

Battery Electric Vehicle Safety in Mines Symposium

Assessing risks and managing hazards of newer technology

Agenda February 15, 2024

8:00 – 8:30 a.m.

Registration opens

8:30 – 8:45 a.m.

Welcoming remarks

Sam Barbuto, Health and Safety Specialist, Workplace Safety North

Shawn Poland, Vice President of External Partnerships and Strategic Enrollment,
Cambrian College

Steve Gravel, Manager, Centre for Smart Mining, Cambrian College

8:45 – 9:30 a.m.

Environmental Impacts: A Comparative Study on Noise and Air Quality in Diesel and EV Mobile Equipment

Anthony Griffiths, Business Development Manager, MacLean Engineering

Battery electric vehicle mobile equipment for underground mining is still quite new, and we still have a lot to learn. MacLean Engineering has been a leader in bringing EVs to the underground mining sector since 2015. With more than 100 BEV units sold and operating, MacLean continues to test, validate, and refine its design.

This presentation shares some of the testing results and field operating data recently gathered in terms of noise, air quality (elemental carbon), and respirable dust generation. All testing was conducted by third parties. The discussion includes what these results mean for both diesel and EV units, and also talks about next steps.

9:30 – 10:15 a.m.

Industry Battery Electric Vehicle Equipment Fires – Case Studies

Norm Ladouceur, Corporate Manager of Health and Safety, Agnico Eagle Mines

Learn how the Macassa Mine in Kirkland Lake has managed BEV equipment fires. This includes fires on BEV equipment as well as batteries in storage. Fire events will be described along with investigation recommendations and steps taken to move forward to ensure the use of best management practices when dealing with BEV and batteries, including relationships with original equipment manufacturers.

10:15 – 10:45 a.m.

Networking break



10:45 – 11:00 a.m.

Remarks

Michelle Boileau, Mayor of Timmins

11:00 – 11:45 a.m.

Plugged In and Prepared: Understanding Training Needs for Electric Mobile Mining Equipment

David Lyon, Mechanical Engineer and President, Zero Nexus

Several Canadian underground mines are global leaders in the roll-out of battery electric vehicles (BEVs) for drilling, loading, and hauling operations in recent years. However, the adoption of new low-carbon technology has not been without challenges, and ensuring the supply of a highly trained workforce will help accelerate the uptake of heavy-duty BEVs in Canada and abroad. This presentation will identify new training opportunities and industry initiatives underway to address the gaps.

11:45 - 11:50 a.m.

Remarks

Paul Lefebvre, Mayor of Greater Sudbury

12:00 – 12:45 p.m.

Lunch and networking break

12:45 – 1:30 p.m.

Powering Up: Safely Creating a Battery Electric Vehicle Mine

Gertjan Bekkers, Vice President of Mines Technical Services, Torex Gold Resources
Mike Mayhew, Founder, Mayhew Performance

This presentation discusses the safety considerations of BEV equipment, mine infrastructure, and operations support. Torex Gold Resources is building the Media Luna mine in Guerrero, Mexico. Notably, this mine will be powered by a primarily electric fleet consisting of production, auxiliary and personnel equipment. Few mining projects have made the courageous decision to implement BEV equipment as the core fleet. The presenters will identify crucial safety considerations for large scale BEV implementation.

1:30 – 2:15 p.m.

Mining the Fuel for the Electric Vehicle Revolution and Ontario's Growing Supply Chain

George Pirie, Ontario Minister of Mines

Learn about the importance of the mining industry to the transition to electric vehicles and how Ontario is becoming part of the growing domestic supply chain. As a northern



Ontarian and former mayor of Timmins, Minister George Pirie was appointed as Minister of Mines in June 2022. Prior to entering politics, George was a senior mining executive with over thirty-five years of experience in the industry both domestically and internationally. George has served on the Mining Association of Canada, the Ontario Mining Association and was also the co-chairman of the Ontario Mineral Industry Cluster Initiative.

2:15 p.m.

Closing remarks

Sam Barbuto, Health and Safety Specialist, Workplace Safety North
Steve Gravel, Manager, Centre for Smart Mining, Cambrian College

2:20 – 3:00 p.m.

On-site tour of Cambrian College Electric Vehicle Research Lab

Steve Gravel, Manager, Centre for Smart Mining, Cambrian College