One-Day Symposium: Battery Electric Vehicle Safety in Mines

Assessing risks and managing hazards of new technology

Wednesday, February 12, 2020

8:30-8:45 am

Welcome

8:45-9:30 am

Battery Fleet Management to Achieve Daily Production

Mike Mayhew, Integration Manager, Kirkland Lake Gold / Mayhew Performance

Over 80 percent of the overall production at Macassa Mine comes from battery-powered fleet equipment. The mine has over 42 pieces of production and development battery equipment and 350,000 proven hours. Mayhew will share his experience and knowledge as the Mine Superintendent of Macassa Mine, and how he achieved 2000 tons per day by maximizing the fleet of equipment and managing the maintenance team.

9:30-10:30 am

Battery Electric Vehicles in Underground Mining: A Case Study in Theory and Practical Terms

David Jacques, Vice President, Engineering, MacLean Engineering & Marketing Co. Ltd.

MacLean Engineering along with many other OEMs have embarked for several years on the shift from diesel to battery electric power sources for underground mining. What started as theory has quickly evolved into several practical cases where battery electric vehicles are proving themselves to be as good or better than advertised. Along with those success stories have come important lessons that together provide context in the pursuit of a greener future for the industry.

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10:30-11:00 am

Health and Networking Break

11:00-11:45 am

Battery Electric Vehicle Specification: Development, History and Intent

Alain Landry, Mobile Equipment Specialist Projects and Steve Holmik, Mobile Equipment Contracts Specialist, Glencore Sudbury INO

This presentation offers a brief introduction to the history, identification of the need, intent, and path going forward regarding the development of battery electric vehicle specifications. The specifications have been developed over the last two years with input from multiple industry stakeholders and version 1 is due for release shortly.

11:45-12:45 pm

Lunch

12:45-1:30 pm

Ontario Mine Rescue: Emergency Response to Battery Fires

Dan Rulli, Mine Rescue Officer / Consultant for the Southern District of Ontario, Ontario Mine Rescue

This presentation outlines the hazards and risks for mine rescue teams responding to battery fires in underground mines in Ontario. Modern battery and electric powered technology are progressing at an unprecedented pace in the quest to reduce traditional fossil fuel emissions in mines. The unpredictable nature of the new and old battery chemistries when they fail and their locations within heavy machinery and confined space environments pose several new health and safety risks to volunteers. Ontario Mine Rescue has identified the need for awareness and training to keep responding teams safe and knowledgeable.

1:30-2:00 pm

Bow-Ties and Battery Electric Vehicles Underground

Trevor Rickwood, Ergonomist – Occupational Health, Vale Ontario Operations

The bow-tie format can support multi-stakeholder analysis and understanding of potential Material Unwanted Events. This presentation will describe two experiences with large multi-disciplinary teams using bow-ties to analyze potential MUEs involving battery-electric vehicles in underground mines.

2:00-3:00 pm

Industry Panel: Battery Electric Vehicle Safety in Mines

Symposium speakers discuss battery electric vehicle safety in mines. Your participation is encouraged in the question and answer session, as well as in the general discussion between the panel and the audience.