Tougher standards for shotfirers - MinEx

Bernie Napp - Thu, 02 Aug 2018

New Zealand's procedure for issuing explosives licences is "slack" and needs upgrading to reduce the risk of injury or death, MinEx CEO Wayne Scott says.

The Extractives Industry Advisory Group to WorkSafe had recommended previously an approved code of practice for drilling and blasting in the sector, but nothing has happened, he says.

The Australian standard is used in New Zealand by default.

"Certainly, an explosive handler's licence appears to be very easy to obtain and are held by many, despite whether or not they are competent to use explosives."

Scott's comments were made in the context of a presentation on new blasting management software by Orica Mining Services at the QuarryNZ conference last month in Hamilton.

He says Australia's "very good code of practice" could be easily adopted in New Zealand.

"There should also be established competencies, experience, and other requirements to ensure drilling and blasting is conducted by competent people."

Orica's view

Craig Pledger, Orica's NZ territory manager agrees New Zealand's requirements are too lax.

"There are people who have been issued shotfirers' licences who should never have been given them. With not much training, next thing, they are an approved shotfirer."

The legal requirement for certification is currently a one-day course, and this focuses mainly on legislation.

At Orica, it takes people about two years of internal training and experience, including a week-long course, to be promoted to shotfirer, Pledger says.

"They need to track 10 blasts, then signed off by a trained certifier."

Orica has three shotfirers at the Stockton coal mine, one casual employee who is a trainer in the field, four shotfirers in Auckland, and two others, of total staff of 24 working in New Zealand.

An Approved Handler's Certificate provides for a person to transport, handle and use explosives.

"The test certifier needs to set out what the trainee is able to do. This normally extends to transport and handling but not the use of explosives. Final use is the final step."

A Controlled Substance Licence is a lesser form of approval, that also requires approval from police that the holder is a "fit and stable person". The CSL has a duration of five years, as does the AHC.

"If you have got it and are active, it is easy to get it renewed," Pledger says.

Orica's scrutiny when on-selling explosives

Pledger says many people in New Zealand hold a Dangerous Goods Licence, a lesser form of approval again, but not a CSL or AHC.

Orica only sells explosives to people who hold the requisite licences, and can demonstrate they have certified magazines, to safely store hazardous substances.

The problem is, however, that an approved handler could potentially sell explosives to anyone.

Blockchain to track and trace detonators

Orica is planning to implement a blockchain mid-2019 to track and trace every detonator it lands in New Zealand and delivers to clients.

Already each electronic detonator has an individual bar code and Exel detonators are in bar coded boxes. There are 60 – 180 detonators to a box, and most Orica sales are by box. A pallet may contain 100 boxes, or 6,000 to 18,000 detonators.

When a shot is set to fire at a certain time, the identification of every detonator is captured by an online recording system, in Orica's case, its new software, BlastIQ.

Blockchain is an electronic mechanism to verify every step in a supply chain, transparently, and could potentially document sale-purchase steps beyond Orica.

"We are heading that way," Pledger says, "it's the next step around where we are going."

In the future, once Orica's sales are detonated, the documented units will be removed from Orica's records.

Orica would in theory be able to trace the fate of detonators that are not used by customers but sold to someone else.

"If they onsell it, you are supposed to have cradle-to-grave record keeping. The end-user should have paper that says these detonators went in this blast; the product is now destroyed."