



Hilton Toronto Airport Hotel, Ontario, Canada
October 8 – 10, 2019

SUNDAY, OCTOBER 6th, 2019

09:15 Pre-Conference Field Trip Cummins Engine Plant, Jamestown New York, USA; Bus leaves conference hotel at 9:15 for DOUBLETREE by Hilton, Jamestown, and returns on Monday, October 6 by 17:00

MONDAY, OCTOBER 7, 2019

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

18:00 – 22:00 EXHIBIT ROOM SET UP

TUESDAY, OCTOBER 8, 2019

07:30 CONFERENCE REGISTRATION AND BREAKFAST

08:30 SESSION 1: CONFERENCE OPENING CEREMONIES:

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

Scholarship: *Cheryl Allen (Vale), Co-Chair MDEC Conference*

Introduction of Keynote Speaker: *Evelynn Stirling (Cummins)*

Keynote Address: "Characterization of Emissions from New Technology Diesel Engines", Rashid Shaikh, Ph.D., Director of Science at the Health Effects Institute (HEI)

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

MDEC Conference: A journey through the last 25 Years, *Bruce Conard, retired (INCO) and Mahe Gangal, Emeritus Scientist (CanmetMINING)*

10:00 COFFEE BREAK

10:30 SESSION 2: Health and Diesel Particulate Matter
CHAIRPERSON: Joe Stachulak (MIRARCO)

The Air We Breathe: Particle Deposition in the airways, *Sandra Dorman, Director, Centre for Research in Occupational Safety and Health, Professor, School of Human Kinetics, Laurentian University*

The advantages of Real-Time Personal Aerosol Monitoring for DPM, *Kevin Chase, TSI*

Considerations for the Establishment of a Corporate Occupational Exposure Limit for DPM, *Robert Stoyanoff (MBA CChem CIH), Senior Industrial Hygienist (Golders)*

12:00 LUNCH

13:00 **SESSION 3: PANEL- Modern Equipment and Maintenance Challenges and Opportunities. Tier 4 final and Stage 5 engines or alternative power, ensuing a cost-effective healthy environment**

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

- *Brian McLean, Mobile Maintenance, (Vale, Canada)*
- *Andreas Mayers, (TTM Technik Thermische Maschinen, Switzerland)*
- *Bapi Surampudi, Ph.D., (Southwest Research Institute (SWrl), San Antonio)*
- *Jay Armburger, (Caterpillar, USA)*

14:30 COFFEE BREAK

15:00 **SESSION 4: Diesel Particulate Filter (DPF) Technology**
CHAIRPERSON: Glen Staskus, (OML)

Electrically regenerated DPF for low temperature DPM control, *Stan Mack, (Johnson Matthey)*

Vale/Mammoth Diesel Particulate Filter Evaluation, *Brent Rubeli, and David Young (CanmetMINING), and Cheryl Allen (Vale)*

Developments in DPF cleaning including ultrasonic technology, *Ralph Deayton (Mammoth)*

16:30 ADJOURNMENT

17:30 – 19:30 RECEPTION & NETWORKING

WEDNESDAY, OCTOBER 9, 2019

07:30 REGISTRATION AND BREAKFAST

08:30 **SESSION 5: Standards Development and Safety systems**
CHAIRPERSON: Kristie Tarr, (Director, CanmetMINING)

Keynote Address: Topic: "Developing Safety Standards for Application of Battery Driven Power Trains", *Bapi Surampudi, Ph.D., Staff Engineer (SWrl)*

Advanced Safety System for Advanced Battery Technology, *Andre Barriault, and Travis Battley, (Epiroc, Canada)*

10:00 COFFEE BREAK

10:30 **SESSION 6: Alternative Energy and Clean Technologies:**
CHAIRPERSON: Brent Rubeli, (CanmetMINING)

Innovation for Cleaner Safer Vehicles (ICSV), *Jay Armburger (Caterpillar)*

BEV Pioneering Partnership at Borden – Celebrate the wins, face the challenges, *Maarten van Koppen, (Newmont Goldcorp)*

BEV Pioneering Partnership at Borden – Celebrate the wins, face the challenges, *David Jacques, (MacLean Engineering)*

12:00 LUNCH - Introduction of sponsors and award of draw prizes

13:00 SESSION 7: Monitoring and Instrumentation
CHAIRPERSON: Keith Bernie (WPHSN)

Real-Time Assessment of Mining Vehicle In-Out- Cabin particulate matter (PM) concentration,
Erkki Lamminen (Dekati)

Comparison of Particulate and Gaseous Emissions for the DPF Retrofitted Tier 2 and SCR
Equipped Tier 4f Engines, *Aleksandar Bugarski, Jon Hummer, Shawn Vanderslice, and Teresa
Barone (NIOSH)*

Impact of low level biodiesel blended fuel on emissions of an underground mining diesel engine,
Brent Rubeli, David Young (CanmetMINING)

14:45 COFFEE BREAK

15:00 SESSION 8: Occupational Health & MDEC Plenary Consultation
CHAIRPERSON: Cheryl Allen (Vale)

Summary of worldwide underground mine diesel regulations, *Mahe Gangal, Emeritus Scientist,
(CanmetMINING)*

Diesel Emission Reduction, *Kevin Hedges, P.H (Occupational Health Clinics for Ontario Workers
Inc.)*

Barrick Hemlo's DPM Management Program Update, *Hannah Demers, Industrial Hygienist,
(Barrick Hemlo)*

MDEC Plenary Consultation, David Young (Co-Chair MDEC Conference)
Summary of comments from MDEC 2018 survey
Review of MDEC 2019
Plans for MDEC 2020 and Final remarks

16:30 ADJOURNMENT

THURSDAY, OCTOBER 10, 2018

07:30 – 08:00 WORKSHOP REGISTRATION & BREAKFAST

**08:00 – 16:30 WORKSHOP Diesel Particulate Filter (DPF) Technology and Technology
Deployment**