



SECURE NIOSH'S LAKE LYNN EXPERIMENTAL MINE

Background

The National Institute for Occupational Safety and Health (NIOSH) needs to regain its former Lake Lynn Experimental Mine, a facility that crosses the Pennsylvania-West Virginia border in Fayette County, PA. Lake Lynn has been a government mine safety and health research facility for the past 30 years. However, a rock fall in October 2008 resulted in closure of the underground testing facility, and a decision was made not to repair damage caused by the rock fall because Lake Lynn was leased, not owned, by the government. NIOSH's parent, the Centers for Disease Control and Prevention (CDC), had been in talks with the landowner to purchase the facility. The talks stalled and CDC handed the facility back to the owner when the current agreement expired on September 30, 2012. Lake Lynn consists of an underground experimental coal mine and an aboveground fire-testing facility. This is where matters of life and preventable death come into play.

Arguments in Favor of Securing Lake Lynn Experimental Mine

- The government has invested millions of dollars to create a one-of-a-kind, large-scale simulated underground coal mine to perform critical mine safety and health research. If the facility is lost, this investment will be lost, too.
- The facility is needed now more than ever because multiple fatalities from underground coal mine explosions have spiked in recent years, necessitating more dust and explosion-prevention research. This research only can be done realistically at Lake Lynn.
- In this brief century alone, research at Lake Lynn has led to three important improvements in mine safety.
 - Determination of the minimal amount of inert “rock dust” needed to render float coal dust incombustible. When float coal dust contains 80% or more incombustible content, it prevents a methane ignition from initiating a secondary float coal dust explosion. This research informed a regulation subsequently issued by the Mine Safety and Health Administration (MSHA).
 - Development of the coal dust explosibility meter (CDEM), which measures the incombustible content in coal dust on the spot. Before the CDEM became commercially available, dust samples had to be sent to an off-site laboratory, which took weeks to return analytical results. Safety is improved because corrective action now can be taken immediately and not critically delayed.
 - After seals separating active from abandoned mine works failed in a 2006 explosion that killed 12 underground coal miners, NIOSH used Lake Lynn to test new seal strengths. This research informed a seals regulation MSHA issued about two years later.

- Sparks created by mine machinery cutting into stone in the presence of explosive methane gas can produce frictional ignitions, which can then transition into massive float coal dust explosions. Frictional ignitions are a fact of life when cutting coal. However, research at Lake Lynn is believed to have saved hundreds of lives since its inception as a research facility due to prevention strategies developed there on rock dusting, float coal dust control and frictional ignition.
- Realistic, full-scale methane gas and float coal dust explosion research cannot be conducted anywhere else in the U.S., or abroad, except at Lake Lynn.
- The Upper Big Branch Mine explosion, which claimed 29 underground coal miners in 2010, has pointed to the critical need for more explosion research. This includes determining the effectiveness of rock dust as a suppression agent, developing anti-caking substances to produce more effective rock dust, studying rock dust particle size to determine the optimal particle size distribution, and evaluating passive barriers to prevent explosion propagation in areas of the mine unsuited to rock dusting.
- Lake Lynn was a major mine rescue team training center because it offers realistic training under conditions as close as possible to those that would be encountered in real life.

Action Requested

The government has assessed the value of the property and Congress previously authorized the purchase of the facility. We understand the holders of the surface and mineral estates regard the offered purchase price as insufficient. Therefore, either more funds need to be appropriated, or the government should consider taking the property under the doctrine of eminent domain and letting the courts decide appropriate compensation. Eminent domain legitimizes a government taking of private property for public use with payment of just compensation. Bipartisan Congressional support, both financial and political, is needed for CDC to pursue an eminent domain proceeding with regard to Lake Lynn. The Nation's overall mine safety and health program requires the Lake Lynn experimental mine if it is to see the continued improvement in mine safety and health we have achieved over the past few decades.

About IMA-NA

The Industrial Minerals Association – North America (IMA-NA) is a trade association created to advance the interests of North American companies that extract or process industrial minerals used throughout the manufacturing and agricultural industries. IMA-NA stands ready to participate constructively in discussions regarding the national importance of the NIOSH Lake Lynn Experimental Mine.