



Hilton Toronto Airport Hotel, Ontario, Canada  
October 2 – 4, 2018

**SUNDAY, SEPTEMBER 30, 2018**

**09:15** Field Trip to Goldcorp's Borden Mine Project, North Eastern Ontario; vehicle leaves conference hotel at 9:15 for Chapleau, Ontario, and returns on Monday, October 1 by 20:00

**MONDAY, OCTOBER 1, 2018**

**17:00 - 19:00** CONFERENCE & WORKSHOP PRE-REGISTRATION & NETWORKING

**18:00 – 22:00** EXHIBIT ROOM SET UP

**TUESDAY, OCTOBER 2, 2018**

**07:30** CONFERENCE REGISTRATION AND BREAKFAST

**08:30** SESSION 1: CONFERENCE OPENING CEREMONIES:

*Welcome: John Stekar (CEP Ltd.) MDEC President*

*Scholarship: J.P.Ouellette (M-K Power Products), Co-Chair MDEC Conference*

*Introduction of Keynote Speaker: Jozef Stachulak (Mirarco)*

**Keynote Address:** Nanoparticle Emissions from Engines and their Health Effects from the Viewpoint of Engineer, *Professor Jan Czerwinski, Director Laboratories for IC-Engines and Exhaust Emission Control (AFHB) (University of Applied Sciences, Biel-Bienne, Switzerland)*

**Organization:** *David Young (Natural Resources Canada), Co-Chair MDEC Conference*

Canadian occupational burden of cancer project: Results for diesel engine exhaust, Paul Demers and *Victoria Arrandale (Occupational Cancer Research Centre, University of Toronto)*

**10:00** COFFEE BREAK

**10:30** SESSION 2: PANEL- Developing Innovative Strategies for Improving Safety and Lessening DPM Exposure to Workers in Mines - A Global Focus

**FACILITATOR: J.P. Ouellette (M-K Power Products)**

- *Brian Huff, Chief Technology Officer (Artisan)*
- *Jim Trench, Manager Technical Marketing (BHP Singapore)*
- *Joan Wills, Technical Executive Director (Cummins)*
- *Samantha Espley, Director, Base Metal Technical Centre (Vale)*

**12:00** LUNCH

**13:00 SESSION 3: ONTARIO MINERS ZERO IN ON INNOVATION**  
**CHAIRPERSON: Philip Bousquet (OMA)**

Presentation by winners of the Ontario Mining Association initiatives on Target Zero + and MINED:

- Northern Mined Operations, *Liam Anderson, Anthony Farrugia, and Michael Janakaraj (Laurentian University)*

- A Lasting Impact, *Shivam Sharma (Laurentian University)*

- Better Built Belts, *Curtis Dykstra, James Fortune, Samuel Grant, Ryan Mahon, and Jeff Wright (Queen's University)*

A comparison of approaches for simulating DPM over one hour in underground mines, *Hongbin Zhang, Lorrie Fava, and Ming Cai (Laurentian University, MIRARCO Mining Innovation), Nick Vayenas (Laurentian University), and Enrique Acuña, Escuela de Minas (Universidad del Desarrollo, Santiago, Chile)*

**14:30 COFFEE BREAK**

**15:00 SESSION 4: MONITORING and DIESEL ENGINES**  
**CHAIRPERSON: Brent Rubeli (CanmetMINING)**

In-use emissions measurements of off-road diesel engines, *Aaron Conde (Environment Canada)*

Tier 3 final off-road retrofit program - In-use compliance testing, *Paul Grylls, Joe Aleixo, Derek Hooey, and Inderpreet Sran (DCL International Inc.)*

Diesel emission options for underground mining hard rock vehicles, *Trent Kapene (Caterpillar)*

**16:30 ADJOURNMENT**

**16:30 – 18:30 RECEPTION & NETWORKING**

**WEDNESDAY, OCTOBER 3, 2018**

**07:30 REGISTRATION AND BREAKFAST**

**08:30 SESSION 5: DIESEL EXHAUST CONTROL**  
**CHAIRPERSON: Evelyynn Stirling (Cummins)**

**Keynote Address:** BHP's commitment to manage diesel exhaust to as low as technically feasible – the science and the possibility, *Dr. Rob McDonald, Vice President Health and Hygiene (BHP Billiton, Melbourne, Australia)*

MSHA Diesel in underground mining, *Jeff Moninger (MSHA)*

**10:00 COFFEE BREAK**

**10:30 SESSION 6: DIESEL PARTICULATE FILTERS**

**CHAIRPERSON: John Stekar (CEP)**

Retrofit DPF Implementation at Goldcorp – Hoyle Pond Mine, Patrick Lessard, Steve Levesque and Lindsay Harvey (Goldcorp)

The promise of an improved work environment and miner safety in underground mines, *Michael Mazzuca (T.F. Hudgins)*

Controlling diesel particulate matter through filtration, *Ralph Deayton (Mammoth)*

Innovation of DPF's from on/off road to underground mining, *Stan Mack (Johnson Matthey)*

**12:00 LUNCH - introduction of sponsors and award of draw prizes**

**13:00 SESSION 7: DIESEL VERSUS ELECTRIC VEHICLES**

**CHAIRPERSON: Kristie Tarr (CanmetMINING)**

Heat Generation in Battery Electric Underground Haul Trucks, Brian Huff (CTO, Artisan Vehicle Systems Inc.)

Economic benefits for using electric and low emission vehicles in a VOD system, *Gary Li, (CanmetMINING)*

Battery vs diesel - Underground LHD's direct comparison of heat generation, *Jay Armbrurger (Caterpillar) and Chris McGuire (Hatch)*

*Impact of Fast Charging on NCA cells, Bapi Surampudi (Southwest Research Institute)*

**14:45 COFFEE BREAK**

**15:00 SESSION 8: OCCUPATIONAL HEALTH & MDEC PLENARY CONSULTATION**

**CHAIRPERSON: Cheryl Allen (Vale)**

Occupational disease action plan (ODAP) and collaboration between system partners, *Kevin Hedges, (Occupational Health Clinics for Ontario Workers Inc.)*

Exposure of underground miners to diesel particulate matter in the United States, *Aleksandar Bugarski and J. Drew Potts (NIOSH)*

*Borden Gold: Mine of the Future: Update, John Mullally (Goldcorp)*

**MDEC Plenary Consultation**, David Young (Co-Chair MDEC Conference)

Summary of comments from MDEC 2017 survey

Review of MDEC 2018

Plans for MDEC 2019 and Final remarks

**16:30 ADJOURNMENT**

**THURSDAY, OCTOBER 4, 2018**

**07:30 – 08:00 WORKSHOP REGISTRATION & BREAKFAST**

**08:00 – 12:15 WORKSHOP “BATTERY TECHNOLOGY – LITHIUM ION CELLS”**

**13:15 – 16:30 WORKSHOP “DIESEL ENGINE TECHNOLOGY AND DPF STRATEGIES & GUIDELINES”**