



**Toronto Airport Marriott Hotel, Ontario, Canada  
October 8 – 10, 2013**

**MONDAY, OCTOBER 7, 2013**

**09:00 – 17:00** Field trip to Sir Adam Beck 2 Generating Station and Niagara Tunnel Project, Niagara Falls, Ontario, bus leaves the hotel at 09:00 and returns at 17:00

**TUESDAY, OCTOBER 8, 2013**

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

**08:30 – 16:30** WORKSHOP “Methods and demonstration of in-use emission testing of diesel equipment”, *Brent Rubeli (Natural Resources Canada) & Sean McGinn (MKNIZD Factors Inc.)*

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

**18:00 – 22:00** EXHIBIT ROOM SET UP

**WEDNESDAY, OCTOBER 9, 2013**

**07:30** CONFERENCE REGISTRATION AND BREAKFAST

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

**Welcome:** *JP Ouellette (Kubota Canada Ltd.), Co-Chair MDEC Conference*

**Introduction of Keynote Speaker:** *David Young (Natural Resources Canada), Secretary MDEC*

**Keynote Address:** *Dr. John Wall (Vice President and Chief Technology Officer, Cummins Inc.), The Future of Diesel Engine Technology*

**Vote of Thanks:** *Evelynn Stirling (Cummins Inc.), MDEC Advisory Committee*

**Organization:** *Mahe Gangal (Natural Resources Canada), Co-Chair MDEC Conference*

**10:00** COFFEE BREAK

**10:30** SESSION 2: DPF Studies

**CHAIRPERSON:** *JP Ouellette (Kubota Canada Ltd.)*

Fuel borne catalysts and aerosol emissions from sintered metal filtration system, *Aleksandar D. Bugarski, Jon A. Hummer, Larry D. Patts, Shawn Vanderslice, & Arthur L. Miller (NIOSH) and Jozef S. Stachulak (Vale)*

HJS/TFH approach for NO<sub>2</sub> neutral DPM technology by SMF, *Bob Clayton (T.F. Hudgins Inc.)*

Vehicle pre-assessments for extended DPF performance, *Paul Grylls, Karen Eccles & Joe Aleixo (DCL International Inc)*

**12:00 LUNCH**

**13:00 SESSION 3: Diesel Emissions Monitoring**  
**CHAIRPERSON: Robin McCaw (DCL International Inc.)**

Diesel emission in underground mining – A program for control, shared learning from Queensland, Australia, Kevin Hedges, (former Senior Principal Occupational Hygienist Queensland Mines Inspectorate)

Underground real time diesel exhaust gas sampling update, Cheryl Allen (Vale Canada Ltd.) and Doug O'Connor (D.O'Connor Consulting Ltd)

Study of diesel emissions relating to air quality in the ramp at Niobec mine, Sean McGinn (MKNIZD Factors Inc.)

**14:30 COFFEE BREAK**

**15:00 SESSION 4: Biodiesel and Health Studies**  
**CHAIRPERSON: David Young (Natural Resources Canada)**

Diesel exhaust emissions and its adverse health effects, Masood Ahmed (Occupational Health Clinics for Ontario Workers)

Biodiesel as a control strategy for reducing exposure of underground miners to diesel aerosols, Part I: Effects on physical and chemical properties of emitted aerosols, Aleksandar D. Bugarski, Jon A. Hummer, Larry D. Patts, Emanuele G. Cauda, Shawn Vanderslice, Anna A. Shvedova, Mariana Farcas, Elena Kisin, and Naveena Yanamala and M. Eileen Birch (NIOSH)

Biodiesel as a control strategy for reducing exposure of underground miners to diesel aerosols, Part II: Effects of toxicological properties of emitted aerosols, Anna A. Shvedova, Mariana Farcas, Elena Kisin, Naveena Yanamala, M. Eileen Birch, Aleksandar D. Bugarski and Jon A. Hummer (NIOSH)

**16:30 ADJOURNMENT**

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

**THURSDAY, OCTOBER 10, 2013**

**07:30 REGISTRATION AND BREAKFAST**

**08:30 SESSION 5: Diesel Particulate Matter and Fuel Cell Systems**  
**CHAIRPERSON: Joe Stachulak**

**Keynote Address: Dr. Andreas Mayer (VERT), Particle number PNC replacing particle mass PM for emission and ambient control**

HyPM HD fuel cell systems for heavy duty green mining, Ryan Sookhoo (Hydrogenics Corp.)

**10:00 COFFEE BREAK**

**10:30 SESSION 6: Ventilation Studies**

**CHAIRPERSON: Rick Banting (Workplace Safety North)**

Provincial mining ventilation blitz update, Glenn Staskus (Ontario Ministry of Labour)

Engine CSA certification testing and ventilation rates for Tier 4 update, Brent Rubeli (Natural Resources Canada)

Impact of diesel equipment on ventilation in Quebec underground mines, Rody K. Mafuta, Kostas Fytas, Jacek Paraszczak and Marcel Laflamme (Laval University)

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

**13:00 SESSION 7: Aftertreatment Systems & MDEC Plenary Consultation**

**CHAIRPERSON: Mahe Gangal (Natural Resources Canada)**

Effect of in-use DOCs on NO<sub>2</sub> emission in the underground operation, Joe Stachulak (Vale/Mirarco/Camiro), and Mahe Gangal (CanmetMINING)

Retrofit SCR systems for NO<sub>x</sub> control from heavy-duty mining equipment Update, Ivan Luke (Nett Technologies)

Progress on NH<sub>3</sub>-SCR catalyst for NO<sub>x</sub> reduction applicable to mining diesel engines, G. Caravaggio, M. Stanciulescu, R. Burich, & L. Nossova (CanmetENERGY), and D. Young, B. Rubeli, V. Feres, & M. Gangal (CanmetMINING)

**MDEC Plenary Consultation, Mahe Gangal (Co-Chair MDEC Conference)**

- Summary of comments from MDEC 2012 survey
- Review of MDEC 2013
- Plans for MDEC 2014
- Final remarks

**14:30 COFFEE BREAK**

**15:00 SESSION 8: ROUNDTABLE FORUM**

**A – Diesel Regulations**

- **Engine**
- **Fuel**
- **Air quality**

**B – Engine Technology**

- **Advanced engines**
- **Maintenance**
- **Monitoring**

**16:30 ADJOURNMENT**