



Link Line



an update from **WSN** on **YOUR** Mine Rescue program

Issue #23 Spring 2014

Fulfilling a Responsibility

Assessing risks helps protect mine rescuers

► **R**isk assessment, soon to be introduced to mine rescue in Ontario, is nothing new to mine rescuers in Australia.

“We have a responsibility to deploy mines rescue teams with appropriate controls for the environment they are entering, and for the job they are being asked to do,” says Steve Tonegato, state operations manager of Mines Rescue for Coal Services Pty. Ltd. in New South Wales.

Australia, a world leader in implementing risk assessment in occupational health and safety, was also among the first countries to implement a risk assessment process for its mine rescuers.

Mine rescuers, or brigadesmen, have used a risk assessment process for years, Tonegato said, because “there is a significant legal imperative to do so. Our occupational health and safety legislation is risk-based, requiring employers to have



Knowing that mine rescuers voluntarily enter hazardous environments doesn't lessen the responsibility to look after their health and safety, says an Australian mine rescue official.

effective risk management and control.”

As well, as an organization delivering specialist mine rescue training, “We (Mines Rescue) always knew that mine rescue teams enter unusually hazardous environments,” he said, but this does not “lessen our responsibility to look after the

health and safety of our brigadesmen.”

As it became apparent that the principle of managing safety risks was not being applied in a formalized, systematic manner when Mines Rescue teams were deployed, a process was developed.

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Hola! New editions of handbook issued

The Handbook of Training in Mine Rescue and Recovery Operations did not become Ontario Mine Rescue's bible over almost 85 years of continuous use without regular revisions.

And this year the handbook is not only undergoing a revision, but also two reincarnations.

To start, the book has been translated to and printed in Spanish, as well both the current English version and the new

Manual de Capacitación en Rescate Minero y Operaciones De Recuperación are now available as ebooks. And finally, the 15th edition of the handbook is now underway.

The Spanish version of the 14th English edition, published in 2011, has been in the works for a year. Translation was completed in the fall of 2013, layout and design work in February, and printing in March this year. The Spanish version resembles the English in appearance, though the year has been removed from

the cover, and the coil binding is clear rather than black.

The Spanish edition was prepared with the financial support of Goldcorp Inc., which not only has three operations in Ontario, but seven operations in Mexico, and Central and South America. The book retails for \$30 on Workplace Safety North's webstore at

www.workplacesafetynorth.ca/products.

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We need you!

If you have comments about the newsletter, or suggestions for future articles, please contact Ken Sitter at WSN, (705) 474-7233 ext. 234, or kensitter@workplacesafetynorth.ca



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Will that be electronic or print?

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Both the English and Spanish editions of the current handbook are now available as ebooks in epub format from Workplace Safety North's webstore at www.workplacesafetynorth.ca/products.

Free ebook previews of the first chapter, both English and Spanish, are now available at www.workplacesafetynorth.ca/minerescue.

The full ebooks retail for \$15 on the webstore, and site licences are available from Ontario Mine Rescue (contact Ken Sitter) for operations that wish to provide epub editions to all their mine rescuers and other staff.



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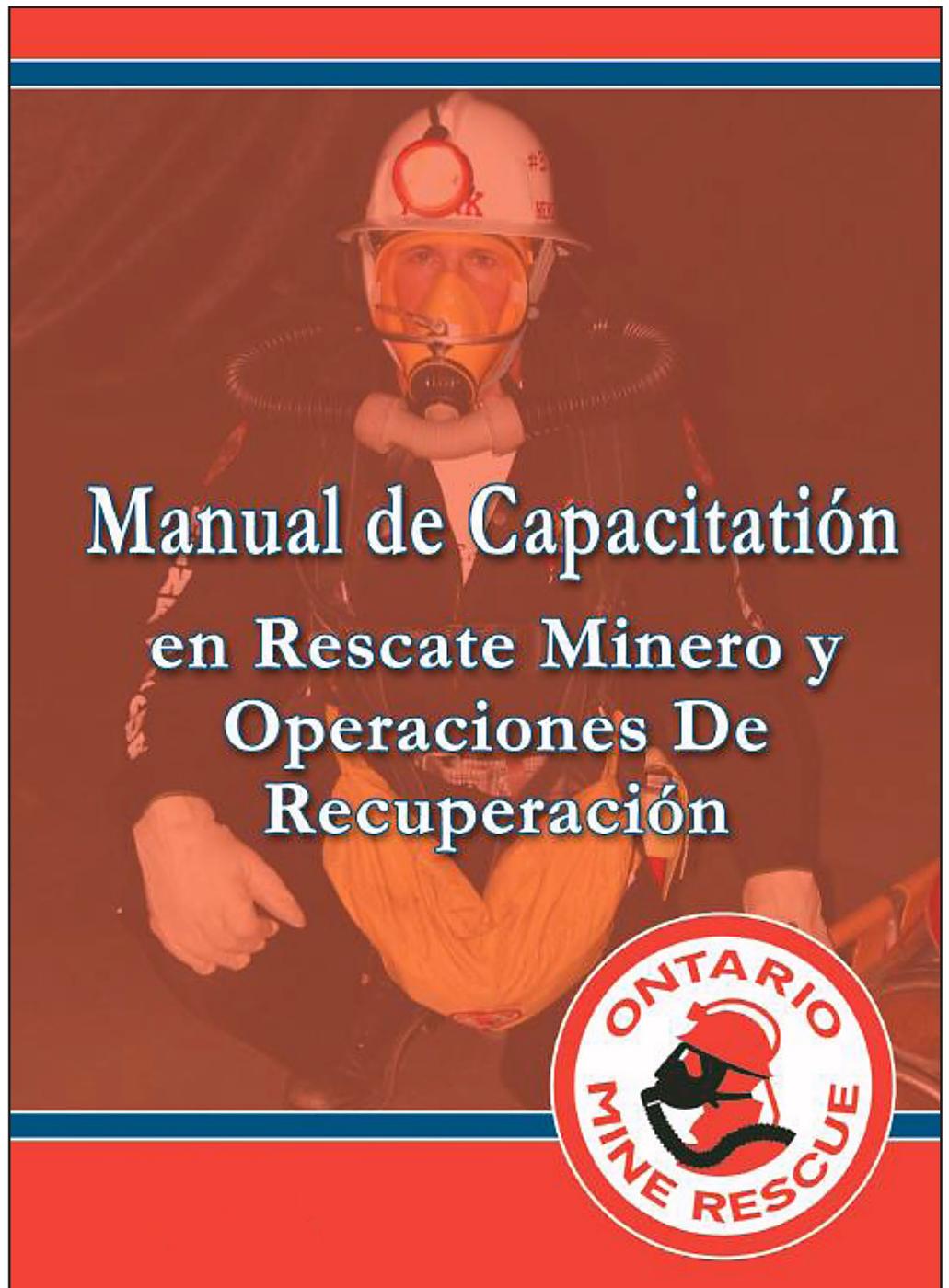
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At this time the ebooks are only available through purchase.

The latest print edition of the handbook, due in September, will include new material on the MX6 iBrid, the Kestrel 3500, and updated information on heat stress.

The results and comments from a recent online survey of mine rescuers about the handbook are being reviewed for possible changes. The new edition will be issued as an epub several months after the print version has been released.



Handbook gets high marks from mine rescue volunteers

Survey says – mine rescuers like the handbook.

That's not a surprise to Ontario Mine Rescue, which regularly receives positive comments on the size, content and presentation of the printed book. But a recent online survey finally gives substance to those comments.

The survey conducted in the last two weeks of March received 49 responses, 80 per cent from active mine rescuers, and the majority of the balance from retired mine rescuers, offered an evaluation on various aspects of the book, as well as suggestions to improve the book.

Many respondents said they liked the book the way it is.

The handbook's coil binding, synthetic cover, paper quality, physical size and text size, all rated "Good", approximately four out of five, while the lowest rated feature – pictures, still rated "Acceptable" or three out of five.

When asked what topics should be expanded or included in a new edition, Special Equipment and General Emergency Practices topped the list at 30 per cent and 27 per cent of respondents respectively. Respondents asked for more details, including pictures or illustrations, on certain equipment.

When asked what topics could be shortened, approximately 15 per cent said Mine Gases and 14 per cent said Ontario Mine Rescue History. Comments focused on removing or reducing information on "exotic" gases.

Approximately 40 per cent thought that an index of charts and photo captions would make the handbook more useful, while about 30 per cent indicated a glossary and 25 per cent a general index.

The survey results and comments are being reviewed and considered as work proceeds on the new edition of the handbook.

Process identifies hazards, controls

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“Without a formal tool to assist us in properly identifying hazards to operational teams, we were not fulfilling our responsibility of doing what is ‘reasonable,’” he said. The process, which occurs each time a mine rescue team is called out, is straightforward.

The senior Mines Rescue official on site must complete documentation that he has gained sufficient information about the “the anticipated environment and team task, that he has implemented suitable controls, and that he has briefed the team and that they understand these controls,” said Tonegato, who has worked for Mines Rescue for 18 years.

“The senior Mines Rescue official is ultimately responsible that a proper assessment is done,” the former coal miner said. But the official does not do the assessment in isolation. He will call upon relevant personnel and expertise, including mine employees to do a thorough assessment.

“All Mines Rescue permanent employees



Steve Tonegato

are trained to a nationally accredited risk management standard,” Tonegato said.

“All mines rescue brigadesmen receive some level of risk management training as part of their ‘normal’ mine working life, in addition to exposure and training in Mines Rescue risk assessment and deployment protocols.”

The risk assessment process was “extremely well-received” by everyone at all levels, he said. Industry and Mines Rescue have a compatible approach and an easy integration because managers and workers use a risk assessment framework in their normal operations.

“Mines Rescue brigadesmen are especially appreciative of the confidence that they gain from having a full understanding . . . of the incident, and in particular, what controls are in place, and what specific actions they need to undertake to ensure their safety.”

The risk assessment process is “extremely” effective, the Mines Rescue official said. With more than 500 brigadesmen in the New South Wales, and approximately 200 team underground deployments a year, the last injury, a minor one, occurred five years ago.

“Recently, we conducted over 130 team deployments to recover a mine, in 100 per cent irrespirable atmosphere, in extremely hot and humid environment without a single injury to Mines Rescue brigadesmen.”

Risk assessment tool in works for Ontario Mine Rescue

Mine rescue activities are not without risk, so Ontario’s Mine Rescue’s Technical Advisory Committee (TAC) is developing a tool to help mine operators reduce those risks.

The Emergency Response Risk Assessment (ERRA) tool, written and currently being pilot tested by a TAC subcommittee, is designed to help mining operations to manage the risks faced by their mine rescue volunteers in emergency response situations.

The tool, in development for more than a year, will help to identify, assess, and control risk sources or hazards mine rescuers may face, and increase the likelihood of a quick, effective emergency response.

“It was well worth it,” said TAC chairman Tim Maloney, who as superintendent of Services Emergency Management is on a working group to pilot the tool at Vale.

The process, which is not yet completed at Vale, requires thought about potential hazards and controls that may not normally receive much attention, Maloney said.

Many Ontario mines have already adopted a risk assessment program as part of their regular approach to work and/or health and safety activities. For these operations, the tool can be adapted to

their specific risk assessment program. For mines without a risk assessment program, the tool can be used as a standalone specifically for emergency response.

“Every mine has unique features that need to be addressed,” said Charlie Burton, mine rescue program supervisor, so the tool is designed to be adaptable.

A key part of the ERRA tool is a risk register or inventory – a comprehensive list of more than 150 possible hazards that a mine rescue team may encounter during an emergency response.

The hazards are divided into categories, such as equipment, human resources, travel and communications, as well as various types of emergency response such as fire and fall of ground.

Mines can add or delete hazards from the inventory, and develop controls specific to their needs.

Once the risk assessment is completed, mines should review or re-assess the results on an annual basis, and use it as a reference during emergency responses.

Though the tool includes a simple guide on how to conduct a risk assessment, and risk assessment courses are available through Workplace Safety North, the committee is considering other options to help mines implement an Emergency Response Risk Assessment.

Microscope becomes spotlight

The research microscope is turning into a spotlight for Ontario Mine Rescue as volunteers in this year’s Timmins and Kirkland Lake district competitions are involved in two different research projects.

As Dr. Mary Waller of York University continues to collect data for her research into communications in dynamic non-routine situations, Dr. Michaela Kolbe of the Swiss Federal Institute of Technology in Zurich will collect data on team debriefings.

Video recordings of the debriefings following the competitions will be forwarded to Dr. Kolbe, who will analyze the interaction during the debriefing.

The Swiss researcher will collect data on what information is shared, how it is shared, and when the research is completed, provide Ontario Mine Rescue with guidelines on effective debriefing.

The mine rescue data will be compared against data collected from similar debriefings involving critical incident teams in other high risk areas, including medicine and the nuclear industry.



Open wide! A trainer guides a mine rescue volunteer using a Hurst eDraulic Spreader during a demonstration exercise at the 2013 Provincial Mine Rescue Competition.

eDraulic rescue equipment added to OMR tool kit

Teams at last year's Provincial Mine Rescue Competition got to "play" with them, but within the next year all mine rescuers will have the opportunity to train on new battery powered hydraulic rescue tools.

One set of the tools – Hurst eDraulic SP 310E2 Spreader, S 700E2 Cutter and R 411E Ram – will be available from each mine rescue station this fall, said Charlie Burton, mine rescue program supervisor.

The tools, which will replace the hydraulic spreader currently in use, will give mine rescuers more options in responding to non-fire emergencies, particularly incidents requiring extrication equipment.

The eDraulics, which have the same force as traditional hydraulic tools, are

powered by lithium ion batteries that eliminate the need for hydraulic hoses and a compressor, allowing quicker deployment, quieter operation, and less clutter in an incident scene.

Each battery has an operating life of approximately 60 minutes. Each tool will be supplied with two batteries and charger unit, and the batteries are interchangeable between tools.

The tools were used in a demonstration and training activity in last June's competition, and were popular among the mine rescuers, including those volunteers experienced in the use of hydraulic tools. Under direction of a trainer, each team dismantled the passenger compartment of a minivan during the 30- to 40-minute activity.

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