from establishing rescue teams, so this is no longer a concern.⁹⁶

Disaster Communication with Miners' Families and the Public Needs Attention

A key goal of the MINER Act was to ensure that MSHA keeps miners' families and the public fully and accurately informed about accidents and their investigations.

The MINER Act requires MSHA to assign a DOL employee to act as a liaison between the Department and the families of victims of mine tragedies involving multiple deaths,

⁹¹ FMSHA §115(e)(2)(A)

⁹² 71 FR 72838.

⁹³ Id.

⁹⁴ FMSHA §115(e)(2)(B)(iii), §115(e)(1).

⁹⁵ Section 5(e).

⁹⁶ FMSHA §116, added by §3 of the MINER Act.

and to be as responsive as possible to the requests of the families for information.⁹⁷ MSHA issued implementing instructions at the end of CY 2006.⁹⁸

MSHA stated in its instructions that it would develop a pool of qualified officials prepared to serve as a family liaison, with technical expertise and crisis/grief training. The instruction further provides that following the initial emergency the family liaison is to remain in contact with the families for the duration of the investigation until the accident report is delivered. According to some of the Sago families, however, as of early this year they were still are not being kept well informed about the status of the investigation of this tragedy, and MSHA has not been responsive to their requests for information; nor do they believe the Department is taking their views and information into account.

The MINER Act also requires MSHA to serve as the primary communicator with the mine operator, miners' families, the press and the public in multiple death mine tragedies.⁹⁹ The purpose of this requirement is to minimize the chances of a mistaken communication, like that which happened at the Sago mine. MSHA has issued a policy to implement this requirement.¹⁰⁰ The policy leaves MSHA in the lead, but provides for support to the agency from the Department of Labor's Office for Public Affairs. We have no information on whether that policy is actually in effect.

Key Hazards Revealed by the 2006 Tragedies Remain Unaddressed

A key goal of the MINER Act was to ensure that some of the specific hazards to underground coal miners revealed by the Sago, Aracoma Alma, and Darby mine disasters in 2006 were promptly addressed. Three such hazards are discussed here.¹⁰¹

Seals

Underground coal mines naturally produce poisonous methane gas, which, like other gases created during mine production (e.g., machine emissions), are kept under control through ventilation. When an area is no longer being mined, it is often sealed in order to avoid the need to ventilate the area.¹⁰² Methane builds up in the abandoned area, and eventually it becomes inert. However, until it reaches this point, the methane remains highly explosive. Moreover, over time, seals degenerate, which means the methane can

⁹⁷ Sections 7(1) and 7(2) of the MINER Act.

⁹⁸ PPL NO. P06-V-11, effective 12/22/06.

⁹⁹ Section 7(3) of the MINER Act.

¹⁰⁰ PPL NO. P06-V-11, effective 12/22/06.

¹⁰¹ Only the first two of these were the subject of special provisions of the MINER Act -- seals and belt air/belt flammability. The third item noted here, detecting methane gas and fires, is closely related to these items. At the present time, there remains uncertainty as to whether a lightning strike can trigger an accident like that at Sago; hence that topic will not be discussed here. For a discussion of the many other safety and health risks that require attention from MSHA, see Appendix 2.

¹⁰² 30 CFR 75.334.

decline again to explosive levels. Accordingly, great care must be taken to ensure that no source of ignition can reach the sealed area, and that the seals are strong enough to contain an explosion should one occur. The protections in place failed dramatically at the Sago and Darby mines. The potential for harm is vast: underground coal mines currently contain about 14,000 seals.

U.S. rules in place since 1992 require that seals be able to withstand a force of 20 pounds per square inch.¹⁰³ Other nations require seals to be able to withstand 50 psi or more, and require other safeguards.¹⁰⁴ It has been estimated that the force of the explosion at the Sago mine was above 100 psi, perhaps because the shape of the opening being sealed may have accentuated the initial explosion.¹⁰⁵

Traditionally, seals are made from concrete blocks, and were constructed with mortar between each block. More recently, we understand MSHA has permitted the blocks to be set dry, with a covering of mortar. The number of concrete block seals constructed in this fashion, and their ability to withstand explosion, are unknown. Most seals these days -- 11,250 of the 14,000 seals -- are constructed of non-traditional materials that are lighter in weight than concrete blocks (and hence easier to handle). It was such non-traditional seals that failed dramatically at Sago and Darby. Such seals were approved as meeting the 20 psi standard if constructed properly.

Not all seals may have been constructed in accordance with specifications approved by MSHA or state agencies. If the construction is not done properly, the walls may not be able to withstand the force of an explosion, and could also leak poisonous gas into working areas of the mine.

After the Sago and Darby explosions, MSHA took some actions in 2006 to attenuate the risks.¹⁰⁶ Any new seal made of alternative materials must be designed to withstand pressures of 50psi. New seal plans must also go through a very strict engineering review by MSHA. Miners constructing the seals must be trained and supervised and MSHA must be given advance notice of instruction. We have no information on whether these actions are being properly implemented. In addition, operators were instructed to inspect all abandoned areas sealed with such materials and, if the methane remains in the explosive range, to either bring the seal up to 50psi capability or inert the atmosphere (bring the methane behind the seal up above 20%). Mine ventilation plans were not to be

¹⁰³ 30 CFR 75.335(a)(2). The rule evolved from work done in the 1970s. Prior to that, there were no rules at all; sealing wasn't given much attention. See "Explosion Pressure Design Criteria for New Seals in US Coal Mines", NIOSH draft report, Feb.9, 2007, pp.9-10. For an excellent discussion of the development of the rules in the US by the Bureau of Mines, see Chapter 5, "The Sago Mine Disaster", a preliminary report to Governor Joe Manchin III (McAteer and associates), July 2006.

¹⁰⁴ Id, pp.10-14.

¹⁰⁵ Section 5.4-3, Report of Investigation into the Sago Mine Explosion, West Virginia Office of Miners' Health, Safety and Training, issued December 11, 2006. In fact, staff have been advised that following further inquiries, the final Federal report on the accident may well determine that the pressures were even much higher than this estimate. .

¹⁰⁶ PIB No. P06-11, Issued June 1, 2006; PIB No. P06-12, issued June 12, 2006; PIB No. PO6-16, issued July 19, 2006; and PIL I-06-V-09, issued August 21, 2006. Some of these actions are discussed in the McAteer report, note 101 supra.

approved by MSHA district directors unless these actions were incorporated (i.e., the mines were not supposed to be allowed to operate unless they took these actions). However, the thoroughness with which the mine operators reviewed their seals, and the thoroughness with which the district directors reviewed the ventilation plans, is certain to vary.

NIOSH has been studying the problem, and in February 2007 released a draft report that calls for a comprehensive new approach for seals.¹⁰⁷ According to the draft, which as of this writing is open for peer review and public comment, seals for areas that are “actively managed” would be limited to 50 psi. Active management, a practice used in Australia and elsewhere, involves ensuring the pressure behind the seal to be regularly monitored and steps taken to ensure the methane behind it stays at safe levels or that miners are evacuated. If sealed areas are not managed, however, explosions can generate forces of 120 psi and pulses of up to 640 psi. The NIOSH report suggests a number of ways in which seals can be feasibly designed to withstand these pressures. It also recommends several steps to ensure that seals are properly constructed. MSHA’s reports on the Sago and Darby disasters, projected for completion by April 2007, should provide additional information about what caused the seal failures in these cases.

We understand that NIOSH is now turning its attention to how to prioritize and secure the 14,000 existing seals in underground US coal mines. In some cases, an area might be ventilated instead of sealed. In other cases, a new seal might be built next to an older one. Active management might be the best approach for dealing with other seals.

The MINER Act requires MSHA to put new rules for seals into place by December 15, 2007.¹⁰⁸ The Agency has committed to issue a notice of proposed rulemaking on seals by May, and to issue a final rule by December 15.¹⁰⁹ Meanwhile, practically all underground coal miners are in imminent danger. Section 9(a) of HR 5389 would have required this rulemaking to be completed by March 15, 2007. In light of the disturbing new information from NIOSH in its February draft report, Chairman Miller has requested the Secretary of Labor to issue an emergency temporary standard instead of just a proposed rule, so that mine operators quickly begin to put new safeguards in place.¹¹⁰

Conveyor Belts and Belt Air

Coal mines use conveyor belts to move coal long distances underground. Belt movement friction can ignite fires which spread quickly, fueled by explosive coal dust. Conveyor belts are longer, wider, faster, and carry more coal than in the past. The Aracoma Alma tragedy in 2006 began with a belt fire.

¹⁰⁷ “Explosion Pressure Design Criteria for New Seals in US Coal Mines”, NIOSH draft report, Feb.9, 2007. As of the publication date of this White Paper, NIOSH is having this document peer-reviewed and is collecting public comments. See <http://www.cdc.gov/niosh/review/public/mineseal/>

¹⁰⁸ Section 10 of the MINER Act.

¹⁰⁹ 71 FR 72837.

¹¹⁰ Letter of Feb.12, 2007.

Coal mine belts must meet a flammability standard, but it is a standard developed 51 years ago.¹¹¹ A rulemaking to impose a more stringent standard recommended by NIOSH was dropped by the Bush Administration.¹¹²

Aracoma Alma had its conveyor belt located in a passage which at the time was also drawing in fresh air from outside of the mine and moving it toward the area where the miners were working.¹¹³ Drawing intake air over a conveyor belt is known as using “belt air”. A fire on such a beltline is particularly serious because it moves toward the miners and is fueled by the flowing air.

Due to the risks of this practice, the Mine Act of 1977 actually banned the use of belt air.¹¹⁴ However, MSHA approved the use of belt air on a case by case basis under a provision of the law allowing “modification” of normal practices when the mine operator can demonstrate that the proposed alternative provides safety protection that is just as good as would be the case if the normal requirements were observed. Before approving any modification, MSHA closely examined the mine operator’s plans for the use of belt air to ensure additional safeguards against fires were provided. However, the Bush Administration adopted a rule permitting operators to use belt air as long as certain safeguards are observed; no special application process is required.¹¹⁵

Using belt air can save money for mine operators: running the conveyor belt in the entry ventilation passageway saves the costs of digging another passage to hold the conveyor belt. The practice is alleged to bring more clean air to the areas of the mine where miners are working, but this is a view challenged by miners.

¹¹¹ Presentation of Harry Verakis, Senior Project Engineer, MSHA, Jan.10, 2007, transcript, Technical Study Panel on the Use of Belt Air, transcript, pp.69 et.seq, at 87. The presentation also reviews the history of subsequent rulemaking and current research in the area.

¹¹² Withdrawn on July 15, 2002. MSHA stated: “This rulemaking was initiated in 1989 in response to a number, over the prior 12 years, of reportable (i.e., greater than 30 minutes) conveyor belt fires attributable to belt material. Since that time, accident and injury data reflect a decline in the number of these fires. We attribute this decrease in conveyor belt fires to improvements in belt monitoring and maintenance, along with technological advances in conveyor systems. Therefore, in the absence of a need for rulemaking, MSHA is withdrawing the proposed rule.” 67 FR 46431

¹¹³ The Fire at Aracoma Alma Mine #1, a preliminary report to Governor Joe Manchin III, by Davitt McAteer and Associates, p.46.

¹¹⁴ §303 (y)(1), FMSHA, provides: “In any coal mine opened after the operative date of this title, the entries used as intake and return air courses shall be separated from belt haulage entries, and each operator of such mine shall limit the velocity of the air coursed through belt haulage entries to the amount necessary to provide an adequate supply of oxygen in such entries, and to insure that the air therein shall contain less than 1.0 volume per centum of methane, and such air shall not be used to ventilate active working places. Whenever an authorized representative of the Secretary finds, in the case of any coal mine opened on or prior to the operative date of this title which has been developed with more than two entries, that the conditions in the entries, other than belt haulage entries, are such as to permit adequately the coursing of intake or return air through such entries, (1) the belt haulage entries shall not be used to ventilate, unless such entries are necessary to ventilate, active working places, and (2) when the belt haulage entries are not necessary to ventilate the active working places, the operator of such mine shall limit the velocity of the air coursed through the belt haulage entries to the amount necessary to provide an adequate supply of oxygen in such entries, and to insure that the air therein shall contain less than 1.0 volume per centum of methane.”

¹¹⁵ 69 FR 17480. The rule was challenged by the UMWA in the DC Circuit Court of Appeals, but the court gave deference to the agency position. No.04-1164, decided May 24, 2005.

Several legislative fixes were suggested last year to deal definitively with the belt air problem. One bill would ban belt air (i.e., to return the approach to what it was before the Bush Administration rule).¹¹⁶ Section 9(a) of HR 5389 proposed a different approach: to suspend the Bush Administration rule until MSHA adopted more stringent conveyor belt flammability rules based on the recommendations of NIOSH. The MINER Act took neither of these definitive approaches, however, but instead established a special Advisory Committee to examine these matters and report back to DOL no later than the end of 2007 and the Congress soon thereafter. The committee has started work,¹¹⁷ but while they deliberate, others have called for quicker action.¹¹⁸

Detecting methane gas and fires

Explosive methane gas is not just confined to the non-ventilated areas of the mine behind seals. Methane can accumulate in poorly ventilated areas of the mine that are not regularly monitored by miners due to poor accessibility. From there, the methane can migrate to areas near where miners are working, and be set off inadvertently before it is noticed.

Similarly, small mine fires can often be controlled while they remain small. But if they are not detected quickly, they can spread rapidly and block miner egress.

Electronic detection devices that can avoid explosions and serious fires by detecting methane, carbon monoxide and smoke are available, and are used mine-wide in some mines. However, MSHA currently requires the use of such devices only in limited circumstances -- in particular, when mines are using belt air.¹¹⁹ This leaves many miners at serious risk. The MINER Act did not specifically address these risks separately, but the matter is likely to be examined by the belt air Advisory Committee. Section 4 of HR 5389 would have required such devices be mandatory. Until action is taken, miner lives remain at risk.

Tougher Penalties Need to be Regularly Assessed

A key goal of the MINER Act was to ensure that incentives for compliance with MSHA requirements at all types of mines were increased. The Act increased penalties on mine operators who willfully violate MSHA requirements.¹²⁰ A significant new penalty was

¹¹⁶ HR 576 (110th Congress), HR 4695 (109th Congress).

¹¹⁷ MSHA has established a single source page for the activities of the Technical Study Panel on the Utilization of Belt Air and the Composition and Fire Retardant Properties of Belt Materials in Underground Coal Mining at <http://www.msha.gov/BeltAir/BeltAir.asp>

¹¹⁸ Sen. Robert Byrd has recently stated that the Department should move beyond the requirements of the MINER Act and reconsider its 2004 rule. Congressional Record, February 5, 2007, S.1552. And Governor Manchin of West Virginia has proposed that his state also return to a case-by-case analysis. Appendix III.

¹¹⁹ 30 CFR 75.351.

¹²⁰ FMSHA §110(a)(2). Section 7(c) of HR5389 would have increased maximum penalties in other respects as well.

established for “flagrant” violations.¹²¹ Minimum penalties were established for certain types of violations.¹²²

The MINER Act make any changes to the process for issuing a “pattern of violations” citation, which involves a very significant penalty for those mine operators who are continually ignoring safety and health requirements.¹²³ In fact, MSHA has never actually issued a “pattern of violations” citation. Section 7(a) of HR 5389 would have made changes to the process to facilitate use, and authorized the Secretary to close down the entire mine in such cases. The new Assistant Secretary has reportedly stated that he would like to make more use of this tool, but so far, apparently, no action has been taken.¹²⁴

The manner in which penalties are actually calculated (“assessed”) under the current law operates under legal and practical constraints.

The current law requires that MSHA take six factors into account in assessing penalties: the operator’s history of previous violations, whether the operator was negligent, the gravity of the violation, the demonstrated good faith of the operator in attempting to achieve rapid compliance with any citation, the size of the business, and whether the penalty might put that operator out of business.¹²⁵ HR 5389 would have eliminated the last two criteria.¹²⁶ If a mine operator cannot afford the fines, it is all the more reason that the mine operator should not violate the law.

The current law also permits mine operators to appeal proposed penalty assessments to an independent Mine Safety and Health Review Commission.¹²⁷ As a result, MSHA has established detailed formulae for calculating assessments in order to protect itself against charges of inconsistency.¹²⁸ MSHA’s rulemaking schedule called for it to complete a new set of formulae for calculating some types of penalties by December 2006; as of today, however, that rule remains under OMB review.¹²⁹ This long delay suggests trouble ahead for MSHA in meeting its other obligations under the MINER Act.¹³⁰

The Government Accountability Office has been conducting a study to determine the extent to which penalties actually proposed by inspectors are reduced by MSHA officials and the Mine Safety and Health Review Commission. A GAO report on this topic is

¹²¹ FMSHA §110(b)

¹²² FMSHA §110(a)(3)

¹²³ FMSHA §104(c); see also MSHA implementing regulations in 30 CFR Part 104.

¹²⁴ *Mine Safety and Health News*, p.554, November 27, 2006; “MSHA going after repeat violators, new chief says,” Ken Ward Jr., *Charleston Gazette*, December 7, 2006.

¹²⁵ FMSHA §105(b)(1)(B) and §110(i)

¹²⁶ Section 7(E)

¹²⁷ FMSHA §110(i); see also FMSHA §113

¹²⁸ 30 CFR Part 100.

¹²⁹ 71 FR 72841.

¹³⁰ See note 5, *supra*.

expected in March 2007.¹³¹ In this regard, the new higher penalties authorized by the MINER Act are likely to be contested more vigorously; hence, assessment practices are likely to come under additional pressure.¹³²

As a general matter, MSHA does not have the authority to close down entire mines; only sections thereof.¹³³ However with respect to underground coal mines, MSHA does have some other powerful tools at its disposal to deal with recalcitrant operators. Specifically, the agency can deny the mine permission to operate if it is not satisfied with its roof control, ventilation or emergency plans. In practice, however, this authority simply leads to negotiations over implementation.¹³⁴ Moreover, MSHA lacks authority to license mine operators, and hence cannot limit those with poor safety and health records continuing to operate mines. By contrast, some states require that mine managers and certain specialists have a current license to perform these tasks, and the licenses can be revoked for bad conduct.

Special Mission Support Needs Careful Monitoring

A special supplemental funding measure in 2006 provided funds to MSHA to hire an additional 170 new coal inspectors by September 30, 2007. It also provided \$10 million in additional funds to NIOSH to make it easier for manufacturers of equipment to complete research and development on its suitability for use in mining environments.

As of January 1, 2007, 42 new inspectors had been hired and placed in training. The bulk of the hiring is to take place this year. The Government Accountability Office is currently reviewing whether MSHA has taken the actions it recommended previously to improve MSHA hiring practices.¹³⁵

While MSHA needs new inspectors badly, it is important that these inspectors not be permitted to go out on their own until they have completed adequate training, as they could miss life-threatening hazards. It is too early to assess whether MSHA is properly training the new inspectors. It has hired additional trainers to work with more experienced staff for classroom training, and has reconsidered its course structure, but the critical on-the-job training in each regional office relies could vary depending upon office workload demands. Chairman Miller recently asked the Government Accountability

¹³¹ Senator Robert Byrd has recently stated that a way must be found to ensure that fair penalties are assessed by Administrative Law Judges and the Mine Safety and Health Review Commission within the appeals process. Congressional Record, February 5, 2007, S.1552

¹³² In 2006, when Federal inspectors did a sweep of West Virginia mines following the Sago and Aracoma Alma accidents, lobbyist-lawyers from Patton Boggs promptly sent out a news release reminding mine operators of all the actions they could take to challenge any resulting citations.

¹³³ As noted supra in this discussion, section 7(a) of the Miller bill would have provided the authority to shut down entire mines in the case of a pattern of violations.

¹³⁴ The constraints upon MSHA in exercising its plan authority are discussed further in the emergency evacuation section of this paper.

¹³⁵ GAO-03-945 (2003).

Office to look into whether new inspectors are receiving the proper training before undertaking critical inspections on their own.¹³⁶

The special NIOSH funding has focused on development and making available to the mining community better SCSRs, communication and tracking systems, and refuge chambers. NIOSH is optimistic about the leverage this funding can provide to develop and commercialize a new generation of mine safety technology, but the results of this one year initiative are yet to be seen.

The President's fiscal year 2008 proposed budget would provide MSHA enough resources to continue to fund the 170 inspectors it was authorized to hire, and would add related funding for the Office of the Solicitor to handle the work generated by these inspectors. No increases are provided; indeed, the levels appear to be a reduction, in real terms, from the fiscal year 2007 continuing resolution levels enacted in February 2007. No continuation of the NIOSH funding for development of new mining technologies is included in the President's proposed budget for the 2008 fiscal year .

The March GAO report on how penalties are assessed and adjudicated will provide useful information on whether the budget indeed provides enough resources for the Office of the Solicitor, and whether the activities and decisions of the Mine Safety and Health Review Commission require attention with respect to how they impact the risk reduction efforts of mine operators. Also, the regulatory process under which MSHA now operates requires attention with respect to whether that process still fulfills the promise of the Mine Act, or instead has become a quagmire for efforts to delay and weaken badly needed miner protections.¹³⁷

Finally, under a program established by the MINER Act, non-profit entities may apply for grants to education and training programs to improve mine safety and health.¹³⁸ Moreover, the MINER Act set up a new program to award scholarships to train novice coal miners in fundamental skills, to train undergraduates studying skills needed to become Federal mine safety inspectors and who agree to work for MSHA for five years, and to train those interested in research into areas that could improve mine safety.¹³⁹ We are uncertain as to whether any money has yet been appropriated or budgeted for these grant and scholarship programs.

Conclusions

¹³⁶ Letter to Comptroller General of February 16, 2007.

¹³⁷ The concern stems from the proliferation over the year of requirements imposed by the Congress and the Executive on rulemaking agencies. For a review of some of these requirements, see the testimony of Sally Katzen, February 13, 2007, before the Subcommittee on Investigation and Oversight, House Science and Technology Committee, and before the Subcommittee on Commercial and Administrative Law, House Judiciary Committee.

¹³⁸ Section 14 of the MINER Act.

¹³⁹ Section 12 of the MINER Act, adding FMSHA §515. These scholarship provisions are administered by the Secretary of Education.

The promise of the MINER Act of 2006 has not been fully realized because MSHA and the mining industry are failing to self-initiate important safety improvements. They need to do better, and quickly move on to address the many other critical safety and health risks to miners that require prompt attention before new disasters occur.

Mine industry financial profits are currently more than adequate to make the required investments in worker safety. The National Mining Association's Grayson Commission has called upon the industry to act on additional safety measures, and stated that companies which do not "should not be permitted to operate underground coal mines."¹⁴⁰

The Mine Safety and Health Administration (MSHA) is not required to wait for technology that does everything perfectly and at minimal cost before it requires mine operators to act. MSHA has delayed action on critical risks to miners.

¹⁴⁰ Grayson Commission report, Conclusions, p.111.

Appendix 1: Miscellaneous Provisions of the MINER Act Should not be Overlooked

Incident Notification

The MINER Act required the agency be notified within 15 minutes of a death or of an injury or entrapment which could reasonably lead to a death.¹⁴¹ MSHA has implemented this requirement, which helps it respond quickly to an emergency.¹⁴² MSHA also expanded upon the law to require that the agency be notified of mine fires that could have become life-threatening (even if the fire did not actually reach that point), so that the situation can be investigated and future catastrophes avoided.¹⁴³ Section 5(d) of HR 5389 would have required reporting of an even broader list of critical incidents.

Coordination with local emergency response personnel

The MINER Act required that mine emergency plans must provide for coordination with local emergency response personnel.¹⁴⁴ MSHA has provided guidance on how mine operators should do so.¹⁴⁵

Directional lifelines; tethers

A requirement that lifelines with directional indicators be installed in every escapeway in an underground coal mine actually went into effect in March of 2006, under an MSHA emergency standard,¹⁴⁶ and updated in certain respects later in the year.¹⁴⁷ However, the requirement is something that is to be implemented in mine plans; hence, actual compliance timeframes are established on a mine by mine basis, and the extent of compliance is currently unknown. The MINER Act does not require these lines to be fire resistant until June 15, 2009, except in the case of an existing line being replaced.¹⁴⁸ MSHA declined to go beyond the requirements of the MINER Act in implementing this requirement, even though the agency conceded that flame resistant lifelines would provide an added degree of protection.¹⁴⁹ Section 4 of HR 5389 would have required all lifelines to be fire resistant. The MINER Act did not establish a requirement on tethers that help miners stay together during an emergency exit in low-visibility conditions.

¹⁴¹ Section 5 of the MINER Act.

¹⁴² 30 CFR 50.10.

¹⁴³ 30 CFR 50.2(h); discussed at 71 FR 71733-34

¹⁴⁴ FMSHA §316(b)(2)(E)(vi).

¹⁴⁵ PPL No. P06-V-10, item #6 under “Emergency Response Plan - Content”

¹⁴⁶ The original provisions on lifelines are discussed at 71 FR 12260

¹⁴⁷ Final rule, 71 FR 71430 et. seq. The lifeline provisions are in 30 CFR 74.380 for bituminous and lignite mines, and in 30 CFR 74.381 for anthracite mines.

¹⁴⁸ FMSHA §316(b)(2)(E)(iv)

¹⁴⁹ 71 FR 71436

However, MSHA regulations do require mine operators to provide tethers for this purpose.¹⁵⁰

Penalty collection

The MINER Act enhanced MSHA authority to collect overdue penalties.¹⁵¹ MSHA is also experimenting with a new legal approach toward this end.¹⁵² We do not yet know if these approaches have succeeded in eliminating this scofflaw behavior by some mine operators. Section 7(b) of HR 5389 would have made it a felony to fail to pay overdue penalties.

¹⁵⁰ 30 CFR 75.1714-6.

¹⁵¹ Section 9 of the MINER Act. This action followed a series of press stories about how many fines were going uncollected. See, e.g., “Millions of coal company fines go unpaid”, AP, Sunday Jan.29, 2006, Louisville Courier-Journal.

¹⁵² MSHA requested the US District Court for the Eastern District of Kentucky to issue an injunction against a mining company and controlling owner who chronically failed to pay assessed penalties, enjoining them from failure to pay future penalties and to post a bond. MSHA press release, Feb. 6, 2006.

Appendix 2: There are Other Critical Risks to Miners That Warrant Committee Attention This Year

There are several key problems identified last year that were not addressed by the MINER Act -- for example, the need for independent investigations of accidents and MSHA's own conduct. And as noted in the body of this paper, there are issues covered by the MINER Act that may require additional consideration by the Congress.

Beyond these, however, there are a number of specific occupational safety and health problems faced by miners which have not recently been considered by the Congress. The examples which follow are a limited sample of those which we believe are worthy of consideration by the Committee consider during the 110th Congress:

- * MSHA needs to improve the chances of an underground miner surviving an underground explosion by redesigning ventilation systems to deal with overpressures that such an explosion can generate. These pressures can blow out walls that direct fresh air to areas where miners are located (stoppings), especially if the stoppings are not constructed properly or are made from nontraditional materials. MSHA also needs to ensure that ventilation plans are properly reviewed and monitored.

- * MSHA and the mining industry need to ensure that all miners have reliable powered transport nearby their work areas to ensure they can rapidly evacuate in the event of an emergency. Miners can be located miles from an exit, and are often not in the best of physical condition; a long hike under stress, using an SCSR, can be problematic.

- * MSHA needs to reduce the explosive risk of coal dust. This may require tightening the rules or practices on rock dusting, ensuring that water sprays and other traditional control methods are fully utilized, and permitting the use of handheld meters to check coal dust concentrations where this would enhance protection.

- * MSHA needs to act promptly so as to eliminate new cases of black lung disease -- by requiring certain miners to wear personal dust monitors, by improving ventilation in certain areas of the mine, and by adopting a new exposure limit.

- * MSHA and the mining industry need to adopt special safeguards to reduce the dangers inherent in retreat mining, or ban such dangerous activity altogether.

- * MSHA needs to eliminate silicosis and asbestosis cases associated with mining work, and address the health problems that are associated with the use of certain chemicals widely used in mining.

- * MSHA and the mining industry need to reduce the number of cases in which automatic machines hit miners by requiring proximity detectors on such equipment.

* MSHA and the mining industry need to improve attention to roof fall control plans and press for improved technology.

* MSHA and the mining industry need to provide underground metal and nonmetal mines better evacuation and refuge requirements based on work done in implementing MINER Act.

* The mining community needs a consistent and independent mine accident investigation and hearing procedures, including a public hearing, to ensure that all it can from the investigation of such incidents.

* The activities and decisions of the Mine Safety and Health Review Commission require attention with respect to how they impact the risk reduction efforts of mine operators.

* The regulatory process under which MSHA now operates requires attention with respect to whether it still fulfills the promise of the Mine Act or instead has become a quagmire for efforts to delay and weaken badly needed miner protections.

* Other provisions of the Mine Act of 1977 deserve reconsideration in light of the now 30 years of experience under the Act; e.g., the lack of a general-duty clause.

Appendix 3: Selected State Requirements

WEST VIRGINIA

West Virginia amended its mine safety laws in early 2006 to address initial problems identified in the tragedies at the Sago and Aracoma Alma mines in that State.¹⁵³ Pursuant to the legislation, the Governor established a Mine Safety Technology Task Force to provide advice on implantation. Following an initial report on May 29, 2006,¹⁵⁴ some changes were made in state requirements to reflect the findings of the Task Force.¹⁵⁵ The Task Force is to continue to meet on a regular basis, and hence further adjustments are possible. Legislation has been introduced this year that would further revise West Virginia law;¹⁵⁶ it remains pending as of the date of this White Paper.

Self-Contained Self-Rescuers (SCSRs)

West Virginia requires that each miner wear or have within his immediate reach an SCSR that will last for at least an hour.¹⁵⁷ West Virginia requires mine operators to train each miner in the use of SCSR and to provide a refresher course every year.¹⁵⁸

Additionally, mine operators must have caches of SCSR in the mines so that each miner will have at least two additional hours of air, for a total of three hours of air from SCSR.¹⁵⁹ West Virginia regulates the placement of the caches based on the height of the mine and the distance the miners will have to travel escaping it; basically requiring a cache every thirty minutes where miners would reach traversing the mine.¹⁶⁰

Implementing regulations issued last year required mine operators in the State to submit Storage Cache Plans with proposed dates and proof of orders for getting all required SCSR in place.¹⁶¹ The Director of the Office of Miners' Health, Safety and Training has

¹⁵³ SB247, Jan.23, 2006. The legislation enacted amendments to several sections of the state code, in particular Article 2, §22a-2-55, Protective Equipment and Clothing. The amendments state that they may not be implemented until emergency rules were developed. Emergency rules have been revised several times. The latest versions are posted on the MSHT web site, and citations refer to the latest versions staff could identify.

¹⁵⁴ Mine Safety Recommendations, Report to the Director of the Office of Miners' Health, Safety and Training, <http://www.wvminesafety.org/taskforce.htm>

¹⁵⁵ The implementing emergency regulations actually change specific requirements of the code adopted by the legislature. In a few places, *infra*, we note those changes.

¹⁵⁶ SB68. The latest version we have examined is that reported by the Committee on the Judiciary on February 7, 2007. A final senate vote is scheduled for February 20, 2007.

¹⁵⁷ W. Va. Code § 22A-2-55(f)(1). *See also* W. Va. CRS §56-4-5.1. However, the rules permits miners to be equipped with units less than one hour as long as they provide twice the amount of air needed to get to the closest storage cache. W.Va. CRS §56-4-5.2.

¹⁵⁸ W. Va. Code § 22A-2-55(f)(1).

¹⁵⁹ W. Va. CRS §56-4-5.1.1 & 5.2.1.

¹⁶⁰ W. Va. CRS §56-4-5.3.1.

¹⁶¹ W. Va. CRS §§56-4-6.

recently announced that the agency will hold mine operators to the deadlines agreed to in their plans for having the SCSRs in place.¹⁶²

By law, the Office of Miners' Health, Safety and Training is also required to conduct a periodic evaluation of the quality of SCSR units in service through a statistically significant sample.¹⁶³

Underground Communication and Miner Tracking Devices

The legislation passed by West Virginia in early 2006 would have required each miner in the state to wear a communication device that is at least capable of receiving emergency communications from the surface to any location in the mine¹⁶⁴-- i.e., a one-way wireless device. It would also have required each miner to wear a wireless tracking device that is capable of providing real time monitoring of each individual miner underground.¹⁶⁵ Mine operators were also required to train each miner to use these devices and to provide a refresher course each year.¹⁶⁶

Implementing regulations issued last year, however, consistent with the recommendations of the state's Mine Safety Technology Task Force, have changed the rules to require an integrated communication and tracking/locating device be provided to miners. All operators are to submit a plan for installing such a system for state approval by July 31, 2007.¹⁶⁷

Underground Refuges

West Virginia has a shelter requirement scheduled to go into effect in Spring 2007, but could end up falling back to requiring mine operators to simply provide an extra supply of SCSRs .

Specifically, the West Virginia Code of State Rules requires that an emergency shelter or chamber be maintained within 1000 feet of the working face in each working section of the mine.¹⁶⁸ The Rules state that every shelter approved by the state for use in underground coal mines has to provide each miner with 48 hours worth of breathable air, and meet a number of additional criteria.¹⁶⁹ Every mine has to submit its shelter plans to the state for approval by April 15, 2007.¹⁷⁰ However, if the Director of the Office of

¹⁶² Memo to West Virginia Mining Operations from Ronald Wooten, Director, January 8, 2007.

¹⁶³ W. Va. CRA §56-4-5.6.

¹⁶⁴ W. Va. CRS §22A-2-55(g)(1) as enacted by SB247.

¹⁶⁵ W. Va. CRS §22A-2-55(h)(1).

¹⁶⁶ *Id.*

¹⁶⁷ W. Va. CRS §56-4-9. We understand several companies have recently applied for approval of integrated devices, but none have been approved as of the date of this paper. State officials do not anticipate a delay in the implementation date. See, e.g., "Manchin says mine communication moving along", Ken Ward, Charleston Gazette, Feb.20, 2007.

¹⁶⁸ W. Va. CRS §56-4-8.1.

¹⁶⁹ W. Va. CRS §56-4-8.4.

¹⁷⁰ W. Va. CRS §56-4-8.5; the criteria the plan must meet are in W. Va. CRS §56-4-8.12

Miners' Health Safety and Training determines that there are no emergency shelters/chambers approved by May 29, 2006, operators are required instead to install an additional cache of 1-hour SCSRs at within 1000 feet of the face.¹⁷¹

Rescue Teams

Under West Virginia law, mine operators are required to have "mine rescue coverage" at each active underground mine.¹⁷² This means that a mine operator must either have two mine rescue teams of his own,¹⁷³ or that the mine operator must contract out to make sure that at least two mine rescue teams are available when miners are underground.¹⁷⁴ Having a mine rescue team "available" means that the team can get to the mine in a "reasonable" time¹⁷⁵, but no rescue team can be located more than 2 hours from the mine it is responsible for.¹⁷⁶

Each mine rescue team is required to have at least five members and one alternate member.¹⁷⁷ Each member is required to initially trained by a state certified mine rescue instructor.¹⁷⁸ Thereafter, each member is required to have 40 hours a year of refresher training, with underground sessions every 6 months;¹⁷⁹ but there is no requirement that the training take place in the mines for which team members are responsible. The law also establishes minimum requirements for the equipment to be provided to mine rescue teams, and for the forward provision of this equipment in rescue stations.¹⁸⁰

No legislative changes were made in 2006, except that mine rescue teams and individual members were given protection under the State's "good Samaritan" law.¹⁸¹ However, the State also operates its own rescue teams and mine rescue stations,¹⁸² and this capacity was expanded in 2006.¹⁸³

¹⁷¹ W. Va. CRS 56-4-8.14. We understand several companies are expected to soon apply for approval of emergency shelter/chambers, but none have yet been approved, and State officials do not currently anticipate a need to go to the SCSR fallback. Should that become necessary, those SCSRs would presumably have to go on backorder or they would have to be filled with the type currently available (Draeger). See the general discussion of SCSRs in the body of this paper.

¹⁷² W. Va. CRS §22A-1-35(a).

¹⁷³ W. Va. CRS §22A-1-35(b)(1).

¹⁷⁴ W. Va. CRS §22A-1-35(b)(2).

¹⁷⁵ W. Va. CRS §22A-1-35(c).

¹⁷⁶ W. Va. CRS §22A-1-35(e).

¹⁷⁷ W. Va. CRS §22A-1-35(f).

¹⁷⁸ *Id.*

¹⁷⁹ W. Va. CRS §22A-1-35(i).

¹⁸⁰ W. Va. CRA §22A-1-35(k), (l), (m)

¹⁸¹ HB4611.

¹⁸² W. Va. CRS §36-44-1 et. seq.

¹⁸³ State of the State address by Gov. Joe Manchin, January 11, 2007.

Special Rules for Specific Hazards

West Virginia legislation in 2006 did not establish requirements with respect to specific hazards like seals or belt air. Legislation introduced in 2007, however, would take action in both areas.

The legislation currently pending before the State legislature would establish a permanent ban on the installation of seals built with alternative materials, require the certification of all new seal constructions, and require daily monitoring and extensive remediation work for existing sealed off areas.¹⁸⁴ The proposed legislation would also reference current Federal strength requirements, but provide for changes following issuance by MSHA of new rules on seals under the MINER Act.

The pending legislation would also require that a request to use belt air go through an extensive review process and be approved on a case by case basis.¹⁸⁵

Penalties

Under existing law, the amount of civil monetary fines depends on 5 factors: the gravity of the violation, the history of previous violations, the size of the business charged with the violation, the mine operator's good faith in complying after the notification of the violation, and whether the mine operator was negligent.¹⁸⁶ This is one less factor than MSHA has to consider in assessing violations; the Federal agency must consider whether the fine would put the mine operator out of business.¹⁸⁷

In the case of very serious violations, the Director of the Office of Miners' Health, Safety and Training is empowered to impose a "special assessment" which means a fine of between \$5,000 and \$10,000.¹⁸⁸ Such circumstances that warrant a special assessment include violations that involve serious or fatal injuries, a failure to comply with orders from the Office of Miners' Health, Safety and Training, the operation of a mine after a closure order, violations involving imminent danger, violations where there is a high degree of negligence, or a violation involving discrimination.¹⁸⁹

Under legislation now pending before the West Virginia legislature, a finding of imminent danger would also trigger a review of the mine's enforcement history; and if it is determined the mine has a history of repeated significant and substantial violations of the same or related standards caused by unwarrantable failure to comply, the entire mine may be closed.¹⁹⁰

¹⁸⁴ SB 68, Article 2.

¹⁸⁵ Id. Other bills would go further and ban the use of belt air altogether. "Lawmakers seek additional mine safety measures," Tom Breen, Jan.26, 2007.

¹⁸⁶ W. Va. CRS §56-12-3.2.1-5.

¹⁸⁷ See note 123, supra.

¹⁸⁸ W. Va. Code §22A-1-21(b)(2).

¹⁸⁹ W. Va. Code §22A-1-21(b)(2)(A)-(F).

¹⁹⁰ SB 68, Article 1.

KENTUCKY

Kentucky amended its mine safety laws in early 2006 to address initial problems identified in the tragedies that year.¹⁹¹ The legislation established a Mine Equipment Review Panel to consider best available mine technologies. The Panel issued a report in November 2006.¹⁹² Legislation has been introduced this year that would further revise the law;¹⁹³ it remains pending as of the date of this paper¹⁹⁴.

Self-Contained Self-Rescuers (SCSRs)

Legislation in 2006 requires that all underground miners must be provided with two SCSR's and that every miner should have the SCSR within 25 feet of them at all times.¹⁹⁵ The law also requires all licensed mines to maintain caches of SCSR's.¹⁹⁶ The law required all caches to be in locations readily accessible to the primary and secondary escapeways,¹⁹⁷ and in particular to establish their number and location "in accordance with the most recent rules, standards, and regulations issued by the United States Mine Safety and Health Administration."¹⁹⁸

The law states that by July 1, 2007 the mines must either have the appropriate number of SCSR's or the mine must have its deadline extended by the commissioner if it can provide substantiated proof of unavailability.¹⁹⁹

Underground Communication and Tracking Devices

Kentucky law was amended in 2006 to require each mine to have telephone or equivalent service to various underground locations.²⁰⁰ However, the law did not require that one-

¹⁹¹ SB 200, signed April 21, 2006.

¹⁹² Report and Recommendations to the Office of Mine Safety and Licensing, Mine Equipment Review Panel, November 2006,

<http://www.olms.ky.gov/homepage-repository/Mine+Equipment+Review+Panel+Report.htm> The latest draft of HB 207 we have reviewed would require annual reports by the Panel in the future.

¹⁹³ HB 207 (Rep. Yonts).

¹⁹⁴ See, e.g., Associated Press, "Ky. Mine safety bill stalls", Roger Alford, Feb.15, 2007. The references to the bill in this paper are to a version circulated in mid-February. However, we understand from press reports that the bill reported to the full House is very different from the version we examined. Lexington Herald-Leader, Feb.22, 2002.

¹⁹⁵ KRS § 352.133(1) (2006) & KRS § 352.133(2)(d) (2006).

¹⁹⁶ KRS § 352.133(2) (2006).

¹⁹⁷ *Id.*

¹⁹⁸ KRS § 352.133(2)(c) (2006). The Task Force recommended that the Federal rules in fact be changed to have the caches at intervals of 50% of the SCSR rating, as opposed to every 30 minutes (which is 50% of one hour), in order not to discourage the development of SCSR's that can last longer. Note 40, *supra*, at 6. The original version of HB 207 (2007) would have tightened up on how close SCSR caches have to be placed; under section of the bill as introduced, caches would have to be at intervals of 1,250 feet for coal seams of 48 inches or less and intervals of 2,500 feet for larger seams. This provision does not appear in the latest draft we have reviewed.

¹⁹⁹ *Id.* As of the date of this White Paper, we have no information that the July 1, 2007 date has been extended.

²⁰⁰ 2006 Ky. Acts 185, Section 1.

way or two-way wireless communication devices, or tracking devices, be provided to miners. The Mine Equipment Review Panel recommended no legislative action at the state level in light of the efforts being made at the Federal level to implement the MINER Act requirements for such devices.²⁰¹

Underground Refuges

Kentucky law does not require that miners be provided with underground refuges. The Mine Equipment Review Panel recommended no legislative action at the state level to provide for refuge chambers, in light of the efforts being made at the Federal level to implement the MINER Act requirement for refuges.²⁰²

Evacuation Training

Legislation in 2006 required each mine in Kentucky to develop and implement a training program in mine emergency evacuation and firefighting that instructs all mine personnel in the proper evacuation procedures.²⁰³ Escapeway drills are required for each miner every 90 days.²⁰⁴ The law did not include any requirements about training under realistic emergency conditions, nor about training in the use of SCSRs. Subsequently, however, the Kentucky Mine Equipment Review Panel recommended that training more closely simulate emergency conditions, and include donning the SCSR and switching units.²⁰⁵

Rescue Teams

Kentucky law currently provides that a mine operator is to have available a trained rescue team within an hour of the mine, and that the State is to provide such a team if one is not otherwise available.²⁰⁶

Legislation introduced in 2007 would require 2 emergency medical technicians be available during each underground shift with at least 1 of these stationed underground.²⁰⁷

Special Rules for Specific Hazards

The Mine Equipment Review Panel recommended continuing a state program established soon after the 2006 tragedies that required existing seals made of non-traditional materials be monitored, and that remedial actions be taken if the seals are in poor condition, damaged, or the atmosphere behind the seal contains from 3 to 20 percent methane. It also recommended certification of the constructive of alternative mine

²⁰¹ Note 40, supra, at 5.

²⁰² Note 40, supra, at 7.

²⁰³ KRS § 352.640(6) (2006).

²⁰⁴ 2006 Ky. Acts 185, Section 3.

²⁰⁵ Note 40, supra, at 6.

²⁰⁶ The introduced version of HB 207 would have modified these requirements somewhat (section 11). However, the latest version of the legislation we have reviewed no longer contains these provisions.

²⁰⁷ HB 207 Sec.8.

seals.²⁰⁸ Legislation has been introduced in 2007 to implement the latter recommendation.²⁰⁹

Legislation introduced in early 2007 would also ban the use of belt air to ventilate mines under all circumstances; mines currently using belt air ventilation would have 6 months to switch.²¹⁰ That legislation would further require all miners working underground to be provided with a methane detector after January 1, 2008.²¹¹ Moreover, the 2007 bill would require fireproof lifelines to be installed within 6 months (rather than waiting, as permitted under the Federal law), for the lines normal replacement life.²¹²

In addition, the 2007 bill would take a first step to address an additional hazard: the serious risk of roof falls in retreat mining. The bill would emphasize the need to train all miners in the operator's retreat mining plan before beginning this process, and require the State be notified that retreat mining is beginning.²¹³

Penalties

Kentucky law provides for sanctions against individuals and against mines. Some sanctions involve monetary penalties; others involve suspension or revocation of a necessary license. For example, in the case of an order to violate the mine safety laws that places miners in imminent danger, an owner of the premises can be fined up to \$10,000;²¹⁴ and, depending upon how many times this has occurred previously, the mine can be fined for up to the gross value of the production for up to 10 working days.²¹⁵ Noncertified personnel can also be docked their wages for certain violations.²¹⁶ Legislation introduced in 2007 would require Kentucky to take into account past violations of Federal law the same way as state violations in making these determinations.²¹⁷

State inspections

In 2006, Kentucky increased from two to three the number of annual inspections of underground coal mines. Pursuant to legislation under consideration in 2007, this would double to six starting in 2009, although two of the six inspections would be specifically electrical inspections.²¹⁸

²⁰⁸ Note 40, *supra*, at 8.

²⁰⁹ HB 207, section 14.

²¹⁰ HB 207, Section 13.

²¹¹ HB207 Sections 19 and 24.

²¹² HB207 Section 16.

²¹³ HB207 Section 21.

²¹⁴ KRS §351.025(1)(b)

²¹⁵ KRS §351.025(2)

²¹⁶ KRS §351.025(1)(c)

²¹⁷ HB 207, section 1.

²¹⁸ HB 207, sections 4 and 23.

Illinois

Illinois amended its mine safety laws in 2006 to address initial problems identified in the 2006 tragedies.²¹⁹ The law is implemented through rules established by the Illinois Mining Board. The 2006 legislation called for the establishment of a Mine Technology Task Force to make recommendations to the Mining Board on best available mine technologies that could be used by mine operators to meet the legal requirements.²²⁰ Subsequently, additional legislation was enacted that made further adjustments to some of these provisions, including effective dates.²²¹

Self Contained Self Rescuers (SCSRs)

Mine operators are required to provide each person who goes underground with an SCSR containing an hour of air which he or she must carry while underground, and, as a result of 2006 legislation, an additional SCSR as well.²²² As an alternative, the mine operator can provide SCSR's that must be kept within 25 feet of each person underground,²²³ and more than 25 feet from the person underground if the Illinois Mining Board approves.²²⁴ If the mine uses a mantrap or mobile equipment to enter or exit the mine, the mine must place additional SCSR's on that equipment.²²⁵

Beginning July 31, 2007, mine operators must place a minimum of 30 SCSR's in caches in the mine, which are to be located at set distances that vary by seam height.²²⁶ In addition, the Mining Board may require operators to store more SCSR's in caches if it determines they are required for safe evacuation, in which case the operators are to submit plans for approval.²²⁷

In addition, 2006 legislation required the Illinois Mining Board to adopt and impose a plan for daily inspections of required SCSR's, and inspections every 90 days of SCSR's in caches, to be sure they are operating correctly.²²⁸

Underground Communication and Tracking Devices

In 2006, Illinois mandated that every mine has to provide each miner with a wireless emergency communication device that has been approved by the Illinois Mining

²¹⁹ SB929, PA -094-1041.

²²⁰ 225 ILCS 705/29.07 (2007). The legislation required the Mine Technology Task Force to make recommendations to the Mining Board on the best available technologies to implement the requirements for communications, tracking and refuge chambers. The Task Force did make the required initial report.

²²¹ HB0822, PA 094-1101.

²²² 225 ILCS 705/11.08. PA 094-1101 clarified that the additional SCSR should last for one hour or longer.

²²³ *Id.*

²²⁴ *Id.*

²²⁵ *Id.*

²²⁶ 225 ILCS 705/11.08(c) as amended by PA -94-1101.

²²⁷ 225 ILCS 705/11.08(d), as added by PA-94-1101.

²²⁸ 225 ILCS 705/11.08(h).

Board.²²⁹ Miners are required to wear these devices whenever they are underground.²³⁰ The wireless emergency communication device must, at a minimum, be capable of receiving emergency communications from the surface at any location throughout the mine – i.e., be capable of one-way communication.²³¹

In 2006, Illinois also mandated that every mine has to provide each miner with a wireless tracking device that has been approved by the Illinois Mining Board.²³² Each person who goes underground in the mine must wear a tracking device.²³³ The tracking device must be capable of providing real-time monitoring of the physical location of each person underground in the event of an accident or other emergency.²³⁴ Illinois also stipulates that “no person may discharge or discriminate against any underground employee based on information gathered by a wireless tracking device during non-emergency monitoring.”²³⁵

In both cases, the legislation required mine operators to submit plans to meet these requirements to the Mining Board within 3 months of enactment.²³⁶ And it required the devices be provided within 90 days of their approval by Federal MSHA (or 90 days of enactment of the Illinois legislation if the devices were already approved by MSHA).²³⁷ Temporary waivers from the Mining Board were authorized for up to 90 days for delivery delays.²³⁸

Underground Refuges in Mines

In 2006 the legislature required that rescue chambers approved by the Mining Board be provided and located within 3,000 feet of each working section of a mine.²³⁹ The law defines a rescue chamber in such a way as to require an oxygen-generative device capable of providing a minimum of 48 hours of oxygen for at least 10 people.²⁴⁰ The law further provided that each working section of the mine have within 1,000 feet of the fact a specific supply of materials to use to construct barricades.²⁴¹

The legislation initially required mine operators to submit plans to meet the refuge chamber requirements to the Mining Board within 3 months of enactment, and have chambers in place by January 1, 2007.²⁴² Subsequently, however, the law was amended

²²⁹ 225 ILCS 705/29.05.

²³⁰ *Id.*

²³¹ *Id.*

²³² 225 ILCS 705/29.06.

²³³ *Id.*

²³⁴ *Id.*

²³⁵ *Id.*

²³⁶ 225 ILCS 705/29.05 and 29.06.

²³⁷ 225 ILCS 705/29.07(b)

²³⁸ 225 ILCS 705/29.07(c)

²³⁹ 225 ILCS 705/11.09(a)

²⁴⁰ 225 ILCS 705/1.23

²⁴¹ 225 ILCS 705/11.10

²⁴² P.A. 94-1041, adding 225 ILCS 705/11.09(c)

to provide that plans must be submitted on or before May 1, 2007, and to eliminate the actual implementation date reference.²⁴³

Rescue Teams

Illinois requires itself by statute to maintain 4 mine rescue stations, and, in 2006, required that each be certified by the Mine Safety and Health Administration of the U.S. Department of Labor.²⁴⁴ The 2006 amendments require each mine operator in the State to provide employees to serve on a rescue team and must compensate these employees who are serving as rescue team members at their regular rate of pay.²⁴⁵

Special Rules for Specific Hazards

Legislation in 2006 did not focus directly on strengthening seals. The legislation did, however, adopt some safeguards to be used when extracting methane from sealed areas (which is a method of actively managing those areas).²⁴⁶

The 2006 legislation did not address the issue of belt air. The Illinois Administrative Code says that whenever belt conveyors are in locations where fire would create a hazard to personnel, the belt conveyers must have switches to stop the drive pulley automatically in the event of excessive slippage.²⁴⁷

At least two travelable passages are to be designated as escape ways, at least one of which must be equipped with a lifeline cord.²⁴⁸ By definition, all lifeline cords must be fire retardant.²⁴⁹ Tag lines to help miners stay together during an escape must also be provided.²⁵⁰

²⁴³ P.A. 94-1101, amendment to 225 ILCS 705/11.09. We understand from State officials that they continue to expect all mine operators to comply with this deadline.

²⁴⁴ 225 ILCS 705/11.01. We understand that two have not yet been funded.

²⁴⁵ 225 ILCS 705/11.07. This obligation under State law would be in addition to whatever obligation large mines have under the MINER Act to field their own teams.

²⁴⁶ 225 ILCS 705/13.17.

²⁴⁷ 62 Ill. Adm. Code 220.110 (h).

²⁴⁸ 225 ILCS 705/19.11.

²⁴⁹ 225 ILCS 705/1.19

²⁵⁰ 225 ILCS 705/13.16.