

# ASSOCIATION OF BITUMINOUS CONTRACTORS

Before the Mine Safety and Health Review Commission

September 13, 2004

Re RIN 1219-AB35

The Association of Bituminous Contractors has represented construction contractors engaged in mine construction, including shaft and slope construction, since 1968. The Association regularly comments and testifies on matters pertaining to mine safety and health. As a supplement to the testimony by the Association and its members on August 26, 2004, the Association offers the following additional comments on the proposed rule to modify Subparts A and B of 30 CFR Part 48, published in the Federal Register on July 16, 2004 (Training Standards for Shaft and Slope Construction Workers at Mines).

**Shaft and slope construction work is not the same as underground or surface mining, and the hazards associated with shaft and slope construction are different than those in surface or underground mining**

MSHA's premise that shaft and slope construction workers face hazards similar to those encountered by miners in underground mining, and, therefore, appropriate training for shaft and slope workers can be provided by simply amending the definition of miner in subparts A and B to include shaft and slope workers is not supported by the facts in the record, is not a rational way to provide training for shaft and slope construction workers, and ignores the statutory mandate at section 115(d) of the Act that calls for MSHA to promulgate "appropriate standards for safety and health training for coal or other mine construction workers." (Emphasis added.)

Senate Report No. 95-181, which accompanied S. 717, the bill that became the Federal Mine Safety and Health Act of 1977, specifically recognized that construction is not the same as mining, and that the hazards encountered in construction are apt to be different than those encountered in mining:

"The [Human Resources] Committee has noted that construction workers are often faced with safety and health hazards which may be different than those which confront miners. Accordingly, Section 116(d) of the bill requires the Secretary to promulgate safety and health standards for mine construction workers. It is clearly not the intent of this provision that construction workers be less trained in safety and health matters than other miners. But it is the Committee's belief that it may require different training procedures to adequately inform construction workers of the hazards which they may confront. Further, the Secretary's regulations concerning safety and health training for construction workers may give appropriate consideration to safety and health training which has been given to mine construction workers elsewhere as long as the Secretary is satisfied that such training realistically deals with the hazards that such workers are likely to confront in the mines."

AB35 Comm-100

Senate Report No. 95-181, at p. 50.

The testimony on August 26, 2004, reaffirmed that neither the work performed, nor the hazards encountered, in shaft and slope construction are the same as the work performed, or the hazards encountered, in underground or surface mining.

**Mine construction work is no different than construction work for other industries.** Shaft and slope construction is heavy and industrial type construction. Shaft and slope construction involves building a vertical or inclined concrete structure, which after it is built will be used by a mine operator to access a mineral seam and/or provide ventilation. As pointed out, these same types of structures are built by shaft and slope sinking contractors for water and sewer projects, highway tunnels, dam diversion tunnels, subways, and railroad tunnels, as well as for coal and other types of mines.

**Construction is a different process than mining.** Whereas mining takes place at a fixed locations with fixed tasks, shaft and slope construction occurs at temporary sites, and goes through a number of phases, employing tasks unique to each phase of construction. All shaft and slope sinking projects are temporary, lasting from several months to a couple of years, depending on the size of the structure to be built and the method used to construct it. As described by the witnesses on August 26, 2004, regardless of the construction method used, every project goes through a number of phases, each of which requires different skills and poses different risks. For example, a conventional project goes through (a) project mobilization, (b) initial excavation and construction of a collar down to hard rock level, (c) installation of a head frame and/or installation of sinking equipment, including work deck assembly, (d) actual sinking by drilling, blasting and mucking, (e) interspersed at regular intervals with construction of a concrete liner by setting forms and pouring concrete, (f) construction of water rings when required, (g) bottom development to access the seam and provide room for the installation of mining and materials handling equipment, (h) construction of a curtain wall to divide the opening into two compartments, if required, and (i) demobilization of the project. Shaft and slope construction workers need to learn a number of different tasks to complete the different phases of a project.

Compared to construction, a mine is a permanent installation which will employ certain mining techniques on an ongoing basis. Miners are usually hired to perform particular tasks, and may perform these same tasks for many years.

**Construction hazards are different than mining hazards.** Although some hazards encountered in certain phases of a project may appear similar to those found in underground mining, the hazards in construction are generally not the same as those found in mining, and even where they are similar, they must be dealt with in a construction rather than a mining setting. As compared to mining, the most significant hazards in shaft and slope construction include those associated with working at heights, extensive use of explosives, use of temporary hoisting equipment to access a continually advancing work face, use of work decks, use of air-operated equipment, construction of forms, placement of reinforcing steel, and installation of concrete and shotcrete. In general, many of the hazards found in shaft and slope construction are associated

with working in a vertical environment, whereas in mining most hazards are associated with working in a horizontal environment.

**Manning a construction project is different than staffing a mine.** Unlike a mine which has a more or less permanent and stable work force, a construction project starts with a small number of workers, builds to a maximum, and then tapers off as the project is wound down and completed. Some workers remain with a contractor and follow the work from one project to the next, and others are hired locally at the site. There may be a good deal of work force turnover between projects and during the course of a project. Crew sizes are small at conventional projects because work is performed in a confined area, and crew sizes are small at raise bore and blind hole projects because only a few workers are needed to operate the equipment. Since crew sizes are small, turnover and the absence of one or two employees can adversely affect productivity.

**Construction projects are managed differently than mines.** Because mines are permanent installations and generally have larger work forces, certain support functions such as safety and health training, payroll, and purchasing may be located full time at the mine's location. In comparison, because shaft and slope construction projects are temporary and do not have large work forces, these support functions, including safety and health training, are usually performed out of a home office which may be located at considerable distances from the project sites.

**Shafts and slopes are not constructed using conventional mining methods.** There is no factual basis for MSHA's assertion that shafts and slopes are constructed by mine operators and contractors using conventional mining methods and equipment. Because it involves special construction skills, almost all shaft and slope construction is performed by independent construction contractor using conventional sinking methods (drill, blast, and muck), raise bore, or blind hole drilling.

**The proposed rule would subject shaft and slope construction to all the existing requirements of Subparts A and B, which were designed for coal mining, not for construction**

The proposed rule would change the definitions of "miner" at Sections 48.2(a)(1)(i) and 48.22(a)(1)(i) to include any person engaged in "shaft or slope construction." This change effectively would make shaft and slope construction workers indistinguishable from miners, and shaft and slope construction contractors indistinguishable from production operators, for purposes of applying all the requirements of Subparts A and B. However, many of these requirements do not fit the construction setting.

For instance, according to sections 48.3 and 48.22, before it could begin a project, a contractor would have to submit a training program (or perhaps two if different ones are required for surface and underground) for approval to the District Manager in which the project is located. Two weeks before submitting its plan to the District Manager, the contractor would have to furnish a copy to the employees' representative, or post a copy at the project site (which in most

cascs would be a bare field). Instructors would have to be approved by the District Manager. District Managers would have 60 days to approve the plan(s). This procedure is unworkable in a construction setting where a shaft or slope project must usually be started in a short period of time. Furthermore, it should not be necessary for a contractor to have its plan approved each time it begins a new project. Finally, for contractors which work in many different parts of the country, it will require dealing with a number of District Managers who may have their own ideas as to what needs to be included in the plan, or may not appreciate the fact that training for shaft and slope construction workers requires different instructional content than training for miners. Differences among Districts has been a problem that contractors encounter when getting shaft and slope sinking plans approved, which will be further aggravated if it becomes necessary to have training plans also approved at the District level.

An additional consequence of putting shaft and slope construction workers under Subparts A and B is that shaft and slope contractors will be qualified to work as underground and surface miners, and, conversely, underground and surface miners will be qualified to work as shaft and slope construction workers.

**The proposed rule would require most shaft and slope construction workers to be trained under both Subparts A and B**

In its preamble, MSHA states that most workers engaged in shaft and slope construction would be subject only to subpart A because most shaft and slope construction is performed underground. It goes on to say that workers could be provided subpart A underground training, to be supplemented with task training under subpart B if they are assigned to a surface task. In reality, over the course of their employment at a project, most shaft and slope construction workers, particularly those employed at conventional type projects, perform work both on the surface and underground.

Regardless of what shaft sinking method is used (conventional, raise bore, or blind hole drilling), the initial work performed at every shaft or slope project takes place exclusively on the surface. In addition to site preparation work, before sinking can begin a collar is constructed to support the initial opening, a headframe may be built, and equipment is installed to be used in the sinking process. Because the proposed rule requires training of shaft and slope construction workers under both subparts A and B, the initial workers at every project will have to be trained under subpart B as surface shaft and slope workers, and then they will have to be trained again as underground shaft and slope workers under subpart A once a project reaches a phase that requires them to go underground. At a raise bore project, this would occur when workers are sent underground to install the cutting head. At a conventional operation, this presumably would occur when workers are required to go below the collar to begin sinking operations, although, like other aspects of the proposed rule, there is no clear definition of what is meant by "underground" or "surface."

Under the proposed rule, inexperienced workers, hired at the beginning of a project would have to undergo 24 hours of surface training before they could start work, and then before they

could go underground, they would have to go through another 40 hours of underground training. This is far in excess of what is reasonable or should be required. Because the majority of shaft and slope construction workers perform work both on the surface and underground, training for such workers should be located under a single subpart, preferably a new Subpart C.

**Due to the sequential way in which a construction project proceeds, extensive pre-employment classroom instruction is not an appropriate way to train construction workers**

As pointed out in the August 26, 2004, testimony, although not mandatory under ~~Part~~ 48, all contractors that specialize in shaft and slope sinking provide training to their employees, both new employees and experienced workers. Typically, ~~an~~ inexperienced worker is ~~given~~ eight hours of training before he or she begins work, followed by task training appropriate to the work being performed at the time the employee begins work. As the project progresses through additional phases of work, the employee is provided ~~task~~ training appropriate to ~~any new tasks~~ that he or she may be assigned to perform. Task training may take place over several shifts depending on the complexity of the work. Safety training for all workers is provided at weekly meetings throughout the term of a project. Although there are some subjects which can be addressed in a classroom setting prior to starting work, due to the sequential nature of shaft and slope construction, training is most effective if it is provided on an ongoing basis.

The training which shaft and slope sinking contractors now provide their workers has been tailored to the special needs and requirements of construction over many years. The manner in which it is provided is typical of how training is provided in the construction industry, and takes into account the very real differences that exist between construction and mining. Whereas formal training requirements under Part 48 will help to assure that every worker receives proper training, the rule which eventually is promulgated needs to take into account the special needs and requirements found in a construction environment.

**Because shaft and slope construction is not a defined term, there will be confusion over which construction workers will require Part 48 training**

As stated in the preamble, the intention is to “amend the definitions of ‘miner’ to include shaft and slope workers and workers engaged in construction activities ancillary to the shaft and slope sinking” (Emphasis added.) This creates a genuine question as to which construction workers will be required to receive Part 48 training. Traditionally, shaft and slope workers have been considered to be workers employed in the actual excavation, or sinking, of shafts and slopes. There are many other workers, however, employed by numerous other types of contractors, who may be engaged in construction activities ancillary to constructing a shaft or slope.

At the hearing on August 26, 2004, testimony was presented by contractors which actually sink shafts and slopes. Before sinking operations can begin, however, a number of preliminary tasks need to be performed. These may include constructing roads, clearing and

leveling the site, building impoundment ponds, grouting, and bringing electrical power into the site. These tasks are normally performed by contractors hired locally by the mine owner. They are not the same as the contractors (those which testified at the August 26,2004, hearing) that perform the actual sinking operations. Likewise, after sinking operations are completed, a number of other tasks may be required before the shaft or slope can be used for its intended purpose. These may include installation of a mine fan, installation and hook up of permanent electrical power, erection of permanent a mine hoist or elevator, and installation of skips or other material handling equipment. Frequently, these tasks also are performed by contractors other than the sinking contractor.

Will the contractors that perform these pre-sinking and post-sinking tasks be required to provide **Part 48 training**? Will they have to have an approved **Part 48** training program before they begin work? In short, what is the definition of "shaft and slope construction work" for which **Part 48** training of construction workers will be required? None of these questions is adequately addressed in the proposed rule.

**It is not clear which construction workers will be considered experienced miners on the effective date of the rule**

The proposed rule would add a new paragraph (b)(4) to sections 48.2(b) and 48.22(b) which provides that a shaft and slope worker "working" on the effective date of the rule would be considered an "experienced miner" for purposes of Part 48 training. If this means that a construction worker has to be actually working, or even on the payroll, as of the effective date of the rule, it fails to take into account the temporary and transient nature of construction, and is too limited in scope. The size of a contractor's work force varies over time depending on the number of projects being worked, and the type of work being performed at each project (i.e., start-up, full production, or winding down). Simply grandfathering as "experienced miners" only those employees who happen to be working, or employed, as of a given date would omit many experienced shaft and slope workers who may be laid off between projects, or who are waiting to be recalled once a project reaches full production (i.e., begins working multiple shifts). In addition to shaft and slope workers working on the effective date of the rule, we propose that shaft and slope workers who were employed in shaft and slope construction for at least six months in the twenty-four month period preceding the effective date of the rule be considered "experienced miners."

**The estimated cost of the proposed rule has been understated**

MSHA has proposed that 30 CFR 48 Parts A and B be applied to newly-hired employees of shaft and slope construction contractors. This would require a total of 64 hours of training. The estimated direct costs of this training include the wage and payroll burden costs of each employee, the cost of training materials, and the cost of training providers.

**Payroll Costs – persons trained**

Under the currently applicable UMWA construction labor agreement, wage rates range from \$15.60 per hour to \$20.46 per hour, with the mid-grade rate being \$19.31. Open-shop wage rates are similar. \$19 per hour is used for this analysis.

Wage per hour	\$ 19.00
Employer portion Social Security @ 6.20%	1.178
Employer portion Medicare @ 1.45%	0.2755
Federal & State Unemployment Tax @ 6.2%	<u>1.178</u>
Estimated hourly cost common to all employers	\$ 21.6315

The costs of worker's compensation insurance, bodily injury and property damage insurance, and other insurance coverages normally paid as a percentage of wage labor varies from employer to employer and state to state. Because a substantial part of the shaft and slope work takes place in West Virginia, and because the state of West Virginia sets the worker's compensation rate, we use that rate, and we also costs for other insurance typical for shaft and slope contractors with whom we are familiar.

Worker's Compensation insurance @ 39.36%	\$ 7.478
Commercial BI & PD and Excess @ 7.56 %	1.436
Retirement Plan (401K type) @ 4.5%	0.855
Health & Life Insurance @ 13.0%	<u>2.47</u>
Typical Payroll Insurance Cost	\$ 12.239
<b>Total payroll cost per person per hour</b>	<b>\$ 33.87</b>
<b>Total payroll cost per person for Parts A + B (64 hours)</b>	<b>\$ 2,167.68</b>

On an annual basis, the major shaft and slope contractors typically have one to four concurrent large projects and may have several smaller ones. For this purpose we assume this is equivalent to 3 concurrent projects. A typical shaft or slope crew consists of about 40 persons, so about 120 persons will be employed at a given time by each contractor. From testimony presented it appears that annual turnover is in the 50% range, so it is reasonable to assume that not fewer than 60 persons would require full training each year for each shaft and slope employer.

**\$2,167.68 X 60 each = \$ 130,060.80 wage cost per year per employer**

**In-House Trainer Costs**

Corporate safety personnel conduct training sessions. Since they are typically employed full time regardless of work volume, the added cost for corporate safety personnel presented by the proposed rule is travel and related cost. It is assumed that the 60 persons trained each year will be trained in six sessions attended by an average of ten workers. Assume that project locations in the Appalachian or Illinois Basin coalfields average 300 miles from a headquarters location (see addresses of the four major coal mine shaft and slope contractors). Assume trainers will travel by automobile, and that 8 days of hotel and meals will be expended, and assume 30 round trip miles from hotel to site, the cost of trainers will be about:

Mileage 300 miles to location, 8 days @ 30 miles per day and 300 miles return, a total of 840 miles times 6 trips = 5,040 miles @ \$0.36 =	\$ 1,814.00
8 nights at a motels x 6 trips =	\$ 3,840.00
9 days of meals @ \$ 35X 6 trips =	\$ 1,890.00
<b>Out of pocket cost per year per employer</b>	<b>\$ 7,544.00</b>

**This cost will be considerably greater if contractors find it necessary to employ full time trainers at each project.**

**Outside Trainer Cost**

On an unknown number of occasions, due to quits or discharge, it will be necessary to train one or two persons. It may not be possible or cost effective to send a corporate safety trainer to do so. In these cases an outside trainer would be used. A short-notice cost of \$400 per day for 8 days would equate to \$3,200 per training. We assume that this would be necessary a minimum of 5 times per year, for a **total of \$16,000.00.**

**Training Materials Cost**

There is an estimated annual cost for training materials of \$1,500. The added training would increase this by an unknown amount. For this estimate we will assume the cost would double to **\$3,000.**



Summary

There are four major coal mine shaft and slope contractors. Annual costs for this group are estimated to be.

Cost type	Annual Cost for one contractor	Annual Cost for four contractors
Trainee Payroll costs	130,061	520,243
In-House trainer costs	7,545	30,180
Outside trainer costs	16,000	64,000
Training: materials costs	3,000	12,000
<b>Totals</b>	<b>156,606</b>	<b>626,423</b>

There are two raise/blind shaft contractors, each of whose costs are estimated to be 25% of the cost of a shaft and slope contractor, for a total of **\$156,600**.

There are at least four other contractors who perform sufficiently similar work on a more or less occasional basis. It is assumed they will incur total costs of about 20% of the total of the major contractors, or **\$125,285**.

**Therefore, on the basis of the assumptions above, which we consider conservative, the coal mine shaft and slope contractors, as an industry, can be expected to incur, as a minimum, additional costs approaching \$910,000. This does not include the metal/non metal contractors that would be affected.**

**Training for shaft and slope construction workers should be provided in a separate Subpart C which addresses the particular needs of training in a construction setting**

Until now, it has always been MSHA's intention to promulgate separate mandatory training regulations for construction, including shaft and slope construction, and place them in a Subpart C. We support the promulgation of Part 48 mandatory training regulations for shaft and slope construction, but we propose for the reasons stated herein, as well as those articulated at the hearing on August 26, 2004, that the appropriate way to accomplish this is to follow the original intention and promulgate them under a separate Subpart C.

We suggest that such rule should include the following elements:

1. A definition of shaft and slope construction as "all work integral to the excavation and/or lining of a vertical, inclined or horizontal structure, including bottom development, to be used to access a seam, or seams, of coal."

2. A grandfather clause under which shaft and slope construction workers employed as of the date of the rule, or employed in shaft and slope construction for at least six months during the 24 months preceding the effective date of the rule, would be considered experienced shaft and slope construction workers.

3. Hazard training only for short-term specialty workers and subcontractors not regularly employed at the construction site for more than five days.

4. A requirement that each contractor engaged in shaft and slope construction provide (a) newly hired inexperienced worker training, (b) orientation training for newly hired experienced workers, (c) annual refresher training for experienced workers, (d) new task training for all workers, and (e) hazard training for short-term workers and subcontractors. Training would be provided pursuant to an MSHA-approved training program. Each contractor's approved plan would apply to all its projects, and a contractor would not have to submit a new plan for approval each time a new project is started. Cooperative training programs would be acceptable.

5. Training for a newly hired inexperienced shaft and slope construction worker would consist of eight hours instruction before the employee begins work, and an additional 16 hours of training during the next 90 days of the individual's employment. (This is similar to the alternative training method which a District Manager may approve under Section 48.25.) The additional training would be given in segments of no less than 30 minutes, and could be combined with refresher training for experienced workers. A newly hired inexperienced worker could not be assigned to work underground before he or she completes the new worker training, unless accompanied by an experienced shaft and slope construction worker.

6. Orientation training for a newly hired experienced shaft and slope construction worker would be sufficient to acquaint an experienced worker with the operations and requirements of the project.

7. Annual refresher training for an experienced shaft and slope construction worker would consist of at least eight hours of training over the course of a year. It could be given in segments of no less than 30 minutes, and could be combined with training for newly hired inexperienced workers.

8. Task training would be provided whenever a worker, whether experienced or inexperienced, is assigned to a task that he or she has not previously performed.

9. Hazard training would be provided to short-term specialty workers and subcontractors to acquaint them with the site and any hazards to which they might be exposed in their particular work area(s).

10 Training would be provided by individuals qualified to provide the training

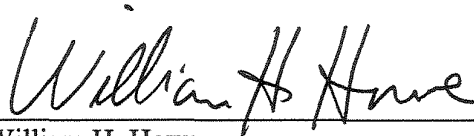
11. Contractors would be required to keep written records of all training provided under Subpart C.

**Conclusion**

By simply proposing to treat shaft and slope construction workers as surface and underground miners for training purposes, MSHA has failed to take into account the differences between the two types of work, and has not adequately considered the way training needs to be provided in the construction industry. Instead of including training for shaft and slope construction workers under Subparts A and B, MSHA should promulgate appropriate training regulations for shaft and slope construction workers under a separate Subpart C.

Respectfully submitted,

ASSOCIATION OF BITUMINOUS CONTRACTORS, INC.

A handwritten signature in black ink that reads "William H. Howe". The signature is written in a cursive style and is positioned above a horizontal line.

William H. Howe  
Secretary-General Counsel