

The CORESafety® Interview with Dr. Jeffrey Kohler

CORESafety® is the National Mining Association's (NMA) common safety and health framework that relies on a management system approach to improve safety and health performance at mining operations. The goal of **CORESafety** is to achieve zero fatalities and a 50 percent reduction in the rate of injuries in U.S. mining within five years – 0:50:5.

CORESAFETY

To learn more
about the framework, visit
www.coresafety.org



Dr. Jeffrey Kohler has been working, teaching, and studying issues surrounding mine safety for the past 45 years. Currently, he's a professor of mining engineering and the undergraduate program chair of mining engineering at Penn State University.

In a recent interview with "Dig a Little Deeper", Dr. Kohler shared his thoughts on the general state of mine safety in the U.S. and what he thinks about CORESafety.

Question: Let's start by talking about your daily interactions with college students. How do young people today feel about mining?

Kohler: I ask the students if they think of mining as the past, the present, or the future. Typically 90% choose "past." Then I ask them to respond to the same question but instead of mining, I insert the word "food," and then "pharmaceuticals," "iPhones," "wind turbines," and "solar cells." I ask them about the piece of paper in their hand, or the paint on the wall.

Generally, they are astonished to learn that mining provides millions of tons of mineral products for these items, and for almost everything else on which they and society depend!

I conclude by telling them that 15 percent of U.S. domestic product comes from mining, and one-quarter of the world's economic output comes from mining.

Young people unfortunately don't see the discipline or profession of mining as something they want to pursue these days, and in large part this is because they don't understand mining's importance today and into the future.

Question: What about the general public? Are there any misconceptions they have about the industry?

Kohler: The public's misunderstanding of the mining industry is quite profound. Many people don't understand why we need "mining." They think it is irrelevant, and often they think it's dirty, dangerous, or environmentally destructive. In reality, it's very different. Safety, environmental sustainability, social responsibility are core values for most mining companies today. Admittedly that was not the case in the past century.

Take safety for example: there was a time when mining ranked as one of the most dangerous occupations, whereas today it doesn't even make the top ten list. Agriculture, fishing, and forestry are all more dangerous than mining, and metal mining is ranked even safer than general industry. The public should know that the mining industry is taking responsibility and being proactive to prevent accidents from happening.

Question: That's a good segue to CORESafety. What are your thoughts about the program?

Kohler: I believe **CORESafety** to be an inspired and timely program that brings together key elements to achieve safety and health goals.



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Question: Do you believe it's doing well on its own, or does CORESafety need a government counterpart?

Kohler: I don't believe the program requires any government augmentation. Historically, the government has stepped in with regulations in attempt to achieve improved safety, and these regulatory interventions achieved some measure of success. What we've seen in the past decade is that regulation alone is unable to prevent fatalities and injuries. Many engineering interventions have been developed and deployed – and this prevention-through-design approach has contributed significantly to improved safety. Yet, less than ten years after the landmark 1969 Act, the importance of training interventions was recognized and codified into the 1977 Mine Safety Act.

Regulatory, engineering, and training interventions have contributed to impressive gains in safety, but not to the level sought by the majority of mining companies – the goal of zero harm. Accordingly, there is a need to go above and beyond the traditional approaches, the role of leadership and the resulting safety culture, and to bring all of these together. And that is the brilliance of **CORESafety**.

Question: CORESafety has a goal of zero fatalities and a reduction in injuries. How's it doing?

Kohler: I don't have the data to track separately the companies that have embraced the **CORESafety** goal and program, but from the companies that I've examined and the mines that I've seen, I would conclude they are on-track. The **CORESafety** approach is the biggest "game changer" in my career, and I fully expect it will result in unprecedented levels of improvement in safety when it is fully implemented throughout the industry.

There's another point I'd like to make about the goal. A goal of zero fatalities is very aggressive, and some would argue too much so. I believe it is important to set lofty goals and work hard to achieve them. However, if we fall short of the goal, it doesn't mean that the program failed to drive improvements that would otherwise never have happened.

Question: What are CORESafety's main challenges?

Kohler: I see two main challenges. The first relates to implementation. The buy-in at the executive level is complete, and that is a critical step. Now the program must be implemented, and personnel at the operations level bear that responsibility. But how does this get rolled out, what does it look like, and what are the underlying structures that must be put into place to make it all work? A clear roadmap is needed and the "implementers" are going to require guidance and examples. This is going to be a challenge throughout the industry, and especially with the smaller companies.

The second challenge is to bring everyone onboard.

Question: Can you give us an example?

Kohler: Well, certain sectors within the mining industry have embraced **CORESafety** more than others – the coal and metal/nonmetal sectors more so than the aggregates sector; and within each of these sectors there are good examples of companies that have adopted it, and examples of companies that are yet to be persuaded. There is still work to be done to bring everyone on board.

The **CORESafety** program is a realistic approach based on solid research and experience. The mining industry needs to meet the societal expectation and the **CORESafety** goal. I would remind those who have been slow to adopt the program that if you don't take care of your business, the government will step in and do it for you, and they're not known for being delicate!

Question: On the issue of government regulation, is there currently too much of it? Too little?

Kohler: It's not just about too much or too little regulation of mine safety. My issue is the unintended consequences of the government being overly prescriptive. Too many companies and people out there believe if they do everything the regulation requires of them then they are safe, and they're off the hook. After all, they did everything prescribed in the regulation and they were following the government-approved plan. Their logic is seriously flawed, but that is the mindset that has developed.

Regulation should form a baseline or floor to promote safe conditions, but it is a fool's errand to attempt to write specific regulations to cover every conceivable combination of events that could occur in a working mine. Rather than more regulations, it would be better if the government stated their expectations and then each company came up with their own approach to achieve that goal.

Look at it like this. If I give you 1,000 pages of prescriptive regulation and you follow it, you may feel little burden to go beyond that – and we know that approach doesn't work. But if I say, you have an obligation to take reasonable steps to prevent fatalities or injuries, you will take actions to achieve that goal in a way that makes sense and minimizes risk.

Question: Anything else about CORESafety you'd like our readers to know?

Kohler: Well, if you want **CORE**Safety to work effectively, you're talking about a cultural shift not just with operators, regulators, and miners, but also with the next generation of these workers. You have to change how they perceive the safety landscape and their responsibility in the safety system. We have an opportunity at the university level to give this next generation of mining engineers better tools, and perhaps more importantly, to effect a cultural shift.

Question: Finally, how did you get involved with the mining industry?

Kohler: I've been associated with the mining industry for 45 years. My father worked in quarries, so I was exposed to surface mining, things like drilling and blasting when I was a child. When it came time for graduate school, I decided mining was the industry I wanted to go into.

Closing: Dr. Jeffrey Kohler, thank you very much for your time.

Kohler: You're very welcome!