

NANCY NUTTBROCK
ASSOCIATE & TEXAS REGIONAL LEADER
BRIERLEY ASSOCIATES

House Committee on Natural Resources, Subcommittee on Energy and Mineral Resources
H.R. 3734 - Mining Schools Enhancement Act

Monday, December 14, 2015, at 10:00 a.m. (MST)
Edgar Mine - Colorado School of Mines Experimental Mine
365 8th Avenue
Idaho Springs, Colorado.

Introduction

Thank you for the opportunity offer my testimony in support of HR 3734. My name is Nancy Nutbrock.

Background...

I graduated with a BS in Geological Engineering from South Dakota School of Mines and Technology in 1996. While in college, I worked as an intern for 2 summers for Phelps Dodge in Morenci AZ, at that time, one of the world's largest copper mines. After graduating, I worked for PacifiCorp at their surface coal mine in Centralia, WA. Then, I worked for Halliburton in Wyoming. I relocated to Denver to pursue my MS in Mining Engineering here at the Colorado School of Mines. While pursuing my Masters n Mining Engineering-Earth Systems Technologies, (aka: tunnel design), I was introduced to Brierley Associates, an engineering firm focusing on all varieties of tunnel and shaft design, and heavy civil underground construction. I worked with Brierley on tunnel projects across the US and internationally for 5 years. Then, I left my friends at Brierley and headed back to Wyoming. For the next 6 years, I served as the Deputy Director for the Wyoming School Facilities Commission, which proved to be a unique and beneficial tangent to my training in the earth sciences. Following this, for the 3 years, I served as the Administrator, and then the Deputy Director, for Wyoming's Department of Environmental Quality. This position took me back to my geology and mining engineering roots – I administered Wyoming's program that regulated all mining activities across the State, including coal, trona, bentonite, uranium, and sand and gravel, to name a few. The program employed approximately 45 earth science professionals: geologists, range and reclamation scientists, hydrologists, and engineers. Then, about a year ago, I left Wyoming to rejoin my friends at Brierley Associates, and open our office in Houston TX.

From my perspective...

This Bill is important for many reason, but based on my background, it is particularly important to states like Wyoming with a robust mining economy. The regulatory program for Wyoming DEQ is charged with not only *permitting* the mining operation, and ensuring that *reclamation* is successful, but also everything in between. Mining operators are required to submit detailed mine plans to incorporate into their permits, which involve all aspects of a mines operation.

With that, now also consider that the Wyoming's program is charged with regulating all forms of mining that differ dramatically:

- traditional surface mines (ranging from the world's largest coal mines in the Powder River Basin to rare elements to small sand and gravel operations),
- and also underground mines (including underground coal mines, underground coal gasification, and large trona mines),
- and also in situ uranium mining.

Some of these mines are the largest of their kind in the world.

The geologists, the reclamation and vegetation experts, the hydrologists and the engineers employed to run Wyoming's program are *extremely* capable professionals in their respective fields of expertise. In order to regulate a wide spectrum of mine types, each professional is must learn the technicalities of each operation assigned to them. To do so, each person learns from their peers, are self-taught, and/or learns from the mine operators and mine personnel they are entrusted to regulate. Wyoming is fortunate, and perhaps even rare, in that the mining industries and regulatory entities collaborate honestly towards a balance between environmentally sound techniques and profitable operations.

Recommendation...

While it is true that federal funding is needed to conduct research at mining schools, and new professors need to conduct research for the tenure process so they can educate the next generation of mining and mineral experts, this cycle still lacks the source of students.

Simply stated, very few high school students contemplating the age-old question "*What do you want to be when you grow up?*" will answer '*A Mining Engineer*'. The President of Brierley Associates recently asked me: "When you were 8 years old, what did you want to be?" He chuckled at my response: I wanted to be a truck driver, because I thought that was the only way I could travel and see the country.

Please consider this: include a mechanism to engage high school students and especially those students who would not otherwise be exposed to mining engineering as an exciting career choice.

Conclusion...

Thank you for your efforts to bolster professionals in our industry, and for listening to me today.