



DEEP Technology Transfer Initiatives

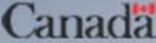



CANADA'S NATURAL RESOURCES
NOW AND FOR THE FUTURE

www.nrcan.gc.ca

Michel Grenier
MDEC 2004


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Presentation Overview

- DEEP consortium
- Field projects
- Impact of projects
- Web site
- Regional workshops
- Other presentations
- MDEC
- Regulatory impact



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DEEP Consortium

- Tri-partite collaboration aimed at reducing DPM exposure using mine site demonstration of available techniques and technologies
- Collecting exposure data and evaluating DPM sampling and analysis protocols
- Started April 1997



Field Projects

- Biodiesel project at Inco's Creighton mine
- DPM sampling protocols comparison at Noranda's Brunswick mine
- Maintenance project at Falconbridge Ltd.





Field Projects (cont.)

- Light-duty vehicle project at Falconbridge Ltd., Kidd Mining Division
- Inco (Stobie mine) and the Noranda Brunswick mine filter projects



Impact - Trap Projects

- Brunswick mine now has 6 LHDs with full-time high-efficiency filtration modules
- Inco tests still underway
 - Production equipment have been equipped
 - Light-duty vehicles are included





Impact – Maintenance Project

- Training of mechanics on system specific maintenance aimed at DPM reduction
 - Toronto Transit Commission: 6 people
 - Mines (U.S. and Canada): 400 people
 - Going global: BHP Billiton global corporate initiative for diesel emissions control

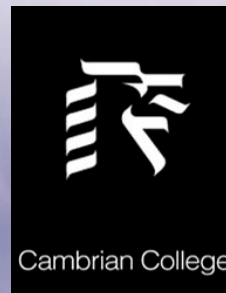


Sean McGinn



Impact – Maintenance Project

- Cambrian College (Sudbury) curriculum:
 - 2-year Heavy-Duty diesel technician diploma
 - 200 graduates to date





DEEP Web Site

- Final reports for all DEEP projects
- Plain language 2 page summaries
- Other technical reports
- Web Master: Addy Majewski
- Maintain 2 years post-DEEP



The screenshot shows the DEEP Research Projects website. The header includes the title 'DEEP Research Projects' and navigation links for 'Research', 'Technology', 'About', 'Contact', and 'Search'. The main content area features a paragraph about DEEP's funded research projects related to land use, with links to 'Final reports', 'Plain language summaries', and 'Technical reports'. A sidebar titled 'Jump to Project' lists specific projects like 'DEEP sampling in high mobile zone' and 'Environmental consequences of DEEP sampling methods'.


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Regional Workshops

• Marathon Sept. 2003	26 part.	
• Val d'Or Oct. 2003	31 part.	
• Saskatoon Oct. 2003	43 part.	
• Bathurst May 2004	22 part.	
• Total:	122 part.	


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Other Presentations

- 4th International Conference of the International Occ. Hyg. Assoc. - July 2000, Cairns, Australia
- MINExpo International 2000, Oct. 2000, Las Vegas, U.S.
- SME Annual Meeting and Exhibit, February 2003, Cincinnati, U.S.



- Yearly event since 1997
- Average attendance 120 delegates/year
- From Canada, U.S. and abroad
- Annual platform for DEEP technology transfer and project updates every year
- DEEP was first scoped and discussed amongst interested parties at MDEC and launched officially in April 1997



DEEP - Regulatory Impact

- Quebec lowered to 0.6 mg/m³ as a result of sampling projects
- Saskatchewan now requires DPM sampling based on NIOSH 5040
- Ontario MLRC diesel sub-committee is working and debating next modifications to regulation

« One of the reasons our company is funding DEEP is to ensure that future regulations are based on sound technical and scientific findings... »



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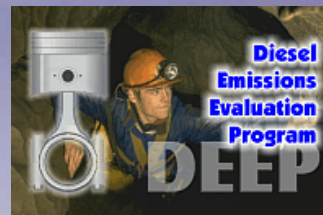
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Final Report

- Author: Jennifer Penney
 - DEEP overview
 - Brief description of projects
 - Author and keyword index for easy cross-referencing
 - CD included
 - Other: parallel research activities and recommendations



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Technology Transfer Committee

- Jennifer Penny
- Sean McGinn
- Ray Ellington
- Charles B. Graham
- Michel Grenier



Thank you!

He who asks a question may appear to be a fool for five minutes, but he who never asks a question remains a fool forever...

Any questions?