Mining Safety: What Lies Beneath?

An accident that trapped 33 miners at the San José mine in the Atacama Desert has raised serious questions about safety standards in the Chilean mining industry. bUSiness CHILE asks how dangerous the country's mines really are and what is being done to make them safer.

by Gideon Long

p the dirt road that leads to the San José gold and copper mine, a group of around 40 miners come walking. Dressed in dark blue overalls and hard hats, they appear ready to start their shifts. But these men have no work to do. Since August 5, when a tunnel collapsed at the mine trapping 33 of their colleagues below ground, they have been idle.

At the head of the group is Evelyn Olmos, the president of the local miners' union. She explains why they are there.

"We're living in uncertainty," she says. "We're still under contract to the company that owns this mine and, while that's the case, we can't find work elsewhere. We need the government to intervene."

Olmos, whose union represents over half of the 140 miners employed at the mine, says the accident was not an isolated incident. Something similar could happen at other Chilean mines at any time, she warns.

"We've been talking to unions elsewhere in the region and they say the safety standards at their mines are just as bad as here," she says. "This was an accident waiting to happen."

The accident, and the enormous media interest it has generated, has shone a harsh spotlight on safety standards at Chile's mines. It has reminded Chileans that mining in this country is not just about Codelco, BHP Billiton, Anglo American, Barrick and Xstrata – huge companies with relatively good safety records. It is also about the small and medium-sized companies, dotted around the Atacama Desert, where miners often scratch out a living in precarious conditions.

Risky Business

Mining is, of course, an inherently risky profession and, thankfully, the days are long gone when the industry claimed hundreds of Chilean lives each year.

Safety standards have improved, so much so that Miguel Ángel Durán, president of Chile's Mining Council which groups 15 private multinational companies and state-owned Codelco, makes the following remarkable claim: "Taken in its entirety, mining has the lowest accident rates of any industry in the

country including construction, banking, retail, agriculture and transport."

The statistics support his claim. According to Chile's Department of Social Security, there were nearly 234,000 accidents in the workplace last year and, of those, just 1,289 were in mining compared to nearly 39,000 in manufacturing and more than 26,000 in construction. For every 100 workers in the mining industry, there were 2.2 accidents, compared to 5.7 in construction and 7.2 in agriculture and fishing.

But those figures tell only half the story. Firstly, as Durán acknowledges, mining accidents tend to be more serious than those in other sectors. When a shop worker or a bank clerk suffers an accident, they might sprain a wrist or twist an ankle. When a miner suffers an accident, he risks ending up dead.

Secondly, the claim masks huge discrepancies within the industry. Codelco and the multinational companies represented by the Mining Council all boast better-than-average safety records. But, as Durán accepts, "within the industry there is clearly a



sharp contrast between safety standards at big companies and those at small and medium-sized firms."

Even so, the overall downward trend in mining accidents in Chile is encouraging. According to the National Geology and Mining Service (Sernageomin), the state body tasked with regulating the country's mining industry, there was an average of 0.41 deaths in Chilean mines for every one million hours worked during the 1980s. By the 1990s that figure had dropped to 0.28 and over the past decade to 0.13. During the past 10 years, the industry has averaged 34 deaths per year, lower than in any previous decade.

Like-for-like comparisons with other countries are difficult, but Durán says Chile's safety standards are better than elsewhere in Latin America and on a par with those in Australia, Canada and the United States. Figures from the U.S. government, howe-

ver, suggest that Chile still has some way to go before that is the case.

According to the U.S. Mine Safety and Health Administration (MSHA), there were 0.06 deaths per million hours worked in U.S. mines last year - less than half as many as in Chile. The number of miners killed in the United States and in Chile last year was almost identical - 34 in the U.S. and 35 in Chile. But when you consider that twice as many people work in the industry in the U.S. than in Chile, it is clear that Chilean safety standards lag behind. Between 2000 and 2009, the number of injuries at U.S. mines fell by 41%. In Chile, it fell, but not so sharply.

Andrew King, national coordinator for health and safety at the massive North American trade union, United Steelworkers, says the equipment, knowledge and skills at Chilean mines are similar to those in Canada and the United States, and so are the safety standards companies are supposed to adhere to.

"The difference lies in how serious countries are about making employers comply with those standards," said King, whose union has over a million active and associate members in Canada and the United States.

King recently visited the San José mine as well as several other Chilean mines, and is deeply critical of their safety standards.

rtunately, there's a culture of non-regulation, non-enforcement and non-recognition of workers' rights, making it open season for mining companies to do whatever they want."

But safety is less of a concern at Chile's big mines than at the little ones. Sernageomin divides Chile's mining companies into four categories: category A companies have around 400 workers or more; category B between



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"We've been fighting to improve safety at this mine for years,"

> Evelyn Olmos, San José miners' union

80 and 400; category C between 12 and 80; and category D, less than 12. In 2009, companies in the first group directly employed some 27,000 people and only one of them was killed in a mining accident. At the other end of the spectrum, category D companies employed just over 1,000 people and 13 of them were killed. The contrast could hardly be starker.

One significant factor in Chile's accident rate is the price of copper. When the price is high, miners - some of them with only limited experience - head out into the desert and the foothills of the Andes in search of the mineral. Mines long-since closed because they could no longer turn a profit suddenly find they can. They reopen, often with no better safety standards than those in place on the day they closed. It is no coincidence that in 2007 and 2008, at the height of the boom in copper prices, there were more deaths in Chilean mines than in any other year during that decade.

In 2007, when the copper price averaged a record US\$3.24 per pound, 40 miners died in accidents. In 2008, when copper was US\$2.88/lb, the death toll hit 43. In contrast, the safest year in the history of Chilean mining was 1999, when there were just 0.09 deaths for every million hours worked. It would be nice to think that this was due to improvements in safety procedures, but the main reason is that in that year the average copper price fell to just 72 cents, it's lowest level in over 10 years, as a consequence of the Asian crisis. For the industry's smaller players, whose safety standards tend to be the poorest, there was simply no incentive to mine copper.

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"We're reviewing all regulations in the mining industry," Laurence Golborne, Mining Minister. (right)

Making mining safer

So, what is being done to improve safety at Chile's mines?

In the wake of the San José accident, the government announced what it described as "a complete overhaul" of Sernageomin. This includes more than doubling the number of mine inspectors from 18 to 45 by the end of next year, and increasing its budget from US\$24.7 million to US\$57.6 million. The government said this should ensure that, on average, mines in Chile are inspected every eight months, an improvement on the current situation.

"This accident happened because maybe measures were not taken properly," Mining Minster Laurence Golborne told bUSiness CHILE in an interview at the San José mine. "We're reviewing all regulations in the mining industry including the inspection of safety measures, particularly in small and medium-sized mines."

In addition to reorganizing Sernageomin, President Sebastian Piñera has established a commission to look into safety standards at Chilean workplaces, not just in mining but across the economy. The commission has 90 days to come up with proposals to improve safety and is due to report its findings on November 22.

"The commission is examining three basic areas: inspection, standards and prevention," said Maria Elena Gaete, the commission's executive secretary.

"It's clear that inspection is an area of particular concern."

She said the commission is talking to workers and employers across the country to get their thoughts on how safety can be improved, but will also look abroad. It has already held talks with officials from the International Labor Organization (ILO), and will talk to experts from the European Union and the United States.



"Chile lags behind developed nations in terms of safety standards"

> Maria Elena Gaete, President Piñera's Commission on Safety in the Workplace



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"Chile still lags behind developed nations in terms of safety standards, but not by much," Gaete said. "In mining, the reason the accident rate is so low is precisely because so many people in the industry are employed by foreign multinationals that have the very highest safety standards."

But union official Andrew King questions the commission's validity.

"It's an expert panel that excludes worker representatives, so it's hard to see how it will have any credibility or make any progress in terms of protecting workers' lives," said King.

The Mining Council's Durán suggests a change of culture is needed, and that Chile's mining companies should realize that a safe mine is a successful mine. Not only do companies have a moral responsibility to protect their workers, they also have a business incentive, he said.

"The more that you spend on safety and training, the better your workforce



becomes," said Durán. "Accident levels fall and your business also improves."

Advances in technology can help too. One good example is the introduction of remote-controlled trucks at some Chilean mines. These monster machines, developed by Japanese company Komatsu, rumble along dirt tracks carrying tons of mineral. But they have no drivers – they are operated remotely by technicians sitting safely in their offices. By taking wor-

kers out of the front line, this kind of technology helps save lives.

One area where improvement is needed is in the training of subcontracted workers who have become an increasingly large part of the workforce, especially when demand for copper is high. In 2007, for example, when business was booming, many mining companies hired extra workers, some of whom with only limited experience. Unsurprisingly, they were often



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the ones who got into trouble. During that year, of the 1,912 workers involved in mining accidents in Chile, more than half – 1.040 – were subcontractors.

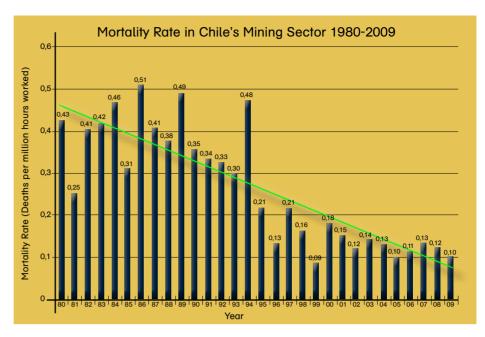
"Safety standards for full-time employees in Chilean mines are good, but that's not always the case when it comes to service providers," said Durán.

Increasingly, however, mining companies are demanding the same safety standards from subcontractors as from their own workers. "The gap is closing," added Durán.

Canary in the coal mine

Mining in Chile remains a dangerous business. In the first eight months of this year, 31 miners died in accidents caused by cave-ins, electrocution, explosions, asphyxiation and falls from heights.

Fortunately, everything went according to plan at the San José mine and the rescue effort was successful so the names of the 33 miners who



were trapped there for more than two months will not be added to this lamentable death toll.

But, even so, the accident will have major repercussions for the Chilean mining industry. Never have the eyes of the world been upon the sector in such a way.

"Companies are frightened, they're

frantically reviewing their safety standards and trying to improve them," union leader Olmos said. "It's just a shame that it took something as dramatic as this to make them do it." bUSINESS CHILE

Editor's Note: At the time this issue went to press, the rescue operation at the San José mine was successfully completed. This story has had a happy ending for the families involved but safety in Chilear mines remains

Gideon Long is a freelance journalist based in Santiago. He also works for the BBC.

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