



Mining Accident News No.1209

10 to 22 April 2012

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Tuesday 10 April 2012

Peru: Rescuers get closer to trapped miners

Extract from The Globe and Mail, Canada

ICA, PERU — Rescuers were closing in on nine workers trapped inside a wildcat mine in southern Peru on Tuesday.

The men have been stuck about 200 metres below ground since the Cabeza de Negro gold-and-copper mine, 280 kilometres southeast of Lima, partly collapsed on Thursday. The trapped workers have been receiving oxygen and liquids through a giant hose in place since before the accident. Dozens of rescue workers have been using pickaxes and shovels to try to remove the collapsed earth and rock blocking the entrance of the mine.



Rescue workers and miners dry clothes as they help with rescue operations of the nine trapped miners at Cabeza de Negro gold-and-copper mine, near the mine in Ica April 10, 2012.

“We have a couple of metres left to go,” Mines and Energy Minister Jorge Merino said on Tuesday to reporters at the site monitoring the digging operation. “We’ve advanced six metres in a tunnel that’s eight metres long.”

Peru “doesn't have a specialized team for mining rescues,” said Jose de Echave, a former deputy environment minister.

The cave-in spurred calls to formalize Peru’s vast informal mining sector, which generates as much as \$2-billion (U.S.) a year in income,

NOTE: Views expressed in this newsletter are those of the individual sender, and are not necessarily the views of the NSW Department of Trade and Investment, Regional Infrastructure and Services
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according to private estimates. Mining is the main engine of Peru's economy, accounting for more than 60 per cent of its exports. According to official figures, 52 miners died in Peru last year in work-related accidents, a third of them in mine shaft collapses.

USA: W.Va. Mine Blast Survivor Cases Linger With Alpha

Extract from Associated Press

Nine men who survived West Virginia's Upper Big Branch mine disaster want to abandon mediation of their personal injury claims and start gathering evidence for trial because they say the mine's new owner isn't negotiating in good faith.

The miners also suggest one reason Virginia-based Alpha Natural Resources is sealing the former Massey Energy mine where 29 men died is to prevent that collection of evidence, according to a motion to lift a stay that's been in place since last September.

The plaintiffs said they've been forced to rely on government and independent reports on the worst U.S. mining disaster in four decades.

Alpha, which acquired Massey and the mine near Montcoal in a \$7.1 billion deal last summer, declined to discuss the mediations, saying they're confidential by court order.

"Alpha intends to respect the court's authority and directives," said spokesman Ted Pile.

In January, attorneys for the families of the 29 killed announced they'd settled their wrongful death lawsuits with Alpha. The terms were not disclosed, but the plaintiffs contend Alpha's stock price rose significantly after the announcement, buoyed by the positive headlines.

"What was not announced was the fact that the serious claims of those miners that survived the explosive blasts that day remained unsettled,"

said the motion that was filed last week in Boone County Circuit Court.

The nine plaintiffs said they've suffered serious, permanent and debilitating physical and psychological injuries as a result of the April 2010 blast, including traumatic brain injuries.

Pile said Alpha has always said it hopes to "settle all outstanding claims related to the Upper Big Branch accident so everyone can move forward."

"It was important to first take care of the families of those miners whose lives were lost in this tragic accident," he said.

Alpha said in January that it also settled lawsuits with at least seven injured survivors when it settled the death cases. Attorney Michelle Parfitt said some of her clients were in the same shuttle car and experienced the same explosive forces as those who died and those who have settled.

Some helped drag their fallen friends out of the mine, administered CPR in vain attempts to save them and suffer from survivor's guilt, among other things.

"They're in the worst of ways. They can't move forward. They can't get resolution of their claims," she said.

Parfitt said plaintiff Ryan Powers, who is in his late 20s, has tried three times to go back underground but is neither physically nor psychologically capable. While some miners have returned to work, she said Powers' doctors have told him he would present a danger to himself and others if he tried.

The other plaintiffs are Jason Stanley, Scott Halstead, Kenneth Woodrum, Kevin Brown, Tommy Estep, Dustin Ross, David Shears and Dakota Davis.

They were one of three groups of lawsuits that were to be mediated separately. But the motion

to start evidence gathering says Alpha has repeatedly sought delays, tried to stop liability experts from assisting them and tried to prevent access to "crucial evidence under the guise of mine safety" by announcing last week it would seal the mine.

"We are sealing the mine because the two years in which it has remained open have allowed for the completion of all outside investigations," Pile said, "and we never had any intention of operating that mine again."

A motion the plaintiffs filed to prevent the sealing was denied.

Parfitt said the plaintiffs worry Massey may have evidence that was not included in one of the reports. While she credited the thoroughness of the accident reports, she said, "it forces us to rely on someone else's evidence."

Separate investigations by the Mine Safety and Health Administration, the United Mine Workers of America and an independent panel appointed by former Gov. Joe Manchin have all agreed on what happened.

They determined that Massey allowed highly explosive methane gas and coal dust to accumulate at Upper Big Branch, and that worn and broken cutting equipment created the spark that ignited the fuel. Broken and clogged water sprayers allowed a mere flare-up to turn into an inferno that ripped through miles of underground tunnels and killed men instantly.

In its final report, MSHA said the root cause of the explosion was Massey's "systematic, intentional and aggressive efforts" to conceal life-threatening problems.

In December, Alpha reached a \$210 million settlement with the U.S. Department of Justice that spared the corporation criminal prosecution and wiped the slate clean of violations at Upper Big Branch and other former Massey mines. Individuals, however, can still be prosecuted.

Former security chief Hughie Elbert Stover is appealing his conviction for lying to investigators and ordering subordinates to destroy documents. Former superintendent Gary May, meanwhile, is cooperating in a continuing federal investigation as he awaits sentencing for his role at the mine.

May, who pleaded guilty to a charge of conspiracy to defraud the federal government, is the highest-ranking mine official yet to be charged in the blast.

Parfitt said her clients wanted to settle their claims but no longer have faith in mediation. Nor have they been treated with dignity, she said.

The miners say they have attended a half-dozen sessions, "often on less than 24 hours' notice, only to be asked mundane and seemingly irrelevant questions about legal theories that could have been asked in a simple email or phone call."

Alpha attorneys have also called them "bystanders," she said, even though many were inside the mine when it blew up.

"That kind of lack of good faith is what's been very, very difficult for these men to understand — and as their attorney, very, very difficult for me to explain," Parfitt said. "These people weren't bystanders."

Lake Memorial for Pike River disaster pair

Extract from www.deadlinenews.co.uk

TWO Scotsmen who died in a mining accident in New Zealand are to be remembered by a new memorial.

Malcolm Campbell and Peter Rodger were among 29 miners killed in the Pike River mine in 2010.

Now a new memorial dedicated to the men, and others who have died in mining disasters, is to

be unveiled on the second anniversary of the blast.



Malcolm Campbell was killed alongside Peter Rodger in the Pike River Mine disaster

The memorial, set to be revealed on November 19, features granite statues of three miners and will sit in the middle of Lake Karoro in western New Zealand.

It will be surrounded by a revolving mine portal and linked to the shore by a causeway.

Grey District Mayor Tony Kokshoorn said the memorial was dedicated to all miners who had died in accidents, including the 29 who died in 2010.

Originally the site was to be dedicated only to the Pike River men, but a memorial committee decided last week to extend the tribute to all who died in mining.

The scenic lake has a backdrop of the Paparoa Ranges, where the bodies of the 'Pike 29' are still entombed.

Spokesman for the families of the miners who died, Bernie Monk, said they would not have closure until their bodies were recovered.

It's expected that body recovery operations could take up to five years.

Mr Monk, whose son Michael died aged 23 in the Mine, said: "Nothing has changed. That's the way the families feel. They are never going to go away until this happens.

"When we had his birthday on December 4, we used that as a birthday for him but also as closure for a lot of his friends who had travelled from all over the world to come to support us.

"People flew in from the UK, from Australia, from everywhere.

"You name it, they came back here for us and we needed to give them some closure."

Malcolm Campbell's parents, Malcolm and Jane, from St Andrews in Fife, are campaigning for the mine to be re-opened.

The miners' bodies were left 2.2km underground due to dangerously high gas levels.

The family hope to raise £1 million to fund the recovery of the bodies, as the New Zealand government is unlikely to pay the cost.

No contact was ever made with Malcolm, 25 or Peter Rodger, 40, after a series of explosions tore through the mine last year.

Malcolm's father, also Malcolm, said: "I don't think they will ever get everyone out.

That is always at the back of our minds.

"But we want Malcolm brought home and laid to rest next to his gran and granddad. My wife lost her parents and Malcolm within 14 months so it has been a horrendous time for us."

Wednesday 11 April 2012

USA: Report released on mining death

Extract from MetroNews, W.Va, USA

The federal Mine Safety and Health Administration have released its final report from a deadly coal mining accident that happened last October in Marshall County.

The MSHA report says miner Charles McIntire died from injuries suffered when a ditch digging

machine ran over him at Consolidation Coal's Shoemaker Mine on Oct. 17, 2011.

The report says McIntire and some other men were attempting to remove some large rocks from the mining area. They decided to get the ditch digging machine. McIntire told a supervisor his training on the machine may have expired so the supervisor gave him a 25-minute training session.

According to the report, the ditch digging machine didn't perform much better in trying to remove the rocks so the workers decided to take it back outside. McIntire got out of the machine in what's called the jump area to hook up some power to the machine to get it back to its previous location. The report says McIntire left the tram speed/power control knob in the high speed position and the tram directional switch was in the forward position causing it to move forward dragging him several feet.

MSHA says there were two root causes of the accident and both involve the mine's owner Consolidation Coal. The mine didn't have a "man in place" switch that MSHA says would have stopped the machine from suddenly moving forward and there was no labelling on the ditch digging machine to identify tram functions and power switch positions.

McIntire was initially conscious but died later at a Wheeling hospital. He had been a coal miner for nearly 10 years.

Link to entire report here:

<http://www.msha.gov/fatals/2011/FTL11c17.asp>

China: 4 found dead, 3 still missing at flooded coal mine

Extract from channel 6 news, online

NANJING, CHINA -- At least four workers have been found dead at a flooded coal mine in eastern China, company officials told state-run media on Wednesday. Three other workers are believed to remain missing.

The accident occurred at around 5:37 p.m. local time on Tuesday when ten miners were working at the Kongzhuang Coal Mine in Peixian county of Jiangsu province, according to the state-run Xinhua news agency. Three of the miners were able to escape, but seven others were trapped.

The Datun Coal and Power company, which owns the mine, told Xinhua that four of those trapped were found dead on early Wednesday morning. Xinhua's report on Wednesday gave no indication if anyone was still missing, but an earlier report said seven people were missing before the four bodies were recovered.

On March 16, thirteen miners were killed when an elevator fell out of control and slammed into the bottom of the Shimen Iron Ore Mine in Lucheng township, which is located in Cangshan county in Shandong province. The accident occurred when a steel rope which was carrying the elevator broke, causing it to plummet to the bottom of the pit.

Safety conditions at mines in China have significantly improved in recent years but they remain among the world's most dangerous with 1,083 fatalities in the first seven months of 2011 alone. There were 2,433 fatalities in 2010 and 2,631 in 2009.

China in recent years shut down scores of small mines to improve safety and efficiency in the mining industry. The country has also ordered all mines to build emergency shelter systems by June 2013 which are to be equipped with machines to produce oxygen and air conditioning, protective walls and airtight doors to protect workers against toxic gases and other hazardous factors.

The first manned test of such a permanent underground chamber was carried out in August 2011 when around 100 people - including managers, engineers, miners, medical staff, and the chamber's developers - took part in a 48-hour test at a mine owned by the China National

Coal Group in the city of Shuozhou in northern China's Shanxi Province.

One of the worst mining accidents in China in recent years happened in November 2009 when 104 workers were killed after several explosions at a coal mine in Heilongjiang province.

Quote of the week



"It has been my experience that folks who have no vices have very few virtues."

Abraham Lincoln
16th president of USA, 1809-1865

Qld: Night mining resumes after toxic gas leaks

Extract from ABC News Online, Aus

Night-time mining operations have resumed at a north Queensland coal mine plagued by hazardous gas leaks.

Mining company Thiess last month decided to suspend all night operations at the Collinsville open-cut coal mine after a series of gassing incidents in the past two months.

In that time, 25 miners have been taken to hospital after being exposed to hazardous gases.

A Thiess spokeswoman says five new monitoring stations have been installed on site and staff have also been given additional training.

The spokeswoman says since night operations resumed on the weekend, there have been

some low-level readings but no-one has been adversely affected.

The company says it is working on long-term solutions to the problem.

Thursday 12 April 2012

Peru: Miners rescued after week-long ordeal

Extract from ABC News Online, Aus

Nine workers trapped inside a wildcat mine in southern Peru have been rescued and brought to daylight after spending almost a week underground.



Free at last: Miner Cabeza de Negro

The men had been stuck about 200 metres below ground since the informal copper-and-gold mine partially collapsed.

They had been receiving oxygen and liquids through a giant hose that was in place before the accident.

"All of them are healthy but obviously dehydrated and dizzy," president Ollanta Humala said.

"They need to get used to the sun still, that's why they are wearing sunglasses."

Miner Jesus Japatinta said he was overwhelmed after walking out alive.

"I spilled tears, happy tears," he said.

Mr Humala, who witnessed the rescue operation, warned informal miners to stay away from abandoned mines like Cabeza de Negro, saying they were dangerous.

He also urged informal companies to register their workers and improve safety measures.

The cave-in spurred calls to formalise Peru's vast informal mining sector, which generates as much as \$2 billion a year in income, according to private estimates.

West Virginia moves to revoke Upper Big Branch foreman's certificate

Extract from www.platts.com

In the first action to revoke the mining credentials of an Upper Big Branch employee, the West Virginia Coal Mine Safety Board of Appeals has scheduled a May 15 hearing between the state Office of Miners' Health, Safety and Training and Jeremy L. Burghduff.

MHST accuses Burghduff, an assistant underground mine foreman at the now-shut Raleigh County mine, on two charges of failing to follow proper mine safety procedures and violating West Virginia mine safety code, according to the order entered March 15 by Clinton Smith, chairman of the appeals board.

MHST's charges stem from its investigation into the April 5, 2010, underground explosion at Upper Big Branch, then owned by Massey Energy. Twenty-nine miners died in the deadliest US coal mine accident in 40 years.

Alpha Natural Resources, which acquired Massey in June 2011, announced last week, on the second anniversary of the explosion, that the mine would be permanently sealed. The metallurgical operation had remained shut since the accident.

"As a result of the state's investigation into the UBB disaster, the OMHS&T issued one

Withdrawal of Certification," agency spokeswoman Leslie Fitzwater said in a Thursday email. "If findings in [the] ongoing federal criminal investigations into UBB bring to light the need for additional action, the OMHS&T will pursue Withdrawal of Certification or other actions as needed."

Asked whether MHST had other certification withdrawal petitions pending, Fitzwater replied, "There were three Individual Personal Assessments made [in the MHST accident report released February 23], which ... differ from Withdrawal of Certification."

She further noted, "The one withdrawal case, Mr. Burghduff's, is the only Withdrawal of Certification to result from the state's investigation."

In the petition, MHST Director C.A. Phillips said that, during the course of the UBB accident probe, investigators found that "Burghduff failed to properly examine the air courses for accumulation of methane and oxygen deficiency during weekly examinations of areas assigned to him."

Four different reports on the accident, including MHST's, found that the mine operator, Massey subsidiary Performance Coal, allowed build-up of explosive coal dust, and a build-up of methane, once ignited at the mine face, combined with the coal dust to result in what should have been a localized fire to spread into a massive explosion throughout mine passageways.

Also, according to the petition, during the course of the investigation, MHST investigators found that from January through April 5, 2010, Burghduff failed to wear his self-contained self-rescuer apparatus in performing various duties underground.

Alpha representatives did not respond to requests for comment Thursday about Burghduff's current employment status.

Sunday 15 April 2012

China: 6 remain trapped in colliery flooding

Extract from China Daily

PINGDINGSHAN, Henan - Rescuers on Sunday are pumping water out of a flooded coal mine in Central China's Henan Province, hoping to reach six miners trapped underground since Saturday afternoon.

Five other miners had been earlier confirmed dead after the flooding occurred at 2 pm Saturday at the mine owned by Yulongyuantong Coal Mining Co in Pingdingshan city.

Rescuers on Sunday morning confirmed 53 miners were under the mine by the time of the accident. Forty-two of them have managed to escape.

A spokesman with the rescue headquarters said the flooding was caused by an outburst of seep from a disused mining pit adjacent to the mine.

Yulongyuantong Coal Mining Co is a new subsidiary set up by the Henan Coalbed Methane Development Co Ltd., which took over the mine on January 17 for renovation and development.

The parent company is China's first state-owned conglomerate specialized in coalbed methane development and recycling coal gas for multipurpose uses.

Monday 16 April 2012

Police detain 21 in alleged coal mine coverup

Extract from ChinaDaily.com.cn

Police have detained 21 people suspected of trying to cover up the death toll from a coal mine accident.

Ten miners were killed and another remains missing after a flood on Friday at an illegal coal mine in Changzhi, Shanxi province.

The owner of the Shanfu Coal Mine originally told authorities that nine workers were trapped.

However, police later discovered that 11 workers were in the shaft when it was flooded with 2,500 cubic meters of water at about 1 am.

About 30 professional rescue workers were sent to the scene, along with nine ambulances and 200 technicians. All of the water had been pumped out of the shaft by 8 pm on Saturday.

The mine's owner and its manager were among those detained, and authorities froze the company's assets.

An official at the State Administration of Work Safety, who declined to be identified, said that under the regulations, concealing an accident that claims the lives of 10 people is punishable with a fine of 5 million yuan (\$76,000) and up to seven years in prison.

The administration said the mine did not have a valid production license.

Authorities were unable to confirm whether the mine was private or State-owned when asked by China Daily.

In a separate flooding incident in Henan province on Saturday, five miners were killed and six others remain missing.

The accident happened at 4 pm at a mine owned by Yulongyuantong Coal Mining Corp in Pingdingshan.

Authorities said 53 miners were working in the mine at the time and 42 managed to escape.

On Sunday night, rescuers were still pumping water from the mine and searching for the trapped miners.

According to the work safety administration, the flooding was caused when water flowed in from an abandoned pit. In this case, the mine was licensed.

Wang Shuhe, deputy director of the State Administration of Coal Mine Safety, led a specialized emergency rescue team to the site and supervised the rescue.

Yulongyuantong Coal is a subsidiary of the Henan Provincial Coal Seam Gas Development and Utilization Co, a large energy enterprise owned by the Henan government.

According to reports, 1,973 miners were killed in 1,201 coal mine accidents in China in 2011, with 1,391 of the deaths in small mines.

12 confirmed dead in NE China coal mine flood

Extract from ChinaDaily.com.cn

CHANGCHUN - Rescuers have retrieved the bodies of 12 colliery workers who died in last week's coal mine flood in Northeast China's Jilin Province, authorities said Monday.

Eight bodies were retrieved from the pit of the Fengxing Coal Mine in the city of Jiaohe early on Monday, 10 days after the accident, the local work safety bureau said in a press release.

The statement said that at least 20,000 cubic meters of water poured into the shaft on April 6. Of the 70 people working in the pit, 58 escaped.

Rescuers spent about a week draining flood water from the shaft before they were able to reach the first four trapped miners, all of whom were found dead, on April 13.

Fengxing was a licensed, privately-run mine.

Investigators said the flood water came from a neighbouring state-owned colliery.

In another recent mining tragedy, five miners were killed and four remained trapped in a flooded colliery pit in central China's Henan Province.

The flooding in the city of Pingdingshan was reported Saturday afternoon, and rescue work continued on Monday.

This week in mining accident history

17 April 1852

Craige colliery

Blackridge, Scotland, UK

Underground coal mine

1 killed by shaft bucket and drowned

Fatal Accident & Wonderful Escape – On the forenoon of Saturday last an accident occurred at one of the pits of the Craige colliery by which a man named Thomas King, a miner, near Clackmannan lost his life. The pit in which the accident happened is newly sunk, and for the last week or two the deceased, along with other two men, has been engaged in driving a mine from the pit bottom for the purpose of commencing regular operations. On the morning of the day on which the accident happened, an increase of water was observed which was communicated to the contractor for the sinking, about 9 o'clock, when the three men came up to breakfast. The contractor, it would appear, went down with the men after breakfast, and ordered them to desist working that day, and to clear away the loose coal. The contractor then ascended and no danger whatever was apprehended. Within an hour after a large quantity of water burst in upon the men from, as is supposed an old waste, which was not known to exist, and the pit was immediately filled to a depth of six or seven fathoms. The three men, however, after considerable struggling in the water, managed to lay hold of a bell rope, suspended from the top of the pit, for the purpose of giving signals. To this rope all three clung, raising themselves as the water increased, by which means they were enabled to keep their heads at least above water. The noise caused by the rush of water being heard at the pithead, a bucket was immediately sent down. In its descent it struck the deceased King on the head, causing him to quit his hold of the rope. The unfortunate man was never seen alive again. The other two had managed to seize hold of the bucket as it passed them in its descent, which carried them under the water to the pit bottom, but the engine was almost immediately reversed, and the bucket raised to the surface. One of the men had got into the bucket while he had hold of the other survivor by one of the legs his body hanging downwards. and they were

thus rescued. Both men were much exhausted, but shortly afterwards recovered, they are pretty severely bruised however. The body of the deceased was recovered on Sunday morning by means of grappling irons. [Falkirk Herald 22 April 1852]

Tuesday 17 April 2012

Namibia: Mines Chamber Orders International Probe

Extract from allAfrica.com, Namibia

THE Chamber of Mines will contract an international consultant to assess the state of health and safety at all mines in Namibia.

This comes after the third fatal mining accident so far this year.

Godfried Shikongo (40) was killed at the Otjihase Mine at about 13h00 on Friday after being struck on the head by a rock.

Veston Malango, chief executive officer of the Chamber of Mines, yesterday said Friday's fatality was the second one at Otjihase this year. Another Otjihase worker died in January, while Namdeb also recorded a fatality this year.

Malango said the number of deaths in the first four months of this year equal the three mine fatalities recorded during the whole of 2011.

"In an effort to strengthen its commitment to safety, the Chamber of Mines hereby announces that it will be contracting an internationally recognised expert consultant to review the state of health and safety in the entire Namibian mining industry."

After completing the probe, the consultant will make recommendations to the chamber, Malango said.

"In addition, the consultant will be tasked to carry out an international benchmarking exercise - the aim of which will be to compare the Namibian mining industry's safety standards and statistics to other first-world countries in which mining is a significant industry."

He said the findings would be made known to the public.

Malango urged all mines to cooperate with the investigation in accordance with Namibian health and safety regulations.

Joseph Iita, the Permanent Secretary in the Ministry of Mines and Energy, yesterday referred all enquiries to the chief inspector of mines, Mathew Amunghete, who was at the accident scene on Friday.

Amunghete declined to comment.

On Sunday, Police Deputy Commissioner Silvanus Nghishidimbwa said no foul play was suspected in the Otjihase incident but the investigation would continue.

In life-threatening mines, a high-tech safety net

Blogg extract from www.smartplanet.com



Photo based on the original by Jaroslaw Binczarowski.

Elko, Nev., is cowboy country. Every pair of Wrangler jeans and Justin boots I saw when I visited the town earlier this year was a reminder that I was in the heartland. But 30 miles outside town, as I toured the Newmont gold mine, I had the strange sense of being in another country.

The tour bus entered the mine on cocoa powder-colored roads and immediately began driving on the left side, as did all the vehicles. It is a safety precaution created so that the cabs of trucks are farther away from each other. In the event of a head-on collision — especially with the gargantuan Caterpillar trucks that stretch to two stories and haul 240 tons of ore around the mine — drivers would be less likely to be injured.

Every vehicle had a flashing green light on its roof, and there were orange flags on the back of pick-up trucks and vans, like the ones you'd see on a child's bicycle. Signs declared five mile-per-hour speed limits and warnings about protective clothing. Everywhere I turned, there were messages about safety:

“DANGER: Entering Blast Area”

“SAFETY: The measure of success”

Each afternoon at two o'clock, a blast occurs, fracturing thousands of tons of material, which is then carried away in haul trucks and processed. Thanks to the price of gold today, it's profitable for Newmont to mine a ton of earth even when it yields as little as two-hundredths of an ounce of gold.

On the tour, I peered into a gold quarry, about 1,500 feet deep and one-and-a-quarter miles across, and watched haul trucks snake down a path to the bottom. From my vantage point, everything looked orderly and harmless, like a giant Lego city. But even in surface mines like this, where the work happens above ground, there are countless ways that a poor decision, bad timing or relaxed standards could lead to fatalities.

On the evening news, we hear about big mining disasters, like the explosion at the Upper Big Branch Mine in West Virginia two years ago this month that killed 29 miners. But we are often unaware of the accidents and injuries that don't make headlines, not to mention the potential fatal occurrences, or PFOs in miner-speak.

There is an old adage that mining regulations are written in blood because so many come as a result of fatalities, like those at Upper Big Branch. In that particular case, the Mine Safety and Health Administration report, released in March, found that the mine operator provided advance notice of mine inspections, hid minor injuries, kept two sets of books and intimidated employees into not reporting hazards to the agency, known as the watchdog for miners. The report also made recommendations for regulatory changes.

But while Upper Big Branch experienced a worst-case scenario, industry experts say that American mining as a whole is taking proactive steps to improve working conditions. Much of this progress can be attributed to technology.

“The driver is to try to get to zero fatalities,” said David Clardy, senior vice president of Matrix, which sells communications and tracking mining technology. “If you look at mine deaths in the last 10 years— besides Upper Big Branch — they start to fall into [categories] like crushing machine death. And it seems like technology could help in these situations.”

Electronics in an extreme environment

The list of accidents that can occur in a mine is endless. The roof of a coal mine could collapse. Fires could start. Coal dust could explode. Large pieces of machinery could injure or kill a worker. Though automation is hardly a panacea, it has become a holy grail of sorts for mine owners. It can keep miners safer, increase productivity and open up new markets by reaching into areas of a mine that humans physically can't access.

“Really, any machine that's operating underground or on a surface mine is a candidate for automation,” said Tony Stentz, director of the National Robotics Engineering Center at Carnegie Mellon University, which is working on a number of mining-related projects. Stentz works with mines or equipment manufacturers that are seeking solutions to make their mines safer and more efficient.

Automation can move a conveyor belt, make a machine dig material or dump ore in trucks and direct a roof bolter to drill into the roof of the mine. Some machines are operated with a remote control, which addresses safety concerns by removing the person from the machine. The operator will often be above ground, sending commands down to the machine below and steering it remotely.

Other machines are partially or fully automated, so that it does the bulk of the work itself and merely reports back to a person monitoring progress on a screen. Cameras and sensors

can be used to “see” the mine, decide where to mine coal and guide the cutter head to engage the coal.

“The idea is that these are imaging sensors that provide data, which is automatically understood by a computer,” Stentz said. “There’s a lot of work in robotics in interpreting data from image sensors and understanding the environment around the machine so it can do what it needs to do, whether it’s driving safely or scooping material.”

Many machines are already being operated remotely and steered autonomously (relying on reflective devices to navigate), but Stentz said there are a number of innovations currently in the prototype stage, and the next five years will be critical for implementing technology.

Due to the extreme environment, and the tendency for things to break in a mine — an oft-repeated phrase is that a miner can find a way to break an anvil — Stentz said there is a lot of work going into developing electronics that are ruggedized. “We’re talking about environments that experience 100 Gs of shock,” he said. “Thermal extremes from –20 to 80 degrees Celsius. So if you know those specifications in advance, you can engineer something that can survive extreme environments.” The electronics must be housed in a way so that they’re protected but also so that they’re what Stentz calls “intrinsically safe” — they won’t ignite coal dust in the air or cause an explosion.

For all the good it does, automaton also means “there’s more stuff that needs to go through the process of ensuring it’s safe,” Stentz said. “Just because we’re adding automation doesn’t let us off the hook in that regard.” Nor is automation a cure-all. In fact, in some cases, it’s created deadly problems.

Unintended consequences

A continuous miner is a giant machine that boasts a large rotating drum with teeth and scrapes coal from the seam. It moves so quickly and efficiently that it can reach tons of coal a minute. Automating these machines years ago

made sense — not only did they remove the miner from the open cab, where there is a high concentration of dust, but they put him in a position where he could see better, resulting in fewer movements for the machine and, ultimately, increased efficiency. Still, between 1984 and 2001, 33 people were crushed or pinned to death by their own remote control continuous miner machines, according to the MSHA.

“Getting the guy out of the cab put him in a safer area, but then it caused some unintended consequences,” said Kenny Murray, vice president of operations for Alliance Coal, which owns 10 mines. Murray began his career in 1974 as a continuous miner operator in Pennsylvania and later became a mine supervisor and eventually an inspector for MSHA, before he began to oversee health and safety at Alliance. “These are big pieces of equipment being moved in a loud, very confined area with limited visibility,” he said. “They move quickly and pivot quickly.”

In response to the large number of fatalities, developers came up with a proximity detection technology that is installed on the machine to detect the presence of a person or piece of machinery within a certain distance of the continuous miner. They can be programmed to send warning signals and stop the machine altogether if the worker gets too close. MSHA has approved three of these systems and has proposed a rule for using proximity detection in underground coal mines that could be finalized this summer.

Matrix Design Group, a subsidiary of Alliance, developed a system that is being used by Joy Mining, one of the largest manufacturers of continuous miners. The SmartZone Proximity System uses triangulation formulas to determine where the remote control operator and other laborers are in relation to the machine — in a similar way that the Xbox Kinect uses motion sensors to gauge a user’s position.

The operator carries a remote control, and everyone working in the area wears a cell-phone-sized transmitter, which communicates information about that person's location. Receivers are located on each corner of the vehicle and, by using some complex algorithms, they can figure out how close the person is to the defined warning zone or stop zone.

Matrix tested the system in 2009 and started deploying units last year. Currently, half of Alliance's 10 mines have installed proximity detection systems on about 40 machines.

"It's not the technology that's difficult," said Matrix's Clardy. "It's the interaction. What you're doing is training the operator to not get too close. The hardest part is always changing people's behavior and getting a culture of safety." The trick, he said, is making sure the technology works well enough that the miners use it.

The safety culture

No matter how many bells and whistles are introduced to promote safety, those in the industry said that none of it matters if the culture doesn't change. A miner could decide not to wear the proximity detection transmitter, or a mine owner could skip a safety check. According to the Upper Big Branch report, in the 18 months before the explosion, there were 684 violations at the mine, and 56 of them were the result of the mine operator's failure to comply with mandatory safety and health standards.

Newmont, whose mine I toured, has an employee workbook with 16 pages of questions such as, "What have we done right when we are injury or incident free for a day?" The book addresses the Newmont Safety Journey, using words such as "awareness" and "ownership" of the safety culture.

"Mining has been around for a long time, and it's been done a certain way for a long time," said Wes Leavitt, Newmont's director of Health Safety and Loss Prevention. "We've evolved, but we still like to get our hands on things and get dirty. That will be one of our biggest hurdles to

overcome." Leavitt said mining will attract a different type of worker in the future — a good video gamer, he noted, would probably make a good remote control operator.

Much of the new technology aims to influence behavior. There's the Seeing Eye Machine, for instance, which Newmont is testing at its Phoenix mine. The device sits on the dashboard of the haul truck and can detect when a driver is starting to feel sleepy. "Not fatigue where you just fall asleep, but just micro sleeps where your mind's not completely engaged," Leavitt said. The machine looks into the driver's eye, and if it determines the driver is sleepy, the seat will vibrate. If it happens multiple times, the driver has to get out and talk to a supervisor. Leavitt said the Phoenix mine has seen a 90 percent reduction in fatigue-related events during the pilot.

Another technology that can affect miner behavior is the Personal Dust Monitor, which was designed by Thermo Fisher Scientific to measure what is called respirable coal dust, which causes black lung and is one of the biggest hazards in the industry. According to Mike Nemergut at Thermo Fisher, the dust breathed by miners is "orders of magnitudes" higher than what he sees in the worst cities in China.

Thermo Fisher essentially miniaturized a technology that it uses in instruments to monitor urban air quality around the world, and put it on a miner's belt. The device draws a continuous sample of air from the miner's breathing zone, then removes the larger particles and measures the dust collected on a filter. The monitor stores exposure information and updates the display every five seconds, which means miners can react in real time and move to a better area to lower their exposure. The monitor won't prevent someone from getting black lung, but it provides the information so a miner can take a couple steps toward a better ventilated area.

"Compared to what was on the market before [when dust samples were collected manually],

it's a game-changer," Nemergut said. "Can you imagine collecting a sample on the filter and then waiting two to three weeks for results?" The \$13,000 unit also provides cumulative readings throughout the shift and the week so a miner's exposure can be tracked by a safety officer. There are currently 400 units in operation, but Nemergut said 4,000 to 7,000 monitors will be deployed in the next three years, because MSHA is expected to finalize a rule requiring their use.

The bottom line

A "potential fatal occurrence" means that nobody was hurt, but these types of events are still reviewed as though they were disasters. "We apply the same rigor and process to the high potential events as we do the actual event," Leavitt said. "We put together an investigation team, which drills down into system failures and the behavior component. If something occurred, you ask five times why it occurred."

Leavitt said 75 to 90 percent of events have at least one basic cause associated with a behavioral aspect, such as someone choosing not to follow a procedure.

He said at Newmont, it's also customary to review events even when something happens at another mine. In 2010, two men were killed at a Barrick gold mine, also outside Elko, when a pipe broke and the miners fell down a shaft. "So we would have looked at whether we had a similar system set up and was there a mention of a safety system being bypassed," Leavitt said. "We talked to our guys. There's a reason these systems are in place."

Murray said there's no obligation to report what he calls near-misses — where an inch to the left or an additional second could have resulted in a serious accident or fatality. "But there's so much information to gain from these," he said. "We investigate them as seriously as we do an accident." Before Alliance miners go underground, at the coffee station, they check out a 42-inch plasma TV that updates them on news about accidents or potential events.

Naturally, some miners resist change, whether it's in the form of electronics or engines. But Murray said when it comes to efficiency, miners often embrace the new technology. "Coal miners want the biggest, fastest and strongest," he said. "Coal miners love to produce coal, and everyone wants to be the most productive. But they also want to be safe. A safe mine is a productive mine."

A productive mine also makes mine owners happy. Automation and technology help protect workers, but also increase efficiency and reduce the down-time associated with any accident.

"These are big machines, and they can make hundreds of dollars of revenue per minute," said Carnegie Mellon's Stentz. "So even if you just add some kind of technology to the machine to make it five or 10 percent faster, even if there's still a person there operating it, it has a tremendous impact on the bottom line."

Safety is a huge driver behind innovation, Stentz said. "But it's just one of many reasons that mining companies are pursuing automation."

By Melanie DG Kaplan, a contributing writer for SmartPlanet.

Wednesday 18 April 2012

NIOSH, MSHA discussing what to do with 70,000 potentially defective air packs in US coal mines

Extract from The Charleston Gazette, USA

CHARLESTON, W.Va. — Two years of testing have found a critical defect in a certain model of emergency breathing devices used in U.S. coal mines, but federal regulators have no immediate plans to remove the more than 70,000 air packs that could remain in use.

The SR-100 self-contained self-rescuers are belt-worn air packs about the size of three cake-mix boxes. They hold chemicals that help recycle exhaled breath, giving miners about an hour of oxygen and, hypothetically, time to seek refuge or escape from a fire or explosion.

The Charleston Gazette says the National Institute for Occupational Safety and Health issued a report this week concluding the model manufactured by CSE Corp. of Monroeville, Pa., failed too many tests and therefore has a critical flaw.

NIOSH says five out of 500 randomly sampled SR-100 units had oxygen starters that failed. Under federal rules, no more than three in 500 can fail for NIOSH to remain confident.

The failure rate, the report said, means the units "no longer conform to the minimum requirements for the certification."

CSE "could not identify a systemic cause or otherwise confine the failure to within certain lots," the report said. "Therefore, the failure could exist among all field-deployed units."

CSE President Scott Shearer said Wednesday the company voluntarily stopped production of the SR-100 when internal quality-control teams identified problems. It has since redesigned the starter system and replaced the device with the SRLD model.

"We changed out the guts of the unit," Shearer said, "and made further improvements to internal and external parts so the engine is beefed up."

Sago Mine survivor Randal McCloy said some SR-100s failed after the 2006 explosion that trapped and killed 12 of his co-workers.

The new model holds more chemicals, he said, and provides more oxygen at a faster rate.

NIOSH said it's discussing the problem of the old air packs with the Mine Safety and Health Administration, which didn't immediately comment.

In 2010, CSE said it had recalled about 4,000 suspect units but later acknowledged it hadn't ordered coal companies to stop using them.

Shearer reiterated his commitment to working with the federal agencies but said he's had no directives from either so far.

He also said the number of SR-100s in use is now likely fewer than 70,000. Some have likely been replaced with competitors' devices, he said, while operators have likely removed others because of "normal wear and tear and attrition."

The old units are believed to have failed in at least one major mine disaster.

Sago Mine survivor Randal McCloy told investigators that several SR-100s his crew was carrying failed after a 2006 explosion that trapped 13 men. Only McCloy survived the 40-hour wait for rescuers.

The device has long been the focus of complaints from miners who worried that it either started slowly or wouldn't start at all.

Thursday 19 April 2012

WA: Man injured in mining accident

Extract from The West Australian

A 22-year-old man has been injured in an underground mining accident in Leonora this afternoon.



A man is wheeled into Royal Perth Hospital after an accident on a minesite in Leonora. Picture: Ben Crabtree/The West Australian.

The man received injuries to his throat and chest after being struck by an object about 3pm.

He has been taken to Royal Perth Hospital for treatment by the Royal Flying Doctor Service.

The accident occurred at the King of the Hills mine about 35kms north-west of Leonora.

The man is an employee of contractors Byrnes, St Barbara Managing Director and CEO Tim Lehany said. The mine is owned by Melbourne-based gold miner St Barbara.

Mr Lehany said the incident did not cause a rock fall.

There would be no formal investigation by the Department of Mines and Petroleum at this stage, a spokeswoman said.

Sunday 22 April 2012

Miner Trapped in Cave-In at Peru Mine Rescued by Colleagues

Extract from Latin American Herald Tribune

LIMA – The informal miner who was trapped in a cave-in at a southeastern Peruvian mine earlier this



week was rescued Thursday by colleagues

dispatched to the site from other mines in the region.

Medardo Gutierrez had been partially buried in the cave-in of a portion of the underground Luicho gold mine, located in the district of Colca, in Paucar del Sara Sara province.

Although Gutierrez suffered some bruises and cuts in the accident – the head of the Luicho Association of Informal Miners, Egidio Yauyos, told officials – after his rescue he was pronounced in “good” physical shape although he received first aid from paramedics from the Buenaventura mining company, that firm’s vice president of operations, Francois Muths, told Efe.

A team of eight miners from Buenaventura and a similarly-sized group from the Hochschild mining firm early on Thursday morning traveled to the mine to help rescue Gutierrez, a process that took almost all day, Muths said.

After the rescue, the miner will receive a medical exam at the hospital in Pausa to determine the extent of his injuries, according to RPP radio.

Energy and Mines Minister Jorge Merino also had dispatched his deputy minister, Guillermo Shinno, to Colca to coordinate the rescue effort.

The accident in Colca comes a week after Peruvian President Ollanta Humala personally led the rescue of nine men who spent five days trapped underground at a mine in the southern region of Ica.

The government has pledged to address safety issues surrounding informal, or unregulated, mining in Peru, especially in the southern part of the Andean nation.

Five miners die in Brazilian elevator accident

Extract from New Zealand Herald

Five miners died on Saturday in an elevator accident at an emerald mine in northeastern Brazil.

The elevator the workers were riding in crashed down its shaft from a height of 100 metres when the steel cable broke that pulled it up and let it down.

The accident occurred in a mine worked by gemstone artisans on the Carnaiba mountains in the Pindobacu municipality, some 400km from Salvador.

The elevator was a fairly primitive structure consisting of a small cabin suspended from a cable, the daily A Tarde reported.

Kentucky Darby mine operators have yet to pay for 2006 blast that killed 5

Extract from Louisville Courier-Journal

WASHINGTON — Nearly six years after an explosion killed five miners at Kentucky Darby Mine No. 1 in Harlan County, the operators have not paid nearly \$700,000 in civil fines and interest fees for safety violations connected to the accident.



Tracy North, left and Tilda Thomas speak during a 2008 hearing in Lexington, Ky., about Paris Thomas Jr., one of those killed in the 2006 Darby Mine blast. Tilda Thomas is Thomas' widow; North is his daughter. / James Crisp/Special to The Courier-Journal

Kentucky Darby admitted liability for the unpaid fines under an agreement finalized in January 2010 in the U.S. District Court for the Eastern District of Kentucky in London, according to court documents.

And the federal Mine Safety and Health Administration has referred Kentucky Darby's

delinquent fines to the Treasury Department for collection. MSHA also obtained a 20-year lien on Kentucky Darby property in March 2010, federal court records show.

Meanwhile, Ralph Napier, a former operator of the Darby Mine, is still mining coal in Kentucky as the vice president of companies operating at least two active mines in Harlan County, records at the Kentucky secretary of state's office show.

Those two operations — K & D Mining Inc., which runs Mine No. 17, and Neco Energy Inc., which runs Mine No. 2 — currently owe at least \$637,000 in delinquent penalties for about 400 safety violations, according to MSHA and a Courier-Journal analysis of the agency's data on citations and penalties.

MSHA chief Joseph Main said in an interview that as a result of The Courier-Journal's findings, his agency is taking a close look at the connections among Kentucky Darby, K & D and Neco.

"They are on our radar screen. ... Mine operators should not be allowed to walk away from their responsibilities for this," Main said.

Collecting unpaid fines is a major problem for MSHA and the federal government.

Coal mines, metals mines, quarries and related operations under MSHA's jurisdiction have run up \$71.3 million in overdue fines over more than a decade, according to an analysis of data through 2011 by the office of U.S. Rep. George Miller, D-Calif. Delinquent penalties owed by active coal mines and mines that operate intermittently totaled \$23.8 million.

"It is unconscionable that in the 21st century, coal mine operators can kill or maim miners without suffering any repercussions, not even the payment of inadequate fines for their admitted safety violations," said Tony Oppeward, a former state and federal mine-safety official.

Now an attorney in Lexington, Ky., Oppeward represented the spouses of four of the Kentucky Darby victims.

The ability of people connected to Kentucky Darby to keep mining while failing to pay massive sums of fines underscores the weakness of federal mine-safety laws, survivors of the dead miners, mine-safety advocates and lawmakers said.

"There's been no justice. These men lost their lives, and nothing's been done," said Priscilla Petra, 49, wife of George William "Bill" Petra, one of those killed in the 2006 Kentucky Darby explosion.

"It really upsets me," said Mary Middleton, 37, wife of Roy Middleton, another of the miners killed. "Sometimes I feel like it was in vain, like no one cares."

Napier did not respond to a request for comment. The attorney for Kentucky Darby did not respond to a request to comment.

The phones at Neco Energy's Mine No. 2 were not answered. A guard who answered the phone at K & D said he did not know where to reach mine officials.

A mine-safety-reform bill, sponsored by Miller and Rep. Lynn Woolsey, another California Democrat, crafted in consultation with MSHA, includes a provision that would give the federal government the power to shut down mines that run up delinquent fines. The measure is stalled in the House.

The power to issue closure orders to scofflaw operators "has a lot more up-front impact in the ability to collect fines," Main said. "Mines that operate and rack up fines and do not pay their bills need to be held accountable under the law."

Asked about the Kentucky Darby case, Miller said in a statement that "it's unacceptable that mine operators are allowed to operate 'business as usual' while owing millions of dollars in outstanding fines stretching back years."

"It's clear that MSHA needs better tools to collect overdue fines for safety violations and needs to make sure that operators aren't able to dodge fines if they open new mines under a different name," he said.

The chairman of the House Education and the Workforce Committee, Rep. John Kline, R-Minn., recently said "all options remain available" regarding enactment of new safety measures. Responding to the outstanding Kentucky Darby fines, Kline said in a statement that "mine operators have a responsibility to protect their workers and follow the law."

"If mine operators are found guilty of violating health and safety standards, they must accept the consequences of their actions without any unnecessary delay," he said.

Under MSHA policy, civil penalties are considered delinquent if they are overdue for 180 days or more. After that, MSHA refers the unpaid penalties to the Treasury Department for collection. That is where the Kentucky Darby fines remain. Fines incurred by the other mines connected with Napier also have been referred to Treasury.

Treasury officials declined to comment, saying the agency does not discuss a specific case of delinquent penalties but would inform MSHA of any developments. When possible, the Treasury Department can collect unpaid fines by intercepting any government funds due the debtor, such as tax refunds or contractor payments.

Kentucky Darby's outstanding fines were among the largest among mining companies in the nation last year, according to a survey by Mine Safety and Health News.

Kentucky Darby Mine No. 1 in Holmes Mill was rocked by a blast at 1 a.m. on May 20, 2006. MSHA investigators determined that methane gas from an improperly built seal leaked into an area where miners were using an acetylene torch to cut some metal roof straps. The torch ignited the gas.

MSHA said Kentucky Darby "did not observe basic mine safety practices and ... critical safety standards were violated."

Three of six major violations showed "reckless disregard" for safety, according to MSHA, while

three others showed a high degree of negligence by the company.

In addition to Bill Petra, who was 49, and Roy Middleton, 35, the victims were Jimmy Lee, 33; Amon "Cotton" Brock, 51, the mine foreman; and Paris Thomas Jr., 53. A sixth miner, Paul Ledford, survived.

Kentucky Darby never resumed operations after the accident, and the mine was sealed in November 2006.

The abandonment of the mine raised concerns at the time among safety advocates and miners' families that efforts to collect penalties would be more difficult. State and federal regulators insisted that would not be the case.

Oppegard said his worries have proved well-founded.

"If Mr. Napier or any other operator can't pay outstanding mine-safety fines, then they should not be allowed to operate another mine," Oppegard said. "We all know what will happen if there is a disaster at Mr. Napier's current operation. Just like at Kentucky Darby, he won't pay a penny in fines, and he'll go elsewhere in Harlan County and open another mine under the name of a new company.

"That is not the way the system is supposed to work. The message it sends to coal miners and their families is, 'You're nothing but a worthless coal miner. Your life has no value,'" he said.

That is how Middleton and Petra feel.

"It's so disturbing, we just can't understand it," said Middleton, who has 13- and 19-year-old daughters and lives near Vedra, Ky. "You can't get no clear answer to why" the Kentucky Darby owners are still running mines.

Petra, a second-grade teacher who lives in Pineville, Ky., has a 24-year-old son and 16-year-old daughter. She said it makes her angry that the operators of Kentucky Darby remain in the mining business.

"You can be on the highway and have an accident and take someone's life, and you have

to pay for that," Petra said. Coal operators are supposed to take safety precautions ... but you can skip all that and cause the deaths of these men and you can get away with it."

MSHA records show that both K & D Mining and Neco Energy are headquartered at the same address in Speedwell, Tenn. Jack H. Ealy is listed as the president of both companies in state records.

K & D Mining and Neco Energy both were given mining licenses in 2011 by Kentucky's Office of Mine Safety and Licensing, the agency's records show.

K & D Mining, which started its Harlan County operations in February 2010, has at least 223 delinquent fines totaling \$579,000, including interest, for safety violations back to March 2010, according to MSHA.

Napier's other company, Neco Energy, has 167 delinquent fines totaling \$58,723 for safety citations back to November 2010. Neco started operating that mine in October 2010.

Kentucky's Office of Mine Safety and Licensing granted mining licenses to K & D and Neco. Outstanding federal fines do not affect that licensing, according to agency spokesman Dick Brown.

"The Office of Mine Safety and Licensing, as well as the other agencies within the Energy and Environment Cabinet, do not have the authority to shut down mining operations for unpaid MSHA penalties," Brown said. "The Cabinet believes MSHA's best remedy for collecting unpaid penalties is through the courts."

Mining dictionary

A guide to coal mining terminology

B

Beneficiation The treatment of mined material, making it more concentrated or richer.

-Ed