

Top primary root causes for incidents involving battery electric vehicles (BEV)

***Thermal runaway events can result in unintended or adverse effects.**

As identified by workers, supervisors, and employers in the Ontario mining industry through Ministry of Labour, Training and Skills Development-facilitated root cause analysis workshop in partnership with Workplace Safety North.



Processes: Inadequate maintenance processes



Measures: Ineffective company operator and maintenance procedures



Measures: Current lack of CSA standard for BEVs



Tools and machines: Improper live troubleshooting on issues with BEV machines



Processes: †Ineffective management of change on new equipment



People: Operator lack of training on BEVs



Tools and machines: Energy sources creating potential for electric shock



Culture: Lack of education and understanding of BEV safe use



Processes: Misuse of new BEV equipment

Culture: Rushed implementation of BEV use

Measures: Lack of common core training standards for BEV use

People: Improper or unclear work delineation for electricians and maintenance personnel

Environment: Inadequate battery storage

*In batteries, thermal runaway describes a chain reaction in which the battery releases energy in the form of heat, once started can be very difficult to stop. Thermal runaway begins when the heat generated within a battery exceeds the amount of heat that is dissipated to its surroundings. When thermal runaway occurs, it causes a rapid temperature increase, resulting in uncontrolled heat with the potential of fire and undesired consequences.

† Effective Management of Change involves review of all significant organizational changes to ensure an acceptable level of safety will be maintained after the change has been implemented.

Overview of Joint Health and Safety Committee certification training

Focus on workplace-specific hazards - JHSC Part 1, 2, and Refresher training

JHSC Certification: Part 1

(Disponibile en français)

This mandatory course provides participants with an understanding of how to recognize, assess and control workplace hazards, the rights and duties of certified members, and how to conduct effective workplace inspections and incident investigations. Online self-paced e-learning also available.

JHSC Certification: Part 2

Focusing on the concepts of recognition, assessment, and control of hazards, and evaluation of the hazard controls, participants learn how to apply these concepts to a minimum of six hazards relevant to their own workplaces. In addition, learners practise drafting action plans and recommendations for the employer.

By the end of the course, participants will:

- Review material covered in Certification Part 1
- Understand the hazard-related concept of recognize, assess, control and evaluate (RACE)
- Understand key hazards specific to the sector
- Use various tools to help recognize, assess and control hazards, and evaluate hazard controls
- Understand the role of the Joint Health and Safety Committee in relation to the Internal Responsibility System.

JHSC Refresher Training

(Disponibile en français)

Certified members of a joint health and safety committee are required to take Refresher Training within three years of becoming certified, and every three years thereafter to maintain their certification.

Failure to meet this requirement may result in revocation of a member's certification status by Ontario's Chief Prevention Officer.

This CPO-approved course reviews core elements of the Part 1 and Part 2 Certification program.

Also available

WSN Training Programs for Mining Supervisor Common Core

- OHS Act and Mining Regulations
- Ground Control - Underground
- Incident Investigation
- Introduction to Safety Programs
- Manage Employees
- Mine Ventilation - Underground
- Occupational Health and Hygiene
- Planned Inspection and Observation
- Practise Effective Communication
- Prepare for Emergencies - Underground

Other recommended training

Duly Diligent Mining Supervisor

Supervisor Drug and Alcohol Awareness Training

About Workplace Safety North

Your health and safety partner

An independent not-for-profit, Workplace Safety North (WSN) is one of four sector-based health and safety associations in Ontario.

Headquartered in northern Ontario, WSN provides province-wide Ministry-approved workplace health and safety training and services for the mining and forest products industries.

With health and safety specialists located across the province, WSN and its legacy organizations have been helping make Ontario workplaces safer for more than 100 years.

A leading provider of health and safety training and consulting, businesses call upon WSN for expert advice and information.

For more information, please contact your WSN Health and Safety Specialist or visit workplacesafetynorth.ca



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