

MDEC Conference: A journey through the last 25 years

Mahe Gangal

Past Co-Chair of MDEC Conference

25th MDEC Conference

Toronto, Ontario, Canada

October 8-10, 2019

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MDEC (Mining Diesel Emissions Council) Conference

Mission Statement

The Mining Diesel Emissions Council (MDEC) is committed to providing a global forum for the dissemination of the latest scientific and technologically advanced research to reduce and control diesel emissions in the mining workplace environment

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MDEC - Organization

MDEC is organized by a Management Committee, comprising members of stakeholder organizations, including the mining industry, labour, government, research houses, consultants, petroleum producers, engine manufacturers, and emission control technology developers, on a voluntary basis

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Diesel Engines - Background

- 1950's – use of diesel engines into North American mines
- 1960's – introduction of catalytic convertors to control CO, hydrocarbons and odour
- 1970's – contributing substantially to the economics, but concerned over the increased use of diesel and possible harmful effects

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1981-1986: CDRAP (Collaborative Diesel Research Advisory Panel)

- Collaboration among three funding agencies: US Bureau of Mines, Ontario Ministry of Labour, and CANMET/NRCan
- Evaluate the comprehensive toxicity to major components of diesel exhaust and develop a tool for ventilation prescription
- Research and develop to produce add-on hardware and study other techniques to reduce emissions from diesel engines
- Means to measure impact of such techniques on the environment for the benefit of regulatory and mine operators
- Overall strategy to improve environment, reduce ventilation costs, improve productivity and safety
- Major outputs: DPM measurement; AQI/EQI application, portable diesel emissions monitoring equipment; first DPF development in 1981 & first Canadian underground trial in 1984

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1986-1997: Canadian ADHOC Diesel Committee

- Informal association of agencies which have a contributing and specific interest in the efficient and least-polluting use of dieselized in underground non-coal mines
- Acted as a forum for technology exchange and as a body undertaking cooperative research programs
- In 1991, the first RCD limit of 1.5 mg/m³ recommended to the Canadian industry
- May 23, 1995, ACGIH, notice of intended changes included DPM limit of 0.15 mg/m³
- In 1995, Dr. Bruce Conard met with CANMET scientists in Ottawa and Sudbury to discuss a proposal to reduce miner's exposure to diesel exhaust, and then discussed at the AdHoc meeting in Toronto in March 1996, where delegates endorsed the concept of a diesel research consortium to be called **DEEP (Diesel Emissions Evaluation Program)** with the major goal to reduce miner exposure to diesel exhaust. This meeting was attended by 90 delegates and it was the beginning of the **First Diesel Emission Conference**
- Subsequently, the **Second Conference** took place in Toronto in November 1996. This meeting was attended by 125 delegates.
- The **Third Conference** took place in Toronto in October, 1997, attended by 131 delegates.
- Major outputs: development of portable continuous monitoring devices for DPM, gases, diesel standards; and use of u/g assessment devices

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1998 - CMDC (Canadian Mining Diesel Conference)

- In 1998, AdHoc forum was changed to the **Canadian Mining Diesel Conference (CMDC)** due to the success of the previous three AdHoc meetings which were attended by about 100 delegates
- This conference continued to act as a platform for information and progress of DEEP consortium projects
- A management committee was formed to organise the conference

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1999-2006: MDEC (Mining Diesel Emissions Conference)

- In 1999, in recognition of the international outreach of the conference, the name was changed to Mining Diesel Emissions Conference (**MDEC**)
- MDEC is organised by a Management Committee. Two Co-Chairs facilitate this committee: one representing government and one representing industry
- Delegates and speakers attend from all over the world to discuss the topic of vital interest to the mining industry

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2007- : MDEC (Mining Diesel Emissions Council)

- In 2007, Mining Diesel Emissions Council (the organization body of the **MDEC Conference**) incorporated as a not-for-profit corporation under the Canada Corporations Act to formalize and expend its services to the industry and for sustainability
- The MDEC Conference takes place every year in early October in Toronto.
- The Council has extended the role of the conference to include other initiatives e.g. scholarships, and financial funding
- Worked with CSA to update diesel standards

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MDEC Conference Roots

In summary, the roots of this conference go back many years, and this period reflects a significant evolution. The origins go back to CDRAP (Collaborative Diesel Research Advisory Panel), to the AdHoc diesel committee, the Canadian Mining Diesel Conference (CDMC), to the Mining Diesel Emissions Conference (MDEC), to Mining Diesel Emissions Council (MDEC) Conference now, which name recognises that this is not just a Canadian, but an global one, and we must call on expertise from everywhere in the world to find a common solution.

Mining Diesel Emissions Council Presidents/Vice-Presidents



Addy Majewski
(2007-2012)



John Stekar
(2012-)



Mahe Gangal
(2007-2016)



David Young
(2016-)

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MDEC Conference Some High Lights

- Keynote Speakers – 32
- Technical Presentations – 507
- Workshops – 17
- Field Trips – 13
- Roundtable Forum – 45
- Scholarships – 11 (started in 2010)
- Standard Development – Provided funding and technical support to CSA on the development of diesel standards

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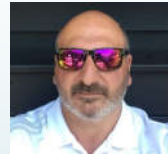
MDEC Conference Co-chairs Industry/Government



Robert Fraser
(1998-2000)



Edward Richards
(2000-2009)



JP Ouellette
(2009-2019)



Cheryl Allen
(2019-)



Don Dainty
(1996-2000)



Mahe Gangal
(2000-2016)



David Young
(2016-)

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2019 MDEC Conference - Advisory Committee

Dr. Aleksandar Bugarski	NIOSH, USA
Dr. Dirk Dahmann	IGF - Berufsgenossenschaft, Germany
Robert Fraser	Pure Exhaust, Chile
Allison Golsby	ConsultMINE
Dr. Claus Görsmann	Johnson Matthey Plc, UK
Harsim Kalsi	Ontario Ministry of Labour, Canada
Dr. Andreas Mayer	Technik Thermische Maschinen, Switzerland
Jeffrey Moninger	Mine Safety & Health Administration, USA
Lennart Mukka	LKAB, Sweden
Edward Richards	Lubrizol Corporation, USA
Neil Roman	BBE Consulting, South Africa
Daniel Stinnette	Mine Ventilation Services, USA

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2019 MDEC Conference-Management Committee

Cheryl Allen, Co-Chair	Vale
Keith Birnie	Workplace Safety North
Philip Bousquet	Ontario Mining Association
Derek Hooey	DCL International
Heather Luttrell	Mobile Parts Ltd.
Jan Romo	CAW
Brent Rubeli	NRCan/CanmetMINING
Dr. Joe Stachulak	MIRARCO
Glenn Staskus	Ontario Ministry of Labour
John Stekar	Catalytic Exhaust Products
Evelynn Stirling	Cummins
Ron Stone	MineTerra LLC
Alex Willows	Sandvik Mining & Rock Technology
David Young, Co-Chair	NRCan/CanmetMINING

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Thank You !

Mahe Gangal
NRCan/CanmetMINING

mahe.gangal@canada.ca

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