

FALL PROTECTION IN MINING IS AS EASY AS ABC

By Jeremy Bethancourt

Most safety professionals, especially those in construction operations, are aware that falling on the job, either from a height or on the same level, is among the most frequent causes of serious injury and death in both construction and general industry.

What many may not know is that fall-related incidents are also a significant issue in the mining industry. Whether we know it or not, everyone is impacted by mining. Accordingly, we should all care about the cost of falls in the mining industry.

If you drive a vehicle, use city streets and interstate highways, eat food with metal utensils on ceramic plates, walk on sidewalks or tile floors, turn on lights at home, wear jewelry or clothing, or read this article, you owe all those activities and abilities in some way to the mining industry. There is likely not one home in the U.S. that is not affected by the important task conducted every day by the hundreds of thousands of miners around the world. As a nation, we owe more than can be expressed to those who work in one of the most hazardous and dangerous working environments in the U.S., past and present. But with proper attitude and commitment from everyone in the industry, both management and workers, things can be a lot better.

When people think of mining, they likely think about how it was in the 1800s. Miners worked in dark, musty caves, often in extreme heat with lack of adequate ventilation and a canary as their only source of information about dangerous atmospheric conditions.

Today, with the help of safety advocates, technology and organized labor, much has changed. However, despite changes and improvements in the industry, we still have to send workers deep into the earth or into huge pits on the surface to recover the raw materials that can be turned into cars, computers, forks, air conditioners, refriger-

ators, copy machines and millions of other products that depend on the raw materials derived from mining.

In an effort to continue enabling employers in all industries to learn from my organization's experience with fall protection feasibility, I participated in a mine safety conference. My presentations provided information and examples to mining industry attendees and many construction-related lessons that can be used to improve safety for miners.

Readers might wonder how an industry that spends its time underground in caves and digging in the dirt has an issue with fall hazards. As I emphasize in presentations on the subject, all industries are affected by gravity and, therefore, have exposure to fall hazards. Mining vehicles are huge, some as tall as 30 to 40 ft. Workers must climb flights of stairs to enter the cabs. Mechanics and maintenance workers must climb over the equipment when it breaks down. Workers use railcars (rolling stock) to transport raw materials. Additionally, as is often forgotten in the construction industry, fall protection does not just mean watching out for workers who might fall, but ensuring that tools, equipment and materials do not fall and injure workers. In mining, MSHA requires employers to ensure that workers do not fall. Unlike OSHA requirements for general industry and construction, no real guidance exists on height threshold in mining. Accordingly, safety professionals and employers must evaluate all situations and tasks at any height to ensure that workers are protected.

The "Plan, Provide, Train" stop falls initiative from partners NIOSH, OSHA and CPWR—The Center for Construction Research and Training, has facilitated the creation of many tools, guidance documents, training materials and resources that the mining industry can easily adapt and utilize to reduce worker exposure and injury. Moreover, what many supervisors and workers in mining do not know is that in 2012, MSHA issued a program policy letter stating that in many cases the fall protection standards promulgated in

OSHA 29 CFR 1926 Subpart M will satisfy the requirements of MSHA's 30 CFR §§ 56/57.15005 standard. With the stroke of a pen, so to speak, the industry was provided a substantial amount of information for greater understanding and improvement for the industry due to the considerable effort of OSHA's Directorate of Construction and Directorate of Standards and Guidance. Numerous memos, Harwood grant training programs, guidance documents, interpretation letters and thousands of systems and equipment configurations are available to help employers create protocols for protecting workers from the effects of gravity.

Based on what I have experienced over the past several years, the problem with fall protection implementation in mining is really no different from the problems faced in the construction industry: employers and workers simply do not know, do not understand or have been misinformed about how to apply the fall protection systems that are available to workers. Further, even employers and workers who do understand where to look for solutions face the same roadblocks that I discussed in "Fall Protection: Overcoming Misconceptions in Residential Construction" (Bethancourt, 2017).

The guidance I provided during my conference sessions related to safety professionals who try to make the work environment fit the systems, then claim infeasibility when they meet failure rather than find solutions or systems that will fit the work environment. To suggest that employers force clients to use fall protection based on a "textbook" is as imprudent as suggesting that workers simply "be careful" where the use of adequate fall protection is not facilitated. Construction and mining work environments are never perfect and change regularly. This should never be an excuse for not finding a solution to protect workers.

During the conference, I explained the journey my company went through more than a decade ago and how we learned that manufacturers' guidelines and instructions do not and cannot take into account every potential application of their equipment.

Vantage Point

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Based on years of experience, research and peer-reviewed technical publications on the subject of fall protection, I explained to attendees how important it is for supervisors and management to explore the entire scope and limit of the systems they are investigating rather than simply reading a legal disclaimer. It is my observation that those legally compelled manufacturer documents often provide blanket warnings based on atypical worst-case scenarios to limit manufacturer liability. Those warnings are not a bad thing in and of themselves, but such warnings can enable safety professionals and employers to assume that no solution exists. The result in mining is similar to the result in construction in that employers often fail to explore what they need for a given situation and instead throw up their arms in defeat or confusion, concluding that nothing can be done to keep workers safe. As we have proven time and again, manufacturers focus on specific ANSI standards when evaluating equipment for compliance. Those evaluations may not produce what the industry needs nor how that equipment might be successfully utilized by industry

employers whose goal is to save workers from serious injury or death.

Gravity is the one constant that all workers and employers cannot escape. Accordingly, equipment available from manufacturers today must be evaluated for how it can be applied rather than how it cannot. Most employers want to find a solution, but they get caught up in the quest for perfection where it can never be achieved.

As in construction, mining employers must adopt a can-do approach if they expect to find success. The cliché that optimism is seeing the glass half full rather than half empty is not folly. For OSH professionals to succeed in protecting workers, they must go in with the expectation that success will be achieved; to do otherwise only demonstrates insincerity of what would amount to

hyperbole regarding worker safety and the feasibility of keeping workers safe.

The mining industry's gift of having a set of protocols available for guidance on a particular issue is no different from the lack of guidance on confined spaces that the construction industry solved by using the protocols available in general industry before the promulgation of 29 CFR 1926 Subpart AA. Construction uses general industry standards for guidance, and miners can use construction standards for fall protection. The end result is that workers and the industry are safer. **PSJ**

References

Bethancourt, J. (2017, Mar.) Fall protection: Overcoming misconceptions in residential construction. *Professional Safety*, 62(3), 58-64.

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