

Public Meeting "Safety and Health Management Programs for Mines"
RIN 1219-AB71

2010 OCT -8 P 4: 40

By
Anthony Iannacchione and Michael G. Nelson

Date
October 14, 2010

Omni William Penn Hotel
530 William Penn Place
Pittsburgh, PA 15219

Thank you for the opportunity to comment on the Mine Safety and Health Administration's (MSHA) effort to gather information about effective, comprehensive safety and health management programs at mines. Perhaps our thoughts can be summed up by saying that implementing risk management protocols, especially those related to major hazards that can cause mining disasters, would have a positive impact in reducing the health and safety issues and should be encouraged.

The U.S. mining industry has made considerable progress in reducing fatalities and injuries. In 1910 when Congress created the U.S. Bureau of Mines, thousands of miners were dying every year in mining accidents. Over the last 100 years, regulations have been periodically improved upon, typically in response to major disasters. As a result of these regulations, new technologies have made their way into the work place. By 1975, when we both began our careers, 155 miners were fatally injured in coal mining accidents. Last year the total number was 18.

Regulations, promulgated by MSHA over the last few decades, have been prescriptive in nature and often define best practices necessary to mitigate health and safety injuries. The mining industry is arguably one of the most regulated industries in the U.S. Unfortunately, even in the midst of massive regulations and falling injury rates, the mining industry still struggles with periodic disasters. Sago, Crandall Canyon and now Upper Big Branch have cast a cloud over the effectiveness of the government's attempt to prescribe every safe action and every best practice. At some of the mines with the worst safety records, the operations focus primarily on minimal compliance with the law. They are, in practice, reacting to safety issues that have the potential to be found by mine inspectors. The necessary efforts to thoroughly understand the hazards in their environment and to develop prevention controls and recovery measures that will mitigate the inherent risks are left to the better operators. One has to ask the question, why didn't any of the new standards, enacted after the Sago disaster, prevent the massive loss of life at the Upper Big Branch Mine? Our fear is that prescriptive regulations lack a clear mandate to encourage operators to become more proactive, to work on leading practices, to go beyond the minimum standards identified in the regulations. As a result, operators who are only used to reacting to the threat of citations are ill prepared to develop more proactive approaches. Our experience suggests that the best way to eliminate major hazards from the work place is to perform rigorous risk management.

This methodology has the advantage of encouraging the operator to consider and plan for unwanted events. It also produces new ideas that help to drive innovation in the safety of the work place and

forces the operation to document its findings. These reports can be reviewed and used to develop leading safety practices. Adequate risk management plans also identify how the barriers and prevention controls put into practice are audited and who is responsible for making sure they are maintained. This is the way many of the best and safest companies already conduct their affairs. It is equally true that the un-safe companies are least likely to embrace these practices. So by facilitating operations to continuously manage their risk to a higher standard, we are encouraging proactive behavior. This would eliminate the need to have government, through highly specific standards and regulations, recognize every potential hazard and identify every appropriate response.

The legacy of mining disasters has the potential to help us develop an alternate strategy for dealing with the risk presented by underground mining. A recent report by National Institute for Occupation Safety and Health (NIOSH IC 9508, 2008) provides examples of how major hazard risk assessment can be used to eliminate multiple fatality occurrences in the U.S. Minerals Industry. We would encourage MSHA to considering implementing major hazard risk assessment as part of its initiative to develop safety and health management programs for the U.S. mining industry.

Sincerely,



Anthony Iannacchione, Ph.D., P.E., P.G.
Associate Professor
Director of the Mining Engineering Program
Swanson School of Engineering
University of Pittsburgh
1130 Benedum Hall
3700 O'Hara Street
Pittsburgh, Pennsylvania 15260
412.624.8289
ati2@pitt.edu



Michael G. Nelson, Ph.D.
Associate Professor
Chair, Mining Engineering Department
College of Mines and Earth Sciences
University of Utah
135 South 1460 East, Room 313
Salt Lake City, Utah 84112
801.585.3064
mike.nelson@utah.edu