

# PUBLIC SUBMISSION

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Examinations of Working Places in Metal and Nonmetal Mines. 30 CFR Parts 56 and 57

**Comment On:** MSHA-2014-0030-0001

Examinations of Working Places in Metal and Nonmetal Mines

**Document:** MSHA-2014-0030-0050

Comment from Bryson Williamson, CSP, NA

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## General Comment

See attached file(s)

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## Attachments

MSHA-2014-0030-0001 Public Comment

*AB87-Comm-27*

August 5<sup>th</sup>, 2016

Ms. Sheila McConnell

Acting Director, Office of Standards and Variances

MSHA/DOL

201 12th Street South, Room 4E401

Arlington, VA 22202-5452

Re: RIN 1219-AB87

Docket No. MSHA-2014-0030

Examination of Working Places in Metal and Nonmetal (MNM) Mines

Dear Ms. McConnell:

I would like to thank you in advance for the opportunity to submit the following comments on MSHA's Proposed Rule on Examinations of Working Places in Metal and Nonmetal (MNM) Mines. I am a Certified Safety Professional (CSP) in good standing with the Board of Certified Safety Professionals (BCSP). My background consists of over 14 years in various health and safety roles extending across multiple industries, including aviation, heavy construction, and most recently the Oil & Gas Industry. I hold a Bachelor of Science Degree in Occupational Safety and Health, while currently performing studies toward a Master of Engineering (MEng). While I do not work in the mining industry, I do feel that my broad perspective across various industries will be beneficial in the comments to follow, as many of the

identified issues within the mining industry are similar in nature to those mentioned above. My intended goal being to interject comments representing several concepts, approaches, and best practices as applied within other industries, for consideration into the proposed rulemaking.

It is my professional opinion that MSHA's strategy suggested in this Proposed Rule doesn't go far enough to have a meaningful impact to overall miner safety. The Proposed Rule seems to lack specificity in regards to key definitions, for example, the term "adversely effects" needs to be better defined as it applies to employee safety. The primary focus of the proposed rulemaking appears to rely heavily toward an "administrative control approach" in regards to the identification, treatment, and mitigation of workplace hazards. One of the stated roles of MSHA is to provide technical, educational, and other types of assistance to mine operators. MSHA accomplishes this through cooperation with industry, labor, and other Federal and State agencies. I encourage MSHA to utilize their influence as an agency to introduce a more comprehensive and systematic approach towards workplace examinations and overall hazard reduction, one that provides a recommended framework for mine operators to implement. One solution would be for MSHA to apply a concept similar to the ANSI/AIHA/ASSE Z10/ANSI/ASSE Z590.3 - Occupational Health and Safety Design Package, with an emphasis on Risk Management. Unlike previous attempts of the I2P2 proposed standard, this approach would focus on either a performance – oriented rule or voluntary consensus. One example of a model program is the CORESafety® initiative embraced by the National Mining Association (NMA).

Recent studies have shown the effectiveness of the implementation of a management system framework. For instance, in a 2012 U.S. Department of Labor publication *Injury and Illness Prevention Programs*, the Occupational Health and Safety Administration states:

“The authors found that among program participants there was a strong association between improved injury and illness experience and the level of compliance with the program requirements. This is further evidence that programs with strong management commitment and active worker participation are effective in reducing injury risk, while “paper” programs are, not surprisingly, ineffective” (U.S. Dept. of Labor. 6)

I would like to see MSHA advocate the non-regulatory implementation of similar management systems and provide guidance and resources to operators who may not be familiar or possess the in-house expertise to implement such a system. By introducing the industry to a phased-in approach of key core management system elements, smaller operators would have the ability to align and progress at a pace suitable for them. The overall effect would be a step-change in the safety culture of the mining industry, all while preparing the industry to advance to more mature concepts such as Prevention Through Design (PTD). Certain skepticism would be mitigated by incentivizing the adoption of the management system approach. For example, operators who are actively engaged in implementing the suggested framework and core elements, may be eligible for citation reductions.

By utilizing a Risk Management System based approach that includes Prevention through Design (PTD) concepts such as those outlined within ANSI/ASSE Z590.3-2011 *Prevention through Design Guidelines for Addressing Occupational Hazards and Risks in Design and Redesign Processes*, the industry can design out causal factors through risk avoidance and elimination of hazards altogether. According to a peer-reviewed article in *Professional Safety*, author David Walline states: “Numerous studies and research reveal that 20% to 50% of all mishaps reported a design gap finding” (43). Evidence of PTD strategies and their overall

success have recently emerged within the mining industry, such as Proximity Detection Systems and human-machine interface technologies. Additionally, MSHA states in its *Summary 2013 4<sup>th</sup> Quarter Fatal Accidents at Coal Mines and Preventive Recommendations* the following: “One of the powered haulage deaths may have been prevented through the use of a proximity system” (U.S. Dept. of Labor). It is reasonable to conclude that MSHA could propel prevention through design cultures by including this principle into its proposed rulemaking. This in turn would stimulate a greater need for manufacturers supporting the mining industry to rise to the challenge and fulfill a Designing for Safety (DFS) mindset.

#### Working Place Examination Prior to Work Beginning

I support preliminary hazard assessments as identified in this Proposed Rule and feel that an assessment of the work area prior to commencing activities within the work area would be beneficial. Many industries perform pre-job inspections prior to engaging in their work tasks, oftentimes having additional hazard assessments when conditions or job scope changes. However, on a much broader scale, I feel the Proposed Rule would best serve the mining industry by including language that encourages operators to embrace a risk management methodology to identify risks associated with specific mining activities. So many times organizations fail to adequately match the risk level of the task with the appropriate level of control, oftentimes relying on less-effective controls such as personal protective equipment (PPE), administrative controls, and warning systems. Focusing on task-based risk assessments is one of many options that mining operations could utilize to ensure their examinations of the

worksite are effective and value added. Task-based risk assessments have been utilized in aviation safety with great success, in both aeronautical decision making and overall aircrew safety. The Oil and Gas Industry has been utilizing the task-based risk assessment process for the past 20 years, with the latest emphasis being in upstream process safety. The task-based risk assessment process can effectively be utilized to account for specific areas, sub-areas, personnel, etc.

By implementing a risk based inspection process to worksite examinations, mining operators would be able to focus resources in areas of high risk or during the operation of critical tasks. An initial baseline risk assessment such as a Bowtie Analysis (BTA), Hazard and Operability Study (HAZOP), Fault Tree Analysis (FTA) or other barrier/safeguard identification method could be used to identify critical controls for each specific worksite. During the baseline assessment, hazards would be assessed and prioritized, with emphasis on risks having the potential for catastrophic, including fatal, consequences. The competent person on-site would be responsible for performing relevant site inspections to ensure that critical controls are in place and functioning as expected.

BHP Billiton best demonstrates this approach in a case study conducted by the World Coal Association (WCA). The case study focuses on BHP Billiton's South Africa - Middelburg Colliery operations. The case study which appeared in the November 2013 publication titled *WCA Case Study: BHP Billiton Middelburg Colliery*, outlines the risk management approach and its effect on dramatically improving safety performance. BHP Billiton bases their risk management approach on two key components consisting of Critical Task Observation (CTO) and Critical Control Verification (CCV), both of which are carried out by line managers (World Coal Assoc 1-2).

The Oil and Gas Industry has seen very promising results in the implementation of risk management principles within their upstream processes. Original concerns within the Oil and Gas Industry were that the application would be cumbersome and largely inefficient. Other concerns were that it appeared to resemble process safety management and could not fit the dynamic natures of the upstream environment. However, the above concerns have largely faded as they are replaced by successful implementation and field level buy-in of risk management principles. The results being better identification and control of latent hazards within the work environment, ultimately reducing the potential for serious injury or mishap.

Given the dynamic nature of worksites, it would be expected for conditions to change, but these could be managed within the process. Utilization of a risk register to compile identified hazards and prioritize mitigation would be an effective means of communicating hazards to mining employees. Subdivided by each respective work area, both the location and status of hazards within the workplace would be obtainable by employees.

Should require that the competent person conducting a working place examination have a minimum level of experience or particular training or knowledge to identify workplace hazards.

The competent person approach MSHA is taking toward work place examinations is one that I support. I feel the agency is poised to provide support and guidance to the mining industry in competent person development. In my professional opinion, the agency should take a competency based approach in the selection, development, and continuing education of personnel selected for competent person designation. The agency could utilize similar principles it uses to train its in-house inspectors, in an abbreviated manner of course. By developing a competency based curriculum, selected competent persons could advance their skill qualifications and progress to a recognized industry wide certification. At a minimum, the

curriculum should include techniques for performing an effective risk assessment of the workplace while focusing on prevention through design (PTD) opportunities.

In conclusion, I would once again like to thank you for the opportunity to comment on this important Proposed Rulemaking. I feel the mining industry has made steady progress in its mission to ensure every employee returns home safely. However, there are still areas for improvement which will require a step-change in both safety culture and mindset. I truly feel the mining industry is on the verge of a pivotal change, so getting this next step right will be critical for the industry. I urge you to strongly consider applying the above-mentioned concepts into the rulemaking process, in doing so the mining industry will have paved the way for a safer work environment for the next generation.

Sincerely,

Bryson Williamson, CSP

**“Works Cited”**

United States. U.S. Department of Labor. Mine Safety and Health Administration. *Summary of 2013 4th Quarter Fatal Accidents at Coal Mines*. Arlington: U.S. Dept. of Labor, 2013.

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Walline, David L. "Prevention Through Design - Proven Solutions from the Field."

*Professional Safety* Nov. 2014: 43+. Print.