an update from WSN on YOUR Mine Rescue program

Issue #17 May 2012

Earthquakes and Tornado

'Non-traditional' mine rescue response

Inmet rescuers volunteer services in devastating quake

ripple of emails from Inmet Mining Corp. head office in Toronto last Oct. 23 marked the start of a major mine rescue response by its Çayeli Mine in northeast Turkey to an earthquake measuring 7.2 on the Richter scale.

"I started getting emails from Canada, our safety people and management, asking if we were OK," says Iain Anderson, Çayeli's general manager, who was spending the Sunday working at home. About 30 minutes earlier he had noticed the light fixtures move, but his wife had not noticed anything.

The quake occurred at about 1:40 p.m. centered near the city of Van, approximately 600 kilometres southeast of the mine. News accounts reported more than 900 buildings had collapsed in the city, the death toll started at 100 confirmed dead and quickly climbed, as did the number of injured which started in the thousands.

"As soon as I saw the images and the size of the destruction, I had our people contact the government" to offer mine rescue personnel and equipment, says Anderson, who sees the response as simply "being part of our corporate responsibility and our responsibility to the community."

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Rescue efforts last October in Van, Turkey, above, and last August in Goderich, Ontario, **Supplied Photos**



Sifto Mine Rescue leads response to Goderich tornado

ess than a week before a deadly F-3 tornado touched down at Sifto Canada Corp.'s Goderich operation last summer the topic of tornados arose during a review of the salt mine's emergency plan.

"A tornado was one of the things we happened to discuss," says Alan Johnston, the mine's safety coordinator. "One guy asked 'Why?' Because Goderich had only two tornados in its history and the last one was 100 years ago."

Three days later, about 4 p.m. Sunday August 21, a tornado with winds reaching 280 kilometres an hour and gusting up to 300 touched down at Sifto, killing longtime employee Norm Laberge, 61, who had been in a loading boom, an extendable arm, loading a ship when the storm struck.

"He said, 'I'm going to shut down. We have some weather coming in," Johnston says, but the fast moving tornado hit before he could reach safety. Elsewhere, though the storm caused extensive damage, no other employees were injured, possibly because on a Sunday the mine has minimal staff.

Shortly after the storm, Johnston received a call from George Mondoux, the mine's manager of safety, "who told me we had to get out to the site right away because we had a tornado."

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We need you!

If you have comments about the newsletter, or suggestions for future articles, please contact Susan Haldane at WSN, (705) 474-7233 ext. 261, or susanhaldane@workplacesafetynorth.ca



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Jackhammers are not a standard piece of rescue equipment, but at least one Çayeli Mine Rescuer was so happy to have them available to dig through the concrete rubble of the Van earthquake, he offered to kiss them when the team returned home.

Photos courtesy Inmet Mining

Team's 4-day effort saved two youths

Five-storey student dormitory reduced to 3 metres of rubble

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A team of 10 volunteers was mobilized within 30 minutes. They left about 8:30 p.m. from the nearby city of Rize on a bus with 30 other rescue workers for the 12-hour journey to Van, accompanied by a company pickup loaded with equipment, supplies, food and water.

Çayeli's mine rescue unit, like those in other Inmet mines, uses the Ontario Mine Rescue model, and received high marks as a "very capable emergency response group" from OMR emergency services specialist Shawn Kirwan during a visit in 2010.

When the team arrived on Oct. 24, they were assigned to work through a collapsed student dormitory, looking for survivors. "It was a five-storey building but it was reduced to a three-metre pile of rubble," says Anderson, but one that still contained life according to rescuers from Azerbaijan.

"Their (the team's) mining experience was very valuable, because they were one of the few rescue teams that knew anything about shoring and cribbing," he says. They were also well equipped with jackhammers, portapower hydraulic spreaders and lifting bags, and the cribbing material they brought.

For more than 24 hours, the team tunneled and dug through the debris, floor-by-floor, working in confined spaces and threatened by aftershocks, before reaching a



teenage boy. Audible contact was made with another person under the debris and 16 hours later the team rescued a second youth.

Throughout the rescue effort contact was maintained with the mine, and the well-being of the team, which had not been tested in emergency conditions before, was closely monitored, says Anderson.

The physical and emotional stress they faced was intense, says Mehmet Eğriboyunoğlu, Çayeli's safety health environment manager. "They worked in extremely harsh conditions, and they didn't have much chance to rest." They slept in shifts in the bus and walked several kilometres to wash themselves. Although the temperature was normal during the day, at night they had to fight with cold.

"We considered sending another team to relieve them and bring the first team home," says Anderson, "and they said, 'No'. They wanted to see the job done."

See "Through" Page 4

Wreckage, debris hampered efforts

Army of agencies follow cue of mine rescuers

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"Mine rescue volunteers were starting to arrive or were already there on their own" by the time he arrived, Johnston says. "We have a great mix of committed members on our team. They're volunteer firefighters, long-time members."

A scene assessment revealed that Laberge had been killed, his body trapped in the heavy wreckage of the boom and storm debris, Johnston says. "Another miner crawled through the debris and found he was deceased. That was confirmed by an OPP officer and the coroner."

But one miner was stranded underground because the storm had knocked out electrical services, and communication with him had been lost after the storm ended.

"He had to take priority," says Johnston

Jeff Sowerby, a Sifto mine rescue volunteer, who first heard about the tornado on the radio and then received a message from home to "head to the mine as soon as possible", was already working with a team to recover the miner.

"I didn't really worry about it," says Sowerby, when he first heard of the tornado, but he didn't hesitate at the callout. "I just came to the mine."

Sowerby and the team, keeping a weatherwatch for a second tornado or severe storm, set up an IPC, an independent personnel carrier, to proceed down the shaft nearest to the miner's last known location.

"We were probably heading down in about 20 minutes," Sowerby says. And despite a few challenges, the lack of power, no voice communications, no bell signals, and a lack of familiarity with the shaft which had recently been reconditioned and not previously used in a training exercise, the missing miner – who made his way to the shaft on his own – was on surface 30 minutes later.

Primary attention returned to La-



Four cranes were required to lift the wreckage of a loading boom, above, but rescuers still had to get close to clear debris and cut through tubular steel and angle bar.

Photos courtesy Compass Minerals



berge and the logistics to free him of the wreckage.

"The boom was a massive structure," says Johnston, and a fire department from a neighbouring municipality simply said "they were not prepared to deal with that type of operation."

"About 1 a.m. I sent the mine rescue team home to get some rest and told them we'd reconvene at 7," the safety coordinator says.

By early morning a small army of agencies and services were on site, including Toronto Urban Search and Rescue, the Ontario Provincial Police forensics unit, the Goderich Fire Department, and an Emergency Medical Services' ambulance.

Ontario Mine Rescue officer Tim Taylor, who had arrived the previous day, was there, as were mine rescue volunteers from Windsor Salt as part of a mutual aid agreement. They came well-equipped. "They had very good extrication equipment – hydraulic spreaders and cutting tools" needed to cut away at the mass of tubular steel and angle bar.

Two 500-tonne cranes and two smaller cranes had arrived, and so had three tractor-trailer loads of cribbing. "They had travelled all night to get here."

See "Task" Page 4

Mine Rescue First Aid updated

When it comes to first aid, Charlie Burton wants everyone to remember that there's Standard First Aid, and then there's Standard First Aid – Mine Rescue.

The Mine Rescue Handbook requires Mine Rescue volunteers to be holders of a St. John Ambulance Standard First Aid Certificate (Mine Rescue) or equivalent, says Burton, mine rescue program supervisor.

Over the years and with the involvement of different first aid training providers at different operations, the distinction became cloudy and unclear, he says. But no more – Ontario Mine Rescue and St. John Ambulance have reviewed and updated the Mine Rescue designation.

The 18-hour course clearly lists what first aid training modules volunteers must receive to qualify as mine rescuers, Burton says. The list includes cardiopulmonary resuscitation for adults (CPR-A) and automated external defibrillator (AED), but excludes modules covering less likely emergency situations such as childbirth, and poison, bites and stings.

What is more important is what has been included – modules that have been missing or not adequately covered in some training situations, he says. These include cervical spine immobilization, full body spinal immobilization, KED/lifting and carrying, fracture management, and more. Like most modules, the additional modules include demonstration and practical components.

Instead of receiving the Standard First Aid manual, volunteers should receive the First Aid Reference Guide and the Medical First Responder Student Manual to better cover the content of the additional modules.

The training need not be delivered by St. John Ambulance, but the content must include all of the required St. John modules.



Mine rescuers from Inmet Mining's Çayeli mine remove rubble from a collapsed building following an earthquake in Van, Turkey.

Photos courtesy Inmet Mining

'Through Hell and back'

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In turn Anderson and his team kept all mine personnel at Çayeli Bakır and head office in Toronto regularly updated. Everyone was eager for news.

After four days in Van, the rescue operation had turned into a recovery operation, but before returning home the mine rescuers were directed to stop at a hotel outside the quake zone to bathe, rest and eat.

After making the 12-hour journey back to Rize, the team was thoroughly debriefed, and each member was offered psychological counseling and received a personal thank you from Anderson. "They went through Hell and

back in those four days. It really shows the quality of those employees that they all volunteered and they all stayed until the end."

After the debriefing the team was dropped off by bus at the foot of the entrance bridge in Madenli to the mine. As they walked across the bridge, they were greeted with cheering and applause by 250 fellow Çayeli employees.

"As tired as they (the team) were, as emotional as they were, we gathered all the employees to welcome them home. It was very emotional for them and it was very emotional for our employees. They are very proud of the mine rescue team."

Task 'done with dignity'

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"It was a huge coordination task," says Johnston, "but they all worked following the cues of our mine rescue team," all of whom knew Laberge, a 30-year employee at Sifto, many as longtime friends. The debris, including propane tanks, was cleared away, the steel boom cut, braced, and lifted.

"It was a long hard day," he says, and when they finally reached Laberge to lift him and take him away, "it was done with dignity and by his friends."

Though it didn't specifically cover

tornados, "I think the emergency plan we had allowed us to handle the crisis," says Johnston, who nonetheless has a list of lessons learned that are being addressed.

More than six months later, the incident and the loss is still fresh.

"When you look out to where that loading boom was, you remember that Norm's not there," says Johnston.

"We can't thank enough everyone for the support we had and for how well these agencies worked together and with us to reach Norm (Laberge)."

An update on your Ontario mine rescue progam





Tomorrow's Mine Rescuers

Not every person Ontario Mine Rescue trains is a miner, or even works at a mine. Every year Ontario Mine Rescue officers offer Introductory Mine Rescue Training to students in mining-related programs at several Ontario universities and colleges. This spring, above and left, MRO Bruce Hall trained a group of Cambrian College students, while, below, MRO Wally Adler trained a group of Queens University engineering students.



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About the Mine Rescue Newsletter

MR newsletter is published three times per year by Workplace Safety North (WSN). WSN is funded by workplaces in the province, through the Workplace Safety and Insurance Board.

The information in this publication is accurate to the best of our knowledge. However, the association assumes no responsibility or liability for the accuracy or sufficiency of this information, nor does it endorse any product mentioned herein with the exception of those produced by Workplace Safety North.



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