

ACE 2010 TECHNICAL PROGRAM HIGHLIGHTS

A&WMA's 103rd Annual Conference & Exhibition Technical Program offers presentations on pertinent issues for all environmental professionals. Whether you work in management or in a "hands on" role, you will be sure to find plenty of sessions that suit your interests.

2010 Technical Program highlights include:

- The Keynote program featuring two plenary sessions. One will address priorities and challenges to energy policy in the 21st century (Tuesday, 9:00 a.m.) and include presentations by Ed Steimach, Premier of Alberta, and Jim Prentice, Minister of Environment Canada. The other will discuss transforming North American energy systems (Thursday 7:30 a.m.) and include high-level members of government and industry from the United States and Canada.
- The Critical Review, "Multipollutant Air Quality Management: Prospects for the Future," will be presented by George Hidy and William Pennell (Wednesday, 8:00 a.m.).

- A dozen panels will feature national leaders from government, industry, and environmental groups discussing the latest issues on climate change policy, renewable energy, and sustainable development.
- More than 10 sessions, both paper and panel, will cover issues of regional and local interest such as oil sands air and environmental quality, CO₂ capture and sequestration, H₂S health research, and managing energy development environmental effects.
- A series of sessions for young or seasoned professionals who want an introduction to an area of interest that include Particulate Matter 101 (Tuesday, 1:20 p.m. and 4:00 p.m.), Carbon Sequestration 101 (Tuesday, 1:20 p.m.), and Understanding Air Toxics (Wednesday, 3:20 p.m.).
- A Mega Poster Session, with no competing sessions, with more than 90 posters covering all aspects of environmental issues, will be grouped by topic with the authors available for discussion (Wednesday, 1:20 p.m.).

Sessions in specific technical areas can be found in the program grid (pages 61-65) and in the interest tracks (pages 66-67).

2010 TECHNICAL PROGRAM CHAIRS



Richard Tropp
2010 Technical Program Chair



Allan Legge
2010 Technical Program Vice Chair

ACE 2010 TECHNICAL PROGRAM GRID

Local Content	Session Type	Session #	Session Title	Start/End	Room	Details
Tuesday, June 22, 2010						
Afternoon:						
Tues PM1						
	Paper	AB-3 (1a)	Challenges to Air Quality Emissions, Modeling, Deposition, and Measurements	1:20 - 2:40 p.m.	Telus 110	p. 68
	Paper	AB-7 (1)	Indoor Air Quality - Sources, Measurements, Impacts, and Control	1:20 - 2:40 p.m.	Telus 101/102	p. 68
	Paper	AE-1 (1)	NO _x Control for Stationary Sources	1:20 - 2:40 p.m.	Glen 209	p. 68
	Paper	AM-1 (1)	Implementation of EPA's New Emissions Inventory System	1:20 - 2:20 p.m.	Macleod A1	p. 68
	Panel	AM-1 (2)/AB-6 (1)	Biomass Burning Emission Inventories and their Impact on Air Quality: Regional to Global	1:20 - 3:00 p.m.	Telus 104	p. 69
	Paper	AO-2 (1)	Greenhouse Gas Measurement with Optical Techniques	1:20 - 3:00 p.m.	Telus 103	p. 69
	Paper	EE-5 (1)	Risk Communication	1:20 - 2:20 p.m.	Glen 208	p. 69
	Paper	EE-6 (1)	Odor Measurement, Effects, and Management	1:20 - 3:00 p.m.	Glen 201	p. 70
	Paper	EI-4 (1)	Environmental Issues in the Chemical/Petroleum Industries	1:20 - 2:20 p.m.	Macleod A4	p. 70
	Paper	ES-4 (1)	Corporate Sustainability Strategies	1:20 - 2:00 p.m.	Glen 202	p. 70
x	Panel	ES-4 (2a)	Advances in Oil Sands Environmental Management and Reclamation	1:20 - 3:00 p.m.	Telus 111	p. 70
x	Panel	LC (1)	New Natural Gas: Opportunities and Environmental Challenges in North America Unconventional Gas	1:20 - 3:00 p.m.	Glen 205	p. 71
	Paper	WM-3 (1)	Anaerobic Digestion and Composting	1:20 - 3:00 p.m.	Glen 203	p. 71
	Panel	WR-2 (1)	RCRA and Industrial Waste Management – What's New and What May Be Around the Corner	1:20 - 3:00 p.m.	Glen 204	p. 71
	Panel	YP (2)	Carbon Capture and Sequestration 101	1:20 - 3:00 p.m.	Telus 109	p. 71
	Panel	YP (3a)	Particulate Matter 101	1:20 - 3:00 p.m.	Telus 108	p. 72
Tues PM2						
	Paper	AB-3 (1b)	Challenges to Air Quality Emissions, Modeling, Deposition, and Measurements	4:00 - 5:20 p.m.	Telus 110	p. 72
	Paper	AB-5 (1)	Community (Transportation) Noise Issues	4:00 - 5:20 p.m.	Telus 109	p. 72
	Panel	AB-6 (2)	Periodic Evaluation of Current and Predicted Visibility Conditions Under the United States Regional Haze Regulations	4:00 - 6:00 p.m.	Macleod A1	p. 73
	Paper	AB-7 (2)	Indoor Air Quality - Investigations and Remediation	4:00 - 5:40 p.m.	Telus 101/102	p. 73
	Paper	AE-1 (2)	Multi-Pollutant Monitoring and Control Technologies for Cement Kiln Air Emissions	4:00 - 5:40 p.m.	Glen 209	p. 74
	Paper	AE-1 (3)	Control Technologies for Fine Particulate Matter	4:00 - 5:40 p.m.	Glen 205	p. 74
	Paper	AM-5 (1)	Data Analysis and Quality Assurance	4:00 - 5:40 p.m.	Telus 104	p. 74
	Paper	AO-2 (2)	Optical Measurement of Emissions From Oil and Gas Production	4:00 - 5:40 p.m.	Telus 103	p. 75
	Paper	EE-1 (1)	Exposure Assessments for Nanoparticles, PM _{2.5} , and Polyaromatic Hydrocarbons	4:00 - 5:00 p.m.	Glen 208	p. 75
	Paper	EE-6 (2)	Odor Modeling and Monitoring	4:00 - 5:00 p.m.	Glen 201	p. 75
	Paper	EI-1 (1a)/(1b)	Federal Facilities: Executive Order 13423 and Beyond	4:00 - 6:00 p.m.	Telus 106	p. 76
	Panel	EP-1 (2)	New Source Review (NSR) Reform: Recent Developments and Issues	4:00 - 6:00 p.m.	Glen 206	p. 76
x	Panel	ES-4 (2b)	Advances in Oil Sands Environmental Management and Reclamation	4:00 - 6:00 p.m.	Telus 111	p. 76
	Paper	ES-4 (8)	Natural Resource Sustainability including Land Use, Water, and Agriculture	4:00 - 5:20 p.m.	Glen 202	p. 76
	Paper/Panel	ET-2 (1)	Land Use and Transportation Policies to Build Sustainable Communities	4:00 - 6:00 p.m.	Macleod A4	p. 77
	Paper	WM-3 (2)	Municipal Waste - Thermal Processing, Reuse and Treatment	4:00 - 5:20 p.m.	Glen 203	p. 77
	Paper	WR-1 (1)	Sustainable Design in Real-World Environmental Characterization and Remediation	4:00 - 5:20 p.m.	Glen 204	p. 77
	Panel	YP (3b)	Particulate Matter 101	4:00 - 6:00 p.m.	Telus 108	p. 78

Local Content	Session Type	Session #	Session Title	Start/End	Room	Details
Wednesday, June 23, 2010						
Morning:						
Wed AM1						
	Critical Review		Multipollutant Air Quality Management: Prospects for the Future	8:00 - 9:20 a.m.; 10:20 - 11:40 a.m.	Hyatt - Regency Ballroom 4-9	p. 78
Wed AM2						
	Panel	AT-1 (1)	Air Toxics Update - Development, Implementation, Area Sources, and Residual Risk	10:20 - 11:40 a.m.	Telus 103	p. 78
	Paper	EE-5 (2)	Risk Assessment Modeling Tools and Techniques	10:20 - 11:20 a.m.	Glen 208	p. 78
	Panel	EI-1 (2)	Approaches to Reducing the Burden of Compliance with the Federal General Conformity Regulations	10:20 - 11:40 a.m.	Telus 106	p. 79
	Paper	EP-1 (3)	Greenhouse Gas Issues	10:20 - 11:20 a.m.	Telus 110	p. 79
	Panel	EP-2 (1)	Energy Policy: Comparative Risks	10:20 - 11:40 a.m.	Telus 111	p. 79
	Paper	EP-3 (1)	Legal and Liability Issues	10:20 - 11:20 a.m.	Glen 205	p. 79
	Panel	ES-1 (1)	Projectile Propellant and Pollution Prevention for Projectile Production	10:20 - 11:40 a.m.	Glen 201	p. 80
	Panel	ITF-11 (1)	Legal Framework for First Nations/Tribes in Resource Protection and Management	10:20 - 11:40 a.m.	Telus 109	p. 80
	Paper	WM-1 (1)	Integrated Waste Management, Waste Prevention and Recycling	10:20 - 11:00 a.m.	Glen 203 [Back-to-back with WR-2 (2)]	p. 80
	Paper	WR-2 (2)	Human and Ecological Risks from Industrial Wastes	11:00 - 11:40 a.m.	Glen 203 [Back-to-back with WM-1 (1)]	p. 80
	Panel	YP (1)	Young Professional's Guide to Getting Involved	10:20 - 11:40 a.m.	Telus 108	p. 80
Afternoon:						
Wed PM1						
	Poster	PS	ACE Poster Session	1:20 - 2:40 p.m.	Macleod A & B	p. 80
Wed PM2						
	Paper	AB-1 (1a)	Particulate Matter Emission Measurements	3:20 - 4:20 p.m.	Telus 104	p. 86
	Paper	AB-2 (1a)	Ambient Studies, Measurements and Modeling	3:20 - 4:40 p.m.	Macleod A2	p. 86
	Paper	AB-3 (2a)	Ozone and PM _{2.5} Modeling	3:20 - 4:20 p.m.	Telus 105	p. 87
	Paper	AB-3 (3a)	Regulatory Model Applications	3:20 - 4:20 p.m.	Telus 110	p. 87
	Paper	AB-7 (3)	Indoor Air Quality - Biocontaminants	3:20 - 4:00 p.m.	Telus 101/102 [Back-to-back with AB-7 (4)]	p. 87
	Paper	AB-7 (4)	Indoor Air Quality - Vapor Intrusion	4:00 - 5:00 p.m.	Telus 101/102 [Back-to-back with AB-7 (3)]	p. 87
	Paper	AE-1 (4)	Implementation of Mercury Control Technologies for Coal Fired Power Plants	3:20 - 4:20 p.m.	Glen 209	p. 88
	Paper	AE-2 (1a)/(1b)	Air Treatment Technologies	3:20 - 4:40 p.m.	Glen 208	p. 88
	Paper	AM-1 (3)	Fire Emissions and Biomass Burning: Research to Management	3:20 - 4:40 p.m.	Macleod A4	p. 88
	Paper	AO-1 (1)	Novel Optical Remote Sensing Instrumentation	3:20 - 4:40 p.m.	Telus 103	p. 89
	Paper	EI-3 (1)	Environmental Issues Facing Commercial and Industrial Energy Sources	3:20 - 4:40 p.m.	Telus 106	p. 89
	Paper	EI-4 (2)	Emissions Issues in the Oil and Gas Industry	3:20 - 4:40 p.m.	Glen 206	p. 89
	Panel	ES-4 (4)	Climate Legislation and Greenhouse Gas Emission Reductions	3:20 - 4:40 p.m.	Glen 202	p. 90
	Paper	ES-4 (3)	Product Sustainability	3:20 - 4:00 p.m.	Glen 201 [Back-to-back with ES-4 (5)]	p. 90
	Paper	ES-4 (5)	Sustainability	4:00 - 5:00 p.m.	Glen 201 [Back-to-back with ES-4 (3)]	p. 90
	Panel	ES-5 (2)	Renewable Energy and Clean Technologies	3:20 - 4:40 p.m.	Telus 111	p. 90
	Panel	ITF-11 (2)	Energy, Economics, the Environment and First Nations	3:20 - 4:40 p.m.	Telus 109	p. 90
x	Panel	LC (2)	CO ₂ Capture and Storage (CCS)	3:20 - 4:40 p.m.	Glen 205	p. 91
	Paper	WM-1 (2)	Municipal Waste Management Issues, Electronics and C&D Wastes	3:20 - 4:20 p.m.	Glen 203	p. 91
	Panel	YP (4)	Understanding Air Toxics	3:20 - 4:40 p.m.	Telus 108	p. 91

Local Content	Session Type	Session #	Session Title	Start/End	Room	Details
Thursday, June 24, 2010						
Morning:						
Keynote			Transforming North American Energy Systems	7:30 - 9:30 a.m.	Hyatt - Regency Ballroom 4-9	p. 91
Thurs AM1						
	Paper	AB-1 (2)	Particulate Matter Modeling	9:00 - 10:40 a.m.	Telus 104	p. 91
	Paper	AB-3 (4)	Meteorology of the Atmosphere	9:00 - 10:00 a.m.	Telus 105	p. 92
	Paper	AE-2 (2a)	Novel Air Pollution Control	9:00 - 10:20 a.m.	Glen 208	p. 92
	Paper	AT-3 (1)	Air Toxics Health Effects	9:00 - 9:40 a.m.	Telus 103	p. 92
	Panel	EE-5 (3)	Corporate Risk Management Strategies	9:00 - 10:20 a.m.	Glen 201	p. 93
	Paper	EI-1 (3)	NESHAP Compliance and Implementation at Federal Facilities	9:00 - 10:40 a.m.	Telus 106	p. 93
	Panel	EI-2 (2a)	Nuclear Renaissance - Expediting the Permitting of New Nuclear Power Generation	9:30 - 10:20 a.m.	Glen 206	p. 93
	Paper	EP-1 (5)	PM _{2.5} and Ozone Nonattainment Strategies	9:00 - 10:00 a.m.	Glen 202 [Back-to-back with EP-1 (8)]	p. 93
	Paper	EP-1 (8)	NAAQS Policy	10:00 - 10:40 a.m.	Glen 202 [Back-to-back with EP-1 (5)]	p. 94
	Paper	ES-5 (3)	Greenhouse Gas Impacts, Technology, and Climate Policy	9:30 - 10:20 a.m.	Telus 101/102	p. 94
	Paper	ET-1 (1a)	Off-Road Sources: Airports, Rail, Marine, and Construction	9:00 - 10:20 a.m.	Telus 109	p. 94
	Panel	IF (1)	Air Quality and Environmental Initiatives in Asia - Part 1	9:00 - 10:20 a.m.	Telus 108	p. 94
	Panel	WM-1 (3)	Achieving Zero Waste - Status Report	9:00 - 10:20 a.m.	Glen 205	p. 95
	Paper	WM-4 (1)	Medical Waste Management	9:00 - 10:00 a.m.	Glen 204	p. 95
Thurs AM2						
	Paper	AB-1 (1b)	Particulate Matter Emission Measurements	11:10 - 12:30 a.m.	Telus 105	p. 95
	Paper	AB-1 (3)	International PM Measurements/Data Analysis	11:10 - 12:30 a.m.	Telus 109	p. 95
	Paper	AB-2 (1c)	Ambient Studies, Measurements and Modeling	11:10 - 12:50 a.m.	Glen 208	p. 96
	Paper	AB-3 (2b)	Ozone and PM _{2.5} Modeling	11:10 - 12:10 a.m.	Telus 110	p. 96
	Paper	AE-1 (5a)	Innovative CO ₂ Control Technologies	11:10 - 12:10 a.m.	Glen 209	p. 96
	Paper	AM-1 (4)	Global Greenhouse Gas and Carbon Black Emissions Inventory and Factors Development	11:10 - 12:10 a.m.	Macleod A2	p. 97
x	Paper	AM-3 (1a)	Characterizing Air Quality and Monitoring for Environmental Effects in the Athabasca Oil Sands Region of Alberta, Canada - Part 1	11:10 - 12:50 a.m.	Telus 104	p. 97
	Panel	EDC	Opportunities and Challenges in Environmental Education and Training	11:10 - 12:30 a.m.	Glen 201	p. 98
	Panel	EI-1 (4)	Title V Permit Streamlining	11:10 - 12:30 a.m.	Telus 106	p. 98
	Panel	EI-2 (2b)	Nuclear Renaissance - Expediting the Permitting of New Nuclear Power Generation	11:10 - 12:30 a.m.	Glen 206	p. 98
	Panel	EP-1 (7)	Implementing New Source Review: State and Local Agency Issues and Differences	11:10 - 12:30 a.m.	Macleod A1	p. 98
	Panel	EP-2 (2)	Impact of Climate Change - an Economic Perspective	11:10 - 12:30 a.m.	Telus 111	p. 98
	Paper	EP-8 (3)	Practical Environmental Management Systems Lessons	11:10 - 11:50 a.m.	Glen 202	p. 98
	Panel	ES-5 (8)	The Science and Implications of the Global Temperature Record	11:10 - 12:30 a.m.	Telus 101/102	p. 99
	Paper	ET-1 (1b)	Off-Road Sources: Airports, Rail, Marine, and Construction	11:10 - 12:10 a.m.	Macleod A3	p. 99
	Panel	IF (2)	Air Quality and Environmental Initiatives in Asia - Part 2	11:10 - 12:30 a.m.	Telus 108	p. 99
x	Panel	WM-1 (4)	Generating Value from Integrated Solid Waste Management	11:10 - 12:30 a.m.	Glen 205	p. 99
	Paper	WM-3 (3)	Landfill and BioGas Systems - Energy Recovery, Gas Treatment and Utilization	11:10 - 12:30 a.m.	Glen 203	p. 99
	Panel	WR-2 (3)	Green Remediation – Principles and Lessons Learned from Success Stories	11:10 - 12:30 a.m.	Glen 204	p. 100

Local Content	Session Type	Session #	Session Title	Start/End	Room	Details
Afternoon:						
Thurs PM1						
	Paper	AB-2 (2)	Photochemistry and Organic Aerosols	2:20 - 3:40 p.m.	Telus 108	p. 100
	Paper	AB-3 (3c)	Regulatory Model Applications	2:20 - 3:40 p.m.	Telus 101/102	p. 100
	Paper	AE-1 (5b)	Innovative CO ₂ Control Technologies	2:20 - 3:20 p.m.	Glen 209	p. 101
	Paper	AE-2 (2c)	Novel Air Pollution Control	2:20 - 4:00 p.m.	Glen 208	p. 101
	Paper	AM-2 (1)	Source Apportionment Applications	2:20 - 3:20 p.m.	Macleod A2	p. 101
x	Paper	AM-3 (1b)	Characterizing Air Quality and Monitoring for Environmental Effects in the Athabasca Oil Sands Region of Alberta, Canada - Part 2	2:20 - 4:00 p.m.	Telus 104	p. 101
	Paper	AT-1 (2)	Air Toxics Emissions, Source Characterization, and Regulatory Developments	2:20 - 3:00 p.m.	Telus 103	p. 102
	Paper	EE-5 (4a)/(4b)	Recent Experience with Risk Assessment and Management	2:20 - 4:00 p.m.	Glen 201	p. 102
	Paper	EI-1 (6)	Industrial Wastewater Treatment on Federal Facilities	2:20 - 3:40 p.m.	Telus 106	p. 103
	Panel	EP-1 (9)	Implementing the PM _{2.5} New Source Review Program	2:20 - 3:40 p.m.	Macleod A3	p. 103
	Paper	EP-2 (3)	Economics of Environmental Compliance	2:20 - 3:40 p.m.	Glen 206	p. 103
	Paper	EP-8 (4)	Developing and Verifying Greenhouse Gas Emission Inventories	2:20 - 3:40 p.m.	Telus 105	p. 104
	Panel	ES-4 (6)	Ethics of Power Generation Technologies	2:20 - 3:40 p.m.	Glen 202	p. 104
	Panel	ES-5 (9)	Taking Advantage of Carbon Markets - A Roundtable on Trading under International Greenhouse Gas Regimes	2:20 - 3:40 p.m.	Telus 111	p. 104
	Paper	ET-1 (2)	Mobile Source Emissions	2:20 - 4:00 p.m.	Macleod A1	p. 105
x	Panel	LC (3a)	Hydrogen Sulphide Health Research and Risk Assessment - Ten Years Later	2:20 - 3:40 p.m.	Glen 205	p. 105
	Panel	WM-3 (4)	Waste-to-Energy – Pros and Cons for Sustainability	2:20 - 3:40 p.m.	Glen 203	p. 105
	Paper	WR-2 (4)	Innovative Treatment and Management of Industrial Wastes	2:20 - 3:40 p.m.	Glen 204	p. 105
	Panel	YP (6)	Tips and Tools for the Techno-Challenged	2:20 - 3:40 p.m.	Telus 109	p. 106
Thurs PM2						
	Panel	AB-1 (4)	PM-Coarse Air Pollution	4:00 - 5:20 p.m.	Telus 101/102	p. 106
	Paper	AB-2 (1d)	Ambient Studies, Measurements and Modeling	4:00 - 5:40 p.m.	Telus 108	p. 106
	Paper	AB-3 (5b)	Air Quality Specialized Modeling	4:00 - 5:20 p.m.	Telus 110	p. 107
	Paper	AB-6 (3)	Periodic Evaluation of Current and Predicted Visibility Conditions	4:00 - 4:40 p.m.	Telus 109	p. 107
	Paper	AE-2 (2d)	Novel Air Pollution Control	4:00 - 5:20 p.m.	Glen 208	p. 107
	Paper	AE-2 (3)	Biotreatment, Biotransformation, Biocatalysis for Treatment of Air Contaminants	4:00 - 5:20 p.m.	Glen 209	p. 108
x	Paper	AM-3 (1c)	Characterizing Air Quality and Monitoring for Environmental Effects in the Athabasca Oil Sands Region of Alberta, Canada - Part 3	4:00 - 5:40 p.m.	Telus 104	p. 108
	Paper	AM-4 (1)	Source Monitoring	4:00 - 5:00 p.m.	Macleod A2	p. 108
	Panel	EI-1 (5)	Integrated Solid Waste Management and Qualified Recycling at Federal Facilities	4:00 - 5:20 p.m.	Telus 106	p. 109
	Panel	EI-2 (3)	Clean Air Interstate Rule - Version 2.0	4:00 - 5:20 p.m.	Glen 201	p. 110
	Panel	EI-4 (3)	Using Cooperative Efforts to Develop Effective Ozone Control Strategies	4:00 - 5:20 p.m.	Macleod A1	p. 110
	Paper	EP-2 (4)	Economic Case Studies in Environmental Stewardship and Leadership	4:00 - 5:00 p.m.	Glen 206	p. 110
	Paper	EP-8 (5)	Performance Improvement with Technology	4:00 - 5:00 p.m.	Telus 105	p. 111
	Panel	ES-1 (2)	Energy Efficiency - Best Practices and Case Studies	4:00 - 5:20 p.m.	Glen 202	p. 111
	Paper	ES-5 (4)	Greenhouse Gas Mitigation Strategies	4:00 - 5:20 p.m.	Telus 111	p. 111
x	Panel	LC (3b)	Hydrogen Sulphide Health Research and Risk Assessment - Ten Years Later	4:00 - 5:20 p.m.	Glen 205	p. 112
	Paper	WM-3 (5)	Biomass Gasification and Waste-to-Energy Applications	4:00 - 5:40 p.m.	Glen 203	p. 112

Local Content	Session Type	Session #	Session Title	Start/End	Room	Details
Friday, June 25, 2010						
Morning:						
Fri AM1						
	Paper	AB-1 (5)	Particulate Matter Measurements and Data Analysis	8:00 - 9:40 a.m.	Telus 101/102	p. 112
	Paper	AB-3 (5c)	Air Quality Specialized Modeling	8:00 - 9:40 a.m.	Telus 110	p. 112
	Panel	AM-2 (2)	Introduction to the Data Management Aspects of Source Apportionment Studies	8:00 - 10:00 a.m.	Glen 204	p. 113
	Paper	AM-3 (2)	Ambient Monitoring	8:00 - 9:20 a.m.	Telus 104	p. 113
	Paper	AO-1 (2)	Novel Optical Remote Sensing Measurement Techniques	8:00 - 9:20 a.m.	Telus 108	p. 113
	Paper	AT-3 (2)	Community Air Toxics Monitoring, Exposure and Risk	8:00 - 9:00 a.m.	Telus 103 [Back-to-back with AT-3 (3)]	p. 114
	Paper	AT-3 (3)	Health and Environmental Effects of Air Toxics	9:00 - 9:40 a.m.	Telus 103 [Back-to-back with AT-3 (2)]	p. 114
	Paper	EP-1 (11)	Impact Assessment/Siting	8:00 - 9:40 a.m.	Telus 106	p. 114
	Paper	EP-8 (6)	Greenhouse Gas Emissions Data Collection Tools and Protocols	8:00 - 9:40 a.m.	Telus 105	p. 115
	Panel	ES-5 (5)	Greenhouse Gas Management	8:00 - 10:00 a.m.	Glen 202	p. 115
	Paper	ES-5 (6)	Climate Change Impacts and Strategies	8:00 - 9:20 a.m.	Telus 111	p. 115
	Paper	ET-1 (3)	Advanced Technology Vehicle and Alternative Fuel Emissions and Lifecycle Assessments	8:00 - 9:40 a.m.	Glen 208	p. 115
x	Paper	LC (4)	Environmental Issues and Energy and Mitigation Technologies for Alberta	8:00 - 9:00 a.m.	Glen 205	p. 116
	Paper	WM-3 (6)	Bioenergy and Alternative Fuels	8:00 - 9:20 a.m.	Glen 203	p. 116
	Panel	YP (5)	Managing Generational Differences in the Workplace	8:00 - 10:00 a.m.	Telus 109	p. 116
Fri AM2						
x	Paper	AB-3 (6)	Emissions and Air Quality Modeling of the Impacts of Alberta Oil Sands Development	10:20 - 11:40 a.m.	Telus 110	p. 117
	Paper	EE-5 (5)	Risk Management & Accidental Release	10:20 - 11:40 a.m.	Glen 201	p. 117
	Panel	EI-2 (4)	CO ₂ Sequestration - Markets and Options	10:20 a.m. - 12:00 p.m.	Glen 206	p. 117
x	Panel	EP-1 (14)	Canadian Air Regulations and Permitting Issues	10:20 a.m. - 12:00 p.m.	Telus 104	p. 118
	Panel	EP-3 (2)	Mock Trial: Cross Examination and Impeachment of Expert Witnesses	10:20 a.m. - 12:00 p.m.	Telus 105	p. 118
	Paper	ES-4 (7)	Stakeholder Involvement	10:20 - 10:40 a.m.	Glen 202 [Back-to-back with ES-5 (7)]	p. 118
	Paper	ES-5 (7)	Greenhouse Gas Management and Other Environmental Programs	10:40 - 11:20 p.m.	Glen 202 [Back-to-back with ES-4 (7)]	p. 118
	Paper	ET-1 (4)	Monitoring Near Road Air Quality	10:20 a.m. - 12:00 p.m.	Glen 208	p. 118
x	Panel	LC (6)	Shale Gas Water Management - Flowback Treatment, Re-Use and Disposal	10:20 a.m. - 12:00 p.m.	Glen 205	p. 119
	Paper	WM-3 (7)	Landfills and Bioreactors - Gas Production and Greenhouse Gas Emission Reduction	10:20 - 11:40 a.m.	Glen 203	p. 119

TECHNICAL PROGRAM TRACKS FOR SPECIFIC INTERESTS

Track	TUE 6/22 PM1	TUE 6/22 PM2	WED 6/23 AM1	WED 6/23 AM2	WED 6/23 PM1	
Air Emissions & Inventories	AB-3 (1a), AM-1 (1), AM-1 (2)/AB-6 (1)	AB-3 (1b), AO-2 (2)			Poster	
Air Monitoring	AO-2 (1), EE-6 (1)	AO-2 (2), EE-6 (2)			Poster	
Air Toxics				AT-1 (1)	Poster	
Compliance & Enforcement				EI-1 (2)	Poster	
Control Technology	AE-1 (1)	AE-1 (2), AE-1 (3)		AE-2 (d)	Poster	
Economy, Energy, and the Environment				EI-2 (1), EP-2 (1)	Poster	
Environment, Health, & Safety					Poster	
Exposures, Risk Assessment & Management		EE-1 (1)		EE-5 (2), WR-2 (2)	Poster	
Federal Facilities		EI-1 (1a)/(1b)		EI-1 (2)	Poster	
Greenhouse Gases and Global Climate	AO-2 (1), YP (2)			EP-1 (3)	Poster	
Indoor Air	AB-7 (1)	AB-7 (2)			Poster	
Industry	AE-1 (1), EI-4 (1), ES-4 (1)	AE-1 (2), AE-1 (3), AO-2 (2), EP-1 (2)			Poster	
International Environmental Studies					Poster	
Legal, Public Participation, and Ethics	EE-5 (1)			EP-3 (1), ITF-11	Poster	
Local Interest	ES-4 (2a), LC (1)	ES-4 (2b)			Poster	
Measurements and Analysis	EE-6 (1)	AM-1 (5)			Poster	
Modeling and Meteorology	AB-3 (1a)	AB-3 (1b)			Poster	
New Source Review		EP-1 (2)			Poster	
Optical Sensing	AO-2 (1)	AO-2 (2)			Poster	
Ozone and Haze			Critical Review		Poster	
Particulates	YP (3a)	YP (3b)			Poster	
Regional/Cultural/Tribal	ES-4 (2a), LC (1)	ES-4 (2b)	Critical Review	ITF-11 (1)	Poster	
Regulatory		AB-6 (2), EP-1 (2)	Critical Review	AT-1 (1)	Poster	
Remote and Satellite Sensing					Poster	
Sustainability	ES-4 (1)	ES-4 (8), ET-2 (1), WR-1 (1)		ES-4 (3)	Poster	
Transportation - Industry and Sources		AB-5 (1), ET-2 (1)			Poster	
Waste Investigation and Management	WR-2 (1)			WM-1 (1), WR-2 (2)	Poster	
Waste Minimization and Pollution Prevention	WM-3 (1)			ES-1 (1), WM-1 (1)	Poster	
Waste Treatment, Remediation	ES-4 (2a), WM-3 (1)	ES-4 (2b), WM-3 (2), WR-1 (1)			Poster	
Young Professionals	YP (2), YP (3a)	YP (3b)	Critical Review	YP (1)	Poster	

	WED 6/23 PM2	THU 6/24 AM1	THU 6/24 AM2	THU 6/24 PM1	THU 6/24 PM2	FRI 6/25 AM1	FRI 6/25 AM2
	AB-1 (1a), AM-1 (3), EI-4 (2)		AB-1 (1b), AM-1 (4)	AT-1 (2), EP-8 (4), ET-1 (2)		EP-8 (6)	AB-3 (6)
	AB-2 (1a)		AB-1 (3), AB-2 (1c), AM-3 (1a)	AM-3 (1b)	AB-2 (1d), AM-3 (1c), AM-4 (1)	AB-1 (5), AM-3 (2)	ET-1 (4)
	YP (4)	AT-3 (1)	AM-3 (2)	AT-1 (2)		AT-3 (3)	
		EI-1 (3)		EP-2 (3)			
	AE-1 (4)	AE-2 (2a)	AE-1 (5a), AE-2 (2b)	AE-1 (5b), AE-2 (2c)	AE-2 (2d), AE-2 (3)	AE-1 (6)	EI-2 (4)
	ES-5 (2), ITF-11 (2)	Keynote [7:30 a.m. start], EI-2 (2a) [9:30 a.m. start]	EI-2 (2b), EP-2 (2)	EP-2 (3), ES-5 (9), ES-4 (6)	ES-1 (2), EP-2 (4)	WM-3 (6)	EI-2 (4)
			EP-8 (3)	LC (3a)	EP-8 (5), LC (3b)		
		AT-3 (1), EE-5 (3)		EE-5 (4a), LC (3a)	LC (3b)	EE-5 (5)	
		EI-1 (3)		EI-1 (6)	EI-1 (5)		
	ES-4 (4), LC (2)	ES-5 (3) [9:30 a.m.start]	AM-1 (4), EP-2 (2), ES-5 (3)	EP-8 (4), ES-5 (9)	ES-5 (4)	EP-8 (6), ES-5 (5), ES-5 (6)	ES-5 (7), WM-3 (7)
	AB-7 (3)/(4)						
	AE-1 (4), , AE-2 (1a)/(1b), EI-3 (1), EI-4 (2)	EE-5 (3)	AE-1 (5a), AE-2 (2b), EI-1 (4), EP-8 (3)	AE-1 (5b), AE-2 (2c), EP-2 (3), ES-5 (9), ES-4 (6)	AE-2 (2d), EP-8 (5)		EP-1 (14)
		IF (1)	AB-1 (3), IF (2)				
							EP-3 (2), ES-4 (7)
	LC (2)	Keynote [7:30 a.m. start]	AM-3 (1a), WM-1 (4)	AM-3 (1b), LC (3a)	AM-3 (1c), LC (3b)	LC (4)	AB-3 (6), EP-1 (14), LC (6)
	AB-2 (1a)		AB-2 (1c)	AM-2 (1)		AB-1 (5), AM-2 (2), AO-1 (2)	
	AB-3 (2a), AB-3 (3a)	AB-1 (2), AB-3 (4)	AB-3 (2b)	AB-3 (3c), AB-3 (5a)	AB-3 (5b)	AB-3 (5c)	AB-3 (6)
			EP-1 (7)	EP-1 (9)			
	AO-1 (1)					AO-1 (2)	
	AB-3 (2a)	EP-1 (5)	AB-3 (2b)		AB-6 (3), EI-4 (3)		
	AB-3 (2a)	AB-1 (2), EP-1 (5)	AB-1 (3), AB-3 (2b)	AB-2 (2)	AB-1 (4)	AB-1 (5)	
	ITF-11 (2)	Keynote [7:30 a.m. start]	AM-3 (1a), WM-1 (4)	AM-3 (1b), LC (3a)	AM-3 (1c), LC (3b)	LC (4)	AB-3 (6), EP-1 (14), LC (6)
	AB-3 (3a), ES-4 (4)	EI-2 (2a) [9:30 a.m. start], EP-1 (5)	EI-1 (4), EP-1 (7), EI-2 (2b)	AB-3 (3c), EP-1 (9), ES-5 (9)	AB-6 (3), EI-2 (3), EI-4 (3)		EP-1 (14)
	AO-1 (1)					AO-1 (2)	
	ES-4 (5), ES-5 (2)			WM-3 (4)	ES-1 (2)		
		ET-1 (1a)	ET-1 (1b)	ET-1 (2)		ET-1 (3)	ET-1 (4)
	WM-1 (2)	WM-4 (1)	WM-1 (4), WM-3 (3)	WM-3 (4)	EI-1 (5), WM-3 (5)	WM-3 (6)	LC (6), WM-3 (7)
	WM-1 (2)	WM-1 (3)	WM-1 (4), WM-3 (3)		WM-3 (5)	WM-3 (6)	WM-3 (7)
	WM-1 (2)	WM-4 (1)	WM-1 (4), WR-2 (3)	EI-1 (6), WR-2 (4)	WM-3 (5)		LC (6)
	YP (4)	Keynote [7:30 a.m. start]		YP (6)		YP (5)	

TECHNICAL SESSIONS

TUESDAY, JUNE 22

TUES. PM1

AB-3 (1a)

Room: Telus 110

6/22/2010 1:20 PM

Paper

Challenges to Air Quality Emissions, Modeling, Deposition, and Measurements

Sponsoring Committee(s): AB-3

Chair: Piotr Staniaszek, Millenium EMS Solutions Ltd.

Co-Chair: Pietro Catizone, TRC Environmental Corp.

1:20 PM

Paper#: 673

Geophysical Data for Regulatory Modeling in Canada

K. Morrison; Hatch, Montreal, QC, Canada

1:40 PM

Paper#: 724

Atmospheric Sampling and Levels of Pesticides in the Canadian Prairie and Lower Fraser Valley Agricultural Regions of Western Canada

R. Raina, L. Sun, P. Hall; University of Regina, Regina, SK, Canada

2:00 PM

Paper#: 751

Consideration of Emissions Variability in Modeling Short-Term Concentrations

R. J. Paine, D. Heinold; AECOM, Westford, MA

2:20 PM

Paper#: 872

Use of MODIS Satellite Measurements of Land Use, Albedo and Leaf Area Index in CALMET

C. Bell, K. Onder, S. Lataille; Golder Associates Ltd., Calgary, AB, Canada

AB-7 (1)

Room: Telus 101/102

6/22/2010 1:20 PM

Paper

Indoor Air Quality - Sources, Measurements, Impacts, and Control

Sponsoring Committee(s): AB-7

Chair: Warren Kindzierski, University of Alberta

Co-Chair: Silvia Martinez, Restek Corporation

1:20 PM

Paper#: 535

Model to Predict Airborne Concentrations of Mercury from Broken Compact Fluorescent Lights

F. D. Hall, J. R. Kominsky; Environmental Quality Management, Inc., Cincinnati, OH

1:40 PM

Paper#: 740

Adsorption of Cable Emitted DEHP (Di-(2ethylhexyl) Phthalate) on Indoor Dust

C. Lee, M. Wang; National Kaohsiung First University of Science and Technology, Kaohsiung, Taiwan

2:00 PM

Paper#: 791

Photodegradation Kinetics of Toluene Using Plasma Modification N-TiO₂ via LED

J. Shie,¹ H. Lin,² C. Chiou,³ Y. Chen,⁴ C. Chang,³ C. Chang⁵;

¹Associate Professor, I-Lan, Taiwan, ²Master Student, I-Lan, Taiwan,

³Professor, I-Lan, Taiwan, ⁴Assistant Professor, Taipei, Taiwan,

⁵Professor, Taipei, Taiwan

2:20 PM

Paper#: 752

Ab Initio and Experimental Studies of VOC Interactions with Ionic Liquid (C₄mimCl) Surfaces

T. Gao, J. M. Andino; Arizona State University, Tempe, AZ

AE-1 (1)

Room: Glen 209

6/22/2010 1:20 PM

Paper

NO_x Control for Stationary Sources

Sponsoring Committee(s): AE-1, AE-2

Chair: Howard Hohl, Eisenmann Corp.

Co-Chair: Arijit Pakrasi, Shaw Environmental, Inc.

1:20 PM

Paper#: 33

Reduction of NO_x Emissions from Stoker-Fired Coal Boilers Using Combustion Modifications to Create Staged Combustion Zones

R. Hawks; Environmental Quality Mgmt., Cincinnati, OH

1:40 PM

Paper#: 48

Use of SCR_s for Large Diesel Generators

D. M. Bisset; Bisset Engineering, Vaughan, ON, Canada

2:00 PM

Paper#: 164

Influence of the Pretreatment Condition on the Selective Catalytic Reduction of NO by C₃H₆ over Cu-Ti-PILC

X. Li, G. Lu, Z. Qu, Q. Zhao, G. Chen, G. Chen; Dalian University of Technology, Dalian, China

2:20 PM

Paper#: 186

Photo-assisted Selective Catalytic Reduction of NO with Ammonia in an Annular Photoreactor Coated with TiO₂ Thin Film

Y. Chou, Y. Ku; National Taiwan University of Science and Technology, Taipei City, Taiwan

AM-1 (1)

Room: Macleod A1

6/22/2010 1:20 PM

Paper

Implementation of EPA's New Emissions Inventory System

Sponsoring Committee(s): AM-1

Chair: Tom Driscoll, U.S. EPA

TECHNICAL SESSIONS

1:20 PM

Paper#: 952

Emission Inventories Comparison for a Typical Brazilian Petroleum Refinery

S. C. Marsal,¹ W. N. Chan²; ¹PETROBRAS S.A., Cubatão, Brazil, ²PETROBRAS S.A., Paulínia, Brazil

1:40 PM

Paper#: 1051

Mobile Emission Inventory in Tehran Using IVE Model

Y. Rashidi, M. Najafi, A. Mansoori, A. Ashayeri; Air Quality Control Company, Tehran, Iran, Islamic Republic of

2:00 PM

Paper#: 1400

Air Force Emission Inventories - Past, Present, and Future

V. Bonifera,¹ F. Castaneda,² J. Ulmer²; ¹Booz Allen Hamilton, Arlington, VA, ²HQ AFCEE, Brooks City-Base, TX

AM-1(2)/AB-6(1)

Room: Telus 104

6/22/2010 1:20 PM

Panel

Biomass Burning Emission Inventories and their Impact on Air Quality: Regional to Global

Chair: Bret Schichtel, Cooperative Institute for Research in the Atmosphere

Biomass burning is one of the primary causes of elevated airborne particulate matter, ozone precursors, and regional haze. There are numerous on-going and innovative efforts to enhance the collection and characterization of emissions in the National Emissions Inventory and models used for environmental management and policy activities. This panel will discuss tools, data collection, and modeling efforts to support NEI production. The panel will present emission evaluation tools, ground-based efforts, use of top-down satellite-based techniques (e.g., MODIS-derived emission inventory), contribution of biomass burning to PM_{2.5} and haze, and perspectives from EPA and State officials responsible for NEI.

Panelists:

- Narasimhan 'Sim' Larkin, U.S. Forest Service
- Tom Moore, Western Governors Association

AO-2 (1)

Room: Telus 103

6/22/2010 1:20 PM

Paper

Greenhouse Gas Measurement with Optical Techniques

Sponsoring Committee(s): AO-2

Chair: Eben Thoma, U.S. EPA

Co-Chair: Ram Hashmonay, ENVIRON

1:20 PM

Paper#: 539

Determining Fugitive Methane Emission Rates at the Springhill Landfill

R. Wyles, J. Ramkellawan, C. L. Y. Wong; Golder Associates, Burnaby, BC, Canada

1:40 PM

Paper#: 636

Measurement of Methane Emissions from an Anaerobic Lagoon Using Horizontal-Scanning OP-TDLAS and a Backward-Lagrangian Stochastic Model

R. H. Grant, M. T. Boehm; Purdue University, W. Lafayette, IN

2:00 PM

Paper#: 570

Cost-Effectiveness in GHG Fugitive Emission Detection and Quantification

J. Wilwerding, S. Schroeder; Sage Environmental Consulting, Denver, CO

2:20 PM

Paper#: 206

The Use of the Orbiting Carbon Observatory to Measure Greenhouse Gas Emissions from Landfills

S. Vigil,¹ D. Crisp²; ¹Civil and Environmental Engineering Department, California Polytechnic State University, San Luis Obispo, CA, ²Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA

2:40 PM

Paper#: 1074

An Innovative Idea for Monitoring and Reducing Ruminant Methane Emissions

D. MacTaggart, R. S. Zimmerman, P. Zimmerman, J. Frein; C-Lock Technology, Inc., Rapid City, SD

EE-5 (1)

Room: Glen 208

6/22/2010 1:20 PM

Paper

Risk Communication

Sponsoring Committee(s): EE-5

Chair: Heidi Rous, PCR Services Corporation

Co-Chair: Michael Weaver, Science Applications International Corporation (SAIC)

1:20 PM

Paper#: 65

Is It a Health Risk or a Hazard Risk...Or Both?

L. Theodore, A. J. Caraccio; Manhattan College Department of Chemical Engineering, Riverdale, NY

1:40 PM

Paper#: 737

Bridging the Gap between Localized Air Modeling Data and Ambient Air Monitoring Data to Determine Health Risks at a Los Angeles School Site

J. Baldino, H. Rous; PCR Services Corporation, Santa Monica, CA

2:00 PM

Paper#: 718

Communication of Methods, Assumptions, and Results of a Multi-Media Human Health Risk Assessment.

D. Treissman, E. Haack, E. Baulk, G. Ramesh; WorleyParsons, Calgary, AB, Canada

TECHNICAL SESSIONS

EE-6 (1)

Room: Glen 201

6/22/2010 1:20 PM

Paper

Odor Measurement, Effects, and Management

Sponsoring Committee(s): EE-6

Chair: Michael McGinley, St. Croix Sensory, Inc.

Co-Chair: Tony van der Vooren, AMEC

1:20 PM

Paper#: 614

Sampling and Analysis Methodology Concerns for Volatile Organo-Sulfur Compounds (VOSCs)

E. C. Sivret, G. Parsci, R. M. Stuetz; The University of New South Wales, Sydney, Australia

1:40 PM

Paper#: 124

Swine Odor Source Chemical Characterization

S. L. Trabue, T. Sauer, R. Pfeiffer; USDA Agricultural Research Service, Ames, IA

2:00 PM

Paper#: 786

Innovative Approaches to the Management of Industrial Odour

P. Beauchemin, O. Petrov; Envirochem Services Inc., North Vancouver, BC, Canada

2:20 PM

Paper#: 1019

Targeted Odor Control at Wastewater Treatment Plants: Four Case Studies of Site-Wide Reduction Plans

R. Saari,¹ J. Urbain²; ¹Environment Canada, Vancouver, BC, Canada, ²AECOM, Markham, ON, Canada

2:40 PM

Paper#: 826

Monitoring and Regulation of Odours - Pitfalls for Consultants

J. Willms; Willms & Shier Environmental Lawyers, Toronto, ON, Canada

EI-4 (1)

Room: Macleod A4

6/22/2010 1:20 PM

Paper

Environmental Issues in the Chemical/Petroleum Industries

Sponsoring Committee(s): EI-4

Chair: Richard Siegel, R & B Consulting Services

1:20 PM

Paper#: 109

Abqaiq Plants - The Journey to Zero Liquid Discharge

E. El-ayoubi; Saudi Aramco, Abqaiq, Saudi Arabia

1:40 PM

Paper#: 1031

A Management Process of Floating Roof Storage Tank Equipment for Air Quality Compliance

T. Shoberg; Barr Engineering Company, Duluth, MN

2:00 PM

Paper#: 61

Numerical Simulation of Sour Gas Flares

A. Chambers,¹ J. Thornock,² P. Smith²; ¹Alberta Research Council, Edmonton, AB, Canada, ²University of Utah, Salt Lake City, UT

ES-4 (1)

Room: Glen 202

6/22/2010 1:20 PM

Paper

Corporate Sustainability Strategies

Sponsoring Committee(s): ES-4

Chair: Sardar Hassan, DoD IG Office

1:20 PM

Paper#: 173

Trends in Corporate Sustainability Reporting

J. L. Kraus, M. J. Thorn; Source 44, San Diego, CA

1:40 PM

Paper#: 696

Financializing Sustainability

T. J. Morahan; Delta Global Corporate Consultancy, Williamsville, NY

ES-4 (2a)

Room: Telus 111

6/22/2010 1:20 PM

Panel

Advances in Oil Sands Environmental Management and Reclamation: Issues and Challenges

Sponsoring Committee(s): ES-4

Chair: Dr. Joseph Fournier, Suncor Energy Inc.

Co-Chair: Darrell Martindale, Shell Canada Energy

This extended panel session has 9 presenters. The initial presentations will provide an overview of the Regional Aquatics Monitoring Program (RAMP), the Alberta Environment Water Quality Monitoring Program supporting Water Quality Frameworks for the Muskeg and Athabasca Rivers and cumulative environmental management in the Oil Sands Region illustrating the Cumulative Environmental Management Association (CEMA) contribution. This will be followed by an overview of reclamation research projects of the Canadian Oil Sands Network for Research and Development (CONRAD) with specific examples relating to tailings ponds. Issues related to wildlife management, historical resource management and waste management will be addressed.

TECHNICAL SESSIONS

LC (1)

Room: Glen 205

6/22/2010 1:20 PM

Panel

New Natural Gas: Opportunities and Environmental Challenges in North America Unconventional Gas

Chair: Travis Davies, Canadian Association of Petroleum Producers

This panel session has four presenters. The session will discuss the recent technological developments which allow for the production of unconventional natural gas resources in Canada and the United States and which will bring on a new, massive, and long-term supply of energy to the North American energy mix. This has the potential to change consumer behavior and options. The opportunities and environmental challenges of these unconventional natural gas resources will also be discussed.

WM-3 (1)

Room: Glen 203

6/22/2010 1:20 PM

Paper

Anaerobic Digestion and Composting

Sponsoring Committee(s): WM-3

Chair: Lee Lundberg, Veolia Water North America

Co-Chair: Samuel Vigil, CA Poly. State University

1:20 PM

Paper#: 543

Municipal Wastewater Treatment Plant Uses Direct Steam Injection for Anaerobic Digestion

L. Van Dixhorn,¹ J. Hutchel²; ¹Hydro-Thermal, Waukesha, WI, ²City of Crystal Lake Wastewater Dept, City of Crystal Lake, IL

1:40 PM

Paper#: 817

Evaluation of Macroalgae *Gracilaria* for Methane Production in Anaerobic Digestion System

M. Chiou, S. Wang, C. Huang; Tunghai University, Taichung, Taiwan

2:00 PM

Paper#: 1089

Evaluation of the Anaerobic Digestion of the Organic Fraction of Solid Waste Produced at the Largest Wholesale Central Market of Mexico

C. Rodriguez-Tapia,¹ M. Gutierrez-Castillo,¹ R. Sosa -Echeverria,² H. Bravo,² L. R. Tovar¹; ¹National Polytechnic Institute, Mexico, Mexico, ²Centro de Ciencias de la Atmosfera, UNAM, Mexico, Mexico

2:20 PM

Paper#: 1026

The Fate of Elm Diseases in a Municipal Composting Environment

K. Wichuk, J. Tewari, V. Bansal, D. McCartney; University of Alberta, Edmonton, AB, Canada

2:40 PM

Paper#: 156

Compost Stability Evaluation for Methane Oxidation in High-Rate Biofilter Systems

U. Mancebo, P. Hettiaratchi; University of Calgary, Calgary, AB, Canada

WR-2 (1)

Room: Glen 204

6/22/2010 1:20 PM

Panel

RCRA and Industrial Waste Management – What's New and What May Be Around the Corner

Sponsoring Committee(s): WR-2

Chair: Dan Mueller, MCG

Although industrial and hazardous waste management regulations have been in place for some time, new issues always present themselves. Consider the RCRA issues raised by the dam safety/coal combustion residues management triggered by the 2008 dam failure at TVA's Kingston, TN power plant. This panel will be comprised of regulatory and industry representatives and discuss current developments of industrial and hazardous waste management as well as potential regulatory initiatives.

YP (2)

Room: Telus 109

6/22/2010 1:20 PM

Panel

Carbon Capture and Sequestration 101

Sponsoring Committee(s): YP, AE-1

Chair: Holly Krutka, ADA-ES

Co-Chair: Anne Marie Bourgeois, SIDD

If CO₂ emissions are to be reduced in the near future, carbon capture and sequestration (CCS) from point sources must play an important role. Research, development, and demonstrations in this field are quickly growing and are providing opportunities and challenges to the environmental industry. This session is designed to provide an introduction and background to the main components of CCS:

1. Post-combustion CO₂ capture from conventional power plants
2. Pre-combustion CO₂ capture from integrated gasification and combined cycles (IGCC) plants
3. Options for sequestration, including enhanced oil recovery and underground storage
4. Public policy related to CCS

This panel session is designed for those who are interested in learning more about the fundamentals related to this exciting field. This panel session is sponsored by the Young Professionals (YPs) as well as AE-1.

Panelists:

- Holly Krutka, ADA-ES
- Katherine Dombrowski, URS Corporation
- John Zhou, Alberta Innovates

TECHNICAL SESSIONS

YP (3a)

Room: Telus 108

6/22/2010 1:20 PM

Panel

Particulate Matter 101

Sponsoring Committee(s): YP

Chair: Delbert Eatough, Brigham Young University

Co-Chair: Madhan Selvaraj, Stantec

Co-Chair: Prakash Doraiswamy, State University of New York at Albany

Understanding particles in the atmosphere is a critical issue important to environmental scientists. This Panel will overview the key issues, what is known, how we arrived where we are and the unanswered questions. Topics to be covered in Part 1 (YP (3a)) include PM Ambient Air Quality Standards; PM and Health; and Composition and Sampling.

Panelists:

- Lindsay Stanek, U.S. EPA
- Jeffrey Brook, Environment Canada
- C. Arden Pope, Brigham Young University
- John Watson, Desert Research Institute
- Delbert Eatough, Brigham Young University

TUES. PM2

AB-3 (1b)

Room: Telus 110

6/22/2010 4:00 PM

Paper

Challenges to Air Quality Emissions, Modeling, Deposition, and Measurements

Sponsoring Committee(s): AB-3

Chair: Piotr Staniaszek, Millenium EMS Solutions Ltd.

Co-Chair: Pietro Catizone, TRC Environmental Corp.

4:00 PM

Paper#: 906

Challenges for Making Ozone, PM_{2.5} and Visibility Projections in Remote Regions with Sparse Measurement Databases

S. Kembal-Cook, T. Shah, R. E. Morris; ENVIRON International Corporation, Novato, CA

4:20 PM

Paper#: 913

Uncertainty Analysis of Fugitive Dust Sampling Strategies

C. Cowherd; Midwest Research Institute, Kansas City, MO

4:40 PM

Paper#: 869

CALPUFF Model Sensitivity Analysis - Model Switch Comparison

G. Unrau, K. Onder, R. Nambiar; Golder Associates Ltd., Calgary, AB, Canada

5:00 PM

Paper#: 1071

Do Models Get It Right? Tracking Sulfur Deposition in Complex Terrain: Comparing CALPUFF Output to Measurements

A. Norman,¹ T. ENSC Class of 2006,¹ P. Staniaszek²; ¹The University of Calgary, Calgary, AB, Canada, ²Millenium EMS Solutions, Calgary, AB, Canada

AB-5 (1)

Room: Telus 109

6/22/2010 4:00 PM

Paper

Community (Transportation) Noise Issues

Sponsoring Committee(s): AB-5

Chair: Jordan Haywood, Siemens Energy, Inc.

Co-Chair: Roger Wayson, Volpe Trans. System Center

4:00 PM

Paper#: 21

Uncertainties in Acoustical Measurement and Estimation and Their Effects on Community Noise

R. J. Peppin; SCANTEK, INC, Columbia, MD

4:20 PM

Paper#: 941

On-Board Sound Intensity Measurements: The Florida Experience

R. L. Wayson,¹ J. M. MacDonald,² M. Berrios³; ¹Volpe National Transportation Systems Center, Cottonwood Shores, TX, ²Consulting Acoustic Engineer, Winter Springs, FL, ³Florida Dept. of Transportation, Tallahassee, FL

4:40 PM

Paper#: 719

Urban Noise and AUC Rule 012

H. de Haan; Golder Associates Ltd., Calgary, AB, Canada

5:00 PM

Paper#: 536

Noise Pollution in Bogotá City: A Pilot Study

J. A. Pacheco Molano, J. Franco Ramirez, E. Behrentz Valencia; Universidad de los Andes, Bogotá, Colombia

TECHNICAL SESSIONS

AB-6 (2)

Room: Macleod A1

6/22/2010 4:00 PM

Panel

Periodic Evaluation of Current and Predicted Visibility Conditions Under the United States Regional Haze Regulations

Sponsoring Committee(s): AB-6

Chair: Robert Paine, AECOM

Co-Chair: Scott Archer, Bureau of Land Management

In 1999, the U.S. EPA implemented the Regional Haze Rule (RHR), which has the goal of providing natural visibility conditions to protected areas such as National Parks in the U.S. by the year 2064. The initial phase of the RHR involved a monitoring period of 2000-2004 to establish baseline visibility conditions. The current activity in the rule implementation involves, in part, a review of emissions retrofit options for major sources put into production between 1962 and 1977 (Best Available Retrofit Technology, or BART). Other issues in the current review of State Implementation Plans (SIPs) for the RHR implementation involve BART proposals as well as a review of Reasonable Further Progress to determine how each state will work toward the goal of natural conditions by the year 2064, with the prospect of periodic reviews of this progress about every 10 years and an initial progress milestone by the year 2018. The implementation of BART and review of Reasonable Further Progress have been complicated by several factors:

- The definition of what constitutes BART for individual sources has been highly contested in certain cases.
- In some areas, natural sources of haze such as wildfires and wind blown dust cannot reasonably be controlled.
- In some areas, even the total shutdown of all anthropogenic sources of pollution would not even begin to approach the goal of what is currently defined as natural conditions.
- International emissions, such as those from Canada, cannot be controlled or projected by U.S. regulations, but they can contribute significantly to haze in certain areas.
- Dispersion models used to project improvements in visibility have technical limitations.
- Measurements of haze-causing particulate species have their own limitations.

The panelists will describe their experiences in the implementation of the Regional Haze Rule program and progress of various regions of the U.S. toward the goal of natural visibility conditions.

Panelists:

- Carol Kemker, U.S. Environmental Protection Agency
- Susan Wierman, MARAMA
- C.V. Mathai, Arizona Public Service
- Tom Moore, Western Regional Air Partnership
- John Watson, Desert Research Institute
- Chuck McDade, University of California at Davis

AB-7 (2)

Room: Telus 101/102

6/22/2010 4:00 PM

Paper

Indoor Air Quality - Investigations and Remediation

Sponsoring Committee(s): AB-7

Chair: Glenn Morrison, University of Missouri - Rolla

Co-Chair: Michael McGinley, St. Croix Sensory, Inc.

4:00 PM

Paper#: 209

Preliminary Results from a Field Study Investigating the Impact of Ventilation Rates on Indoor Air Quality and the Respiratory Health of Asthmatic Children in Quebec City, Canada during 2008-09

D. G. Aubin,¹ D. Won,¹ D. Gauvin,² D. Fugler,³ H. Schleibinger,¹ P. Lajoie²; ¹National Research Council of Canada, Ottawa, ON, Canada, ²Institut National de Santé Publique du Québec, Québec City, QC, Canada, ³Canada Mortgage and Housing Corporation, Ottawa, ON, Canada

4:20 PM

Paper#: 630

Seasonal Variation of Airborne Particles Inside Emperor Qin's Terra-Cotta Museum, China: A Study by SEM-EDX

T. Hu,¹ J. Cao,¹ S. Lee,² J. C. Chow,³ J. G. Watson,³ K. Ho,² W. Ho,² B. Rong,⁴ Z. An¹; ¹Institute of Earth Environment, Chinese Academy of Science, Xi'an, China, ²Department of Civil and Structural Engineering, The Hong Kong Polytechnic University, Hong Kong, Hong Kong, ³Division of Atmospheric Sciences, Desert of Research Institute, Reno, NV, ⁴Emperor Qin's Terra-cotta Warriors and Horses Museum, Xi'an, China

4:40 PM

Paper#: 572

Characterizing the Range of Air Pollutants Exposure in Urban Microenvironments: A Case Study for Latin America

E. Behrentz, M. Espinosa; Universidad de los Andes, Bogota, Colombia

5:00 PM

Paper#: 1151

Distributions of Hospital Indoor Air Pollutants in Different Area and Air Conditioning System

C. Jung,¹ P. Wu,² H. Su,¹ J. Kang,³ C. Chou⁴; ¹Dept. of Environmental and Occupational Health, College of Medicine, National Cheng Kung University, Tainan, Taiwan, ²Dept. of Occupational Safety and Health, Chang Jung Christian University, Tainan, Taiwan, ³Inst. of Environmental Engineering and Management, Taipei, National Taipei University of Technology, Taipei, Taiwan, ⁴Researcher Special Project Division, Foundation of Taiwan Industry Service, Taipei, Taiwan

5:20 PM

Paper#: 547

Indoor Environmental Quality at a LEED Gold Office Building

I. C. MacGregor, B. P. Goodwin, M. G. Nishioka; Battelle, Columbus, OH

TECHNICAL SESSIONS

AE-1 (2)

Room: Glen 209

6/22/2010 4:00 PM

Paper

Multi-Pollutant Monitoring and Control Technologies for Cement Kiln Air Emissions

Sponsoring Committee(s): AE-1, EI-5

Chair: Gary Elliott, Lafarge North America

Co-Chair: Constance Senior, Reaction Engineering

4:00 PM

Paper#: 31

Reduction of Mercury Emissions from Preheater/Precalciner Cement Kilns Through the Use of Thermal Desorption of Kiln Feed

R. Hawks; Environmental Quality Mgmt., Cincinnati, OH

4:20 PM

Paper#: 34

Verification of Microfine Lime Theoretical Model for SO₂ Removal in Precalciner Cement Plants

R. Hawks,¹ J. Schwab²; ¹Environmental Quality Mgmt., Cincinnati, OH, ²Envirocare International, Inc., American Canyon, CA

4:40 PM

Paper#: 143

Making Mercury Measurements at Cement Kilns Using Sorbent Traps and Thermal Zeeman AA Analysis

P. J. Dufresne, J. Siperstein, Q. He, A. Sipershteyn; Ohio Lumex, Twinsburg, OH

5:00 PM

Paper#: 680

Experience in Europe with Multi Pollutant Monitoring Systems for Cement Kilns

B. J. Andres; Consulting Emissions- und Prozessmesstechnik, Biebergemund, Germany

5:20 PM

Paper#: 1419

Mercury Emissions Reduction from Portland Cement Kilns using Wet Scrubbers

C. Senior; Reaction Engineering International, Salt Lake City, UT

AE-1 (3)

Room: Glen 205

6/22/2010 4:00 PM

Paper

Control Technologies for Fine Particulate Matter

Sponsoring Committee(s): AE-1, AB-1

Chair: Hardik Shah, Southern Environmental Inc.

Co-Chair: John McKenna, ETS International

4:00 PM

Paper#: 112

Synergistic Effect of Modern ESP Design Produces Particulate Emissions Comparable to Fabric Filters

M. Chambers,¹ G. J. Grieco,² J. R. Chaney³; ¹Southern Environmental, Pensacola, FL, ²ACA, Morris Plains, NJ, ³Ameren/UE, St. Louis, MO

4:20 PM

Paper#: 585

Wet Electrostatic Precipitator Control for Meeting Metals Emission Standards

A. Bartocci; Envitech, Inc., San Diego, CA

4:40 PM

Paper#: 49

Next Generation Wet Electrostatic Precipitators

H. G. Shah, J. Caine; Southern Environmental Inc., Pensacola, FL

5:00 PM

Paper#: 154

Application of Silica Precursor to Reduce Toxic Metal Emissions from Gas Metal Arc Welding Process

J. Wang,¹ N. Topham,¹ J. Huang,¹ M. Kalivoda,¹ C. Wu,¹ Y. Hsu,² S. Oh,³ K. Cho,⁴ K. Paulson⁵; ¹Department of Environmental Engineering Sciences, University of Florida, Gainesville, FL, ²Wood Buffalo Environmental Association, Ft. McMurray, AB, Canada, ³Department of Environmental Engineering, Sangmyung University, Seoul, Korea, Republic of, ⁴Korea Institute of Geoscience and Mineral Resources, Daejeon, Korea, Republic of, ⁵Naval Facilities Engineering Command, Washington Navy Yard, DC

5:20 PM

Paper#: 1404

The Challenges of Reducing PM_{2.5} and Ozone Exposure Levels in the South Coast Air Basin

L. T. Tisopoulos, J. Cassmassi, M. Pham; SCAQMD, Diamond Bar, CA

AM-5 (1)

Room: Telus 104

6/22/2010 4:00 PM

Paper

Data Analysis and Quality Assurance

Sponsoring Committee(s): AM-5

Chair: Christopher Rogers, MACTEC Engineering & Consulting, Inc.

4:00 PM

Paper#: 1053

Are the Current CO₂ Emissions Measurements from US Coal Fired Power Plants Adequate for the Billion Dollar Carbon Market?

R. S. Zimmerman, M. J. Billars, A. K. Muttyam, D. MacTaggart; C-Lock Technology, Inc, Rapid City, SD

4:20 PM

Paper#: 907

Temporal and Spatial Trends in Continuous PM_{2.5} Mass Measurements in Atlanta and Macon, Georgia, 2003 - 2010

A. J. Butler, B. Handziuk; Mercer University, Macon, GA

4:40 PM

Paper#: 1101

Solution Gas Flaring and Venting in Alberta: Characterization, Trends, and Potential for Mitigation

A. R. Coderre, M. R. Johnson; Carleton University, Ottawa, ON, Canada

TECHNICAL SESSIONS

5:00 PM

Paper#: 1090

Evaluating the Contribution from Pulp Mills on Ambient Monitors in Prince George

D. C. Fudge,¹ P. Jackson²; ¹BC Environment, Prince George, BC, Canada, ²UNBC, Prince George, BC, Canada

5:20 PM

Paper#: 1196

Evaluation of Uncertainty on the GHG Emission Factor for a Type of Furnace

J. Woo,¹ H. Bae,¹ H. Kim,¹ K. Han,² B. Min²; ¹KRISS, Daejeon, Korea, Republic of, ²KIER, Daejeon, Korea, Republic of

AO-2 (2)

Room: Telus 103

6/22/2010 4:00 PM

Paper

Optical Measurement of Emissions from Oil and Gas Production

Sponsoring Committee(s): AO-2, AO-3

Chair: Chang-Fu Wu, National Taiwan University

Co-Chair: Vincent Farley, Telops

4:00 PM

Paper#: 555

Application of Smart LDAR on an European Refinery Site for Detection and Quantification of Fugitive Emissions

M. Benassy; Total Raffinage Marketing, Solaize, France

4:20 PM

Paper#: 70

Detection and Quantification Fugitive Emissions from Colorado Oil and Gas Production Operations Using Remote Monitoring

E. D. Thoma,¹ B. A. Mitchell,¹ B. C. Squier,¹ J. M. DeWees,² R. R. Segall,² C. Beeler,³ M. T. Modrak,⁴ M. Sharooz Amin,⁴ A. B. Shah,⁵ C. W. Rella,⁶ R. L. Apodaca⁶; ¹U.S. EPA ORD, RTP, NC, ²U.S. EPA OAQPS, RTP, NC, ³US EPA Region 8, Denver, CO, ⁴ARCADIS, DURHAM, NC, ⁵ARCADIS, Durham, NC, ⁶Picarro, Sunnyvale, CA

4:40 PM

Paper#: 866

Measurement of Volatile Organic Compounds from Petrochemical Barges using Optical Remote Sensing Approaches

M. T. Modrak,¹ J. Holt,² E. H. Daughtrey,³ R. Hashmonay⁴; ¹ARCADIS U.S., Inc., Durham, NC, ²Memphis & Shelby County Health Dept., Memphis, TN, ³Alion Science & Technology, Durham, NC, ⁴ENVIRON Corp., Chapel Hill, NC

5:00 PM

Paper#: 1913

Smart LDAR Quality: Problems and Solutions

E. Dupuis, F. Thibodeau; SNC-Lavalin Environment Inc., Longueuil, QC, Canada

5:20 PM

Paper#: 1121

Quasi-Stationary Barge Emission Study

M. Modrak, M. S. Amin; ARCADIS U.S., Inc., Research Triangle Park, NC

EE-1 (1)

Room: Glen 208

6/22/2010 4:00 PM

Paper

Exposure Assessments for Nanoparticles, PM_{2.5}, and Polyaromatic Hydrocarbons

Sponsoring Committee(s): EE-1

Chair: David Brenner, Neptune and Co., Inc.

Co-Chair: James Morrow, J. W. Morrow

4:00 PM

Paper#: 665

Potential Inhalation Exposure of Consumers to Nanoparticles and Their Agglomerates Due to the Use of Nanotechnology-Based Cosmetic Powders

Y. Nazarenko,¹ T. Han,¹ P. Liou,² G. Mainelis¹; ¹Rutgers, the State University of New Jersey, New Brunswick, NJ, ²Environmental and Occupational Health Sciences Institute and UMDNJ-Robert Wood Johnson Medical School, Piscataway, NJ

4:20 PM

Paper#: 827

Hazardous Air Pollutant and Water Adsorption on Nanomaterials: An Aggravated Human Exposure?

N. M. Facundo Torres, D. Ramirez; Texas A&M University-Kingsville, Kingsville, TX

4:40 PM

Paper#: 1411

Particulate Air Pollution and Health Effects for Cardiovascular and Respiratory Causes over an Industrial Neighborhood; Linking Epidemiological Time Series Studies and the Power of a Health Perception Survey

L. Diaz-Robles,¹ M. P. Silva,² N. Schiappacasse P.,¹ M. Guerrero,¹ J. C. Ortega,¹ P. Etcharren,¹ G. Oyola,³ N. Fernandez⁴; ¹Catholic University of Temuco, Temuco, Chile, ²Universidad Mayor, Temuco, Chile, ³National Environmental Commission (CONAMA), Biobio Region, Chile, ⁴Environmental Commission (CONAMA), Biobio Region, Chile

EE-6 (2)

Room: Glen 201

6/22/2010 4:00 PM

Paper

Odor Modeling and Monitoring

Sponsoring Committee(s): EE-6

Chair: Anna Bokowa, Canadian Ortech Env.

Co-Chair: Larry Hottenstein, ERM

4:00 PM

Paper#: 606

Management Framework for Fugitive Emissions Control at a Large Oil Tank Terminal in Alberta

A. L. Fisher, B. Z. Kucewicz, M. Schroeder; Stantec Consulting Ltd., Calgary, AB, Canada

TECHNICAL SESSIONS

4:20 PM

Paper#: 930

Application of Quantitative Risk Assessment Techniques to Evaluate Odors

A. Springer, R. Person, K. Bajwa; Stantec Consulting, Calgary, AB, Canada

4:40 PM

Paper#: 691

Development of a Livestock Odor Dispersion Model (LODM): Model Theory and Development

Z. Yu,¹ H. Guo,¹ C. Lague²; ¹University of Saskatchewan, Saskatoon, SK, Canada, ²University of Ottawa, Ottawa, ON, Canada

EI-1 (1a)/(1b)

Room: Telus 106

6/22/2010 4:00 PM

Paper

Federal Facilities: Executive Order 13423 and Beyond

Sponsoring Committee(s): EI-1

Chair: David Kumar, U.S. Air Force

Co-Chair: Michael McFarland, Utah State University

4:00 PM

Paper#: 58

Preparing a Greenhouse Gas Baseline Inventory at Hill Air Force Base in Conjunction with Newly Promulgated Greenhouse Gas Rulemaking

S. Rasmussen,¹ G. Palmer,¹ S. L. Van Klooster,² M. York,² M. Carter²; ¹Hill Air Force Base, Hill AFB, UT, ²CH2M Hill, Salt Lake City, UT

4:20 PM

Paper#: 53

Operationalizing Energy and Environmental Data in an Asset Management System

G. L. Hart; Tinker Air Force Base, MWC, OK

4:40 PM

Paper#: 1630

Air Force Environmental Management System Implementation: Status Review & Next Steps

K. Winnie,¹ C. Tipton²; ¹United States Air Force, Brooks AFB, TX, ²Booz Allen Hamilton, TX

5:00 PM

Paper#: 541

Implementing EO 13423 through Eglin's EAI Toolset

K. M. Sculthorpe; Eglin AFB/SAIC, Eglin AFB, FL

5:20 PM

Paper#: 546

Integrating Green Base Tracking and an Environmental Management System

D. Hansell,¹ D. Stimson²; ¹EM-Assist, Layon, UT, ²Marine Corps Logistics Base, Barstow, CA

5:40 PM

Paper#: 1629

Regulatory/Policy and Other Key Drivers and Features of Executive Order 13423 Chemical Reduction Requirements at Air Force Facilities

D. Kumar; HQ United States Air Force, Washington, DC

EP-1 (2)

Room: Glen 206

6/22/2010 4:00 PM

Panel

New Source Review (NSR) Reform: Recent Developments and Issues

Sponsoring Committee(s): EP-1, EP-4

Chair: Gary McCutchen, RTP Environmental Associates, Inc.

Co-Chair: Ken Weiss, ERM

This panel will discuss significant NSR rule developments and explain how these developments affect applicants and agencies. Of particular interest are the role of NSR in (1) greenhouse gas regulation and (2) PM_{2.5} permits.

Panelists:

- Raj Rao, U.S. EPA
- Matthew Cohen, Stoel Rives, LLP

ES-4 (2b)

Room: Telus 111

6/22/2010 4:00 PM

Panel

Advances in Oil Sands Environmental Management and Reclamation

Sponsoring Committee(s): ES-4

Chair: Dr. Joseph Fournier, Suncor Energy Inc.

ES-4 (8)

Room: Glen 202

6/22/2010 4:00 PM

Paper

Natural Resource Sustainability Including Land Use, Water, and Agriculture

Sponsoring Committee(s): ES-4

Chair: Flint Webb, SAIC

4:00 PM

Paper#: 903

The Influence of Climate Change on Pollinator Decline

R. E. Owen; Mount Royal University, Calgary, AB, Canada

4:20 PM

Paper#: 777

Future Energy Demands in India, China, and USA: Energy Mix vs. Air Pollution Potential

A. Paduru, B. Kura; University of New Orleans, Metairie, LA

TECHNICAL SESSIONS

4:40 PM

Paper#: 1104

Green Buildings: Comparison of Environmental Parameters in the U.S. and India

A. K. Tilwankar,¹ S. R. Asolekar,¹ K. Carr,² A. Sengupta,² B. Kura²;
¹Indian Institute of Technology Bombay, Mumbai, India, ²University of New Orleans, New Orleans, LA

5:00 PM

Paper#: 1025

Brackish Water Desalination Using Renewable Energy

K. Gillespie, L. Moon; Montana Tech of the University of Montana, Butte, MT

ET-2 (1)

Room: Macleod A4

6/22/2010 4:00 PM

Paper/Panel

Land Use and Transportation Policies to Build Sustainable Communities

Sponsoring Committee(s): ET-2, ET-1

Chair: Walter Arenstein, Writrac Consulting

Co-Chair: John Holtzclaw, Sierra Club

This panel will provide an overview of strategies to address land use and reduce growth in vehicle miles travelled as a means of achieving NAAQS pollutant and greenhouse gas reductions. It will include an overview of transportation's contribution to air quality issues and trends in vehicle miles travelled growth, available resources/guidance documents, upcoming federal legislation, and the experiences of two metropolitan planning organizations with respect to land use and VMT measures that have been implemented in their regions.

Panelists:

- Jeff Houk, FHWA
- John Holtzclaw, Sierra Club
- Carrie Reese, NCTCOG
- Harold Brazil, MTC

Paper#: 10

Efficient Edge Cities of the Future

S. Raney; Cities21, Palo Alto, CA

Paper#: 554

A Plan to Efficiently and Conveniently Unbundle Car Parking Costs

M. R. Bullock,¹ J. R. Stewart²; ¹Sierra Club California's Energy-Climate Committee, Oceanside, CA, ²University of the West, Los Angeles, CA

Paper#: 927

Establishing Regional Transportation Performance Targets in Support of Climate Change Mitigation, Growth Management, and Sustainable Transportation in Metropolitan Vancouver

R. Kan,¹ E. Hou,¹ G. Cross²; ¹Metro Vancouver (Greater Vancouver Regional District), Burnaby, BC, Canada, ²TransLink (South Coast British Columbia Transportation Authority), Burnaby, BC, Canada

WM-3 (2)

Room: Glen 203

6/22/2010 4:00 PM

Paper

Municipal Waste - Thermal Processing, Reuse, and Treatment

Sponsoring Committee(s): WM-3

Chair: Samuel Vigil, CA Poly. State University

Co-Chair: Lee Lundberg, Veolia Water North America

4:00 PM

Paper#: 196

Small Waste Incinerator for Remote Communities

A. J. Liem, A. Chhibber; Westland Environmental Services Inc, Edmonton, AB, Canada

4:20 PM

Paper#: 929

Advancing Thermal Treatment Technologies

A. McLean, A. Gorchinski; Plasco Energy Group, Ottawa, ON, Canada

4:40 PM

Paper#: 113

Tea Waste as a Potential Adsorbent for Decoloration of Textile Wastewater

C. Weng, Y. Chen; I-Shu University, Kaohsiung County, Taiwan

5:00 PM

Paper#: 1078

Municipal Wastewater and Human Health Risk Assessment - A Case Study

K. A. Phillipps, G. Brown; Intrinsik Environmental Sciences Inc., Calgary, AB, Canada

WR-1 (1)

Room: Glen 204

6/22/2010 4:00 PM

Paper

Sustainable Design in Real-World Environmental Characterization and Remediation

Sponsoring Committee(s): WR-1

Chair: Bhaskar Kura, University of New Orleans

Co-Chair: John Stallings, Department of the Air Force, Aeronautical Systems Center

4:00 PM

Paper#: 43

Using Green Remediation Technology to Remediate Petroleum Impacted Soil and Groundwater

L. J. Gimpelson; LG Environmental Engineering, Orlando, FL

4:20 PM

Paper#: 1102

Waste to Energy: Comparison of Technologies and Environmental Regulatory Framework in the U.S. and India

S. Verma,¹ P. P. Kalbar,² B. Kura,¹ S. R. Asolekar²; ¹University of New Orleans, New Orleans, LA, ²Indian Institute of Technology, Bombay, Mumbai, India

TECHNICAL SESSIONS

4:40 PM

Paper#: 583

Successful Full-Scale Development and Deployment of Advanced PGPR Enhanced Phytoremediation Systems (PEPS) for Decontamination of Petroleum and Salt Impacted Soils

B. M. Greenberg,¹ X. Huang,² P. D. Gerwing³; ¹University of Waterloo & Waterloo Environmental Biotechnology Inc, Waterloo & Hamilton, ON, Canada, ²Waterloo Environmental Biotechnology Inc, Hamilton, ON, Canada, ³Earthmaster Environmental Strategies Inc., Calgary, ON, Canada

5:00 PM

Paper#: 1063

Pre-Coated Fasteners, A Great Idea, Still Waiting in the Wings

J. H. Stallings; U. S. Air Force, Aeronautical Systems Center, Wright-Patterson Air Force Base, OH

YP (3b)

Room: Telus 108

6/22/2010 4:00 PM

Panel

Particulate Matter 101

Sponsoring Committee(s): YP

Chair: Delbert Eatough, Brigham Young University

Co-Chair: Madhan Selvaraj, Stantec

Co-Chair: Prakash Doraiswamy, State University of New York at Albany

Understanding particles in the atmosphere is a critical issue important to environmental scientists. This Panel will overview the key issues, what is known, how we arrived where we are and the unanswered questions. Topics to be covered in Part 2 (YP (3b)) include Visibility; Source Apportionment; Global Radiative Balance; and Role of Black Carbon.

Panelists:

- Brett Schichtel, National Park Service – Air Resource Division
- Brian Stocks, B.J. Stocks Wildfire Investigations Ltd.
- Jay Turner, Washington University
- Knut von Salzen, Canadian Centre for Climate Modeling and Analysis
- Sarah Doherty, IGAC Core Project Office

WEDNESDAY, JUNE 23

WED. AM1

Critical Review

Room: Hyatt - Regency Ballroom 4-9

6/23/2010 8:00 AM

Multipollutant Air Quality Management: Prospects for the Future

George M. Hidy and W.T. Pennell

See page 16 for details on the Critical Review.

WED. AM2

AT-1 (1)

Room: Telus 103

6/23/2010 10:20 AM

Panel

Air Toxics Update - Development, Implementation, Area Sources, and Residual Risk

Sponsoring Committee(s): AT-1

Chair: Paul Siebert, Weston Solutions, Inc.

This panel session will present views of EPA, State agencies, industry, and environmentalists on the status, directions, and expectations regarding maximum achievable control technology (MACT) standards under 40 CFR 63, as well as air toxics regulations of other nations and jurisdictions. The panel may address the progress and problems with implementation of the promulgated standards and the status and results of legal challenges. A major focus will be an update on the ongoing development and implementation of the area source and residual risk standards. Alternative hazardous/toxic air pollutant programs by states and other nations are also of interest. This panel will strive to present the status, direction, and expectations regarding developing air toxic regulations in the United States, Canada, and other countries.

Panelists:

- Penny Lassiter, U.S. EPA
- Anil Chhibber, Westland Environmental Services, Inc.

EE-5 (2)

Room: Glen 208

6/23/2010 10:20 AM

Paper

Risk Assessment Modeling Tools and Techniques

Sponsoring Committee(s): EE-5

Chair: Michael Weaver, Science Applications International Corporation (SAIC)

10:20 AM

Paper#: 1038

Human Health Risk Assessment and Beyond - The Community Health Impact Approach

M. Orenstein,¹ G. Brown,² E. Myles³; ¹Habitat Health Impact Consulting, Calgary, AB, Canada, ²Intrinsic Environmental Sciences Inc., Calgary, AB, Canada, ³EMyles Consulting, Calgary, AB, Canada

10:40 AM

Paper#: 945

Application of the EPA's Total Risk Integrated Methodology (TRIM) to Elevated Point Sources

C. D. Szembek, D. Heinhold; AECOM, Westford, MA

11:00 AM

Paper#: 678

Development and Application of a River Spill Dilution Model

D. I. McCreedy, J. B. Williams; Dow Chemical, South Charleston, WV

TECHNICAL SESSIONS

El-1 (2)

Room: Telus 106

6/23/2010 10:20 AM

Panel

Approaches to Reducing the Burden of Compliance with the Federal General Conformity Regulations

Sponsoring Committee(s): El-1

Chair: John Hoertz, U.S. Air Force Regional Environmental Office

This panel will discuss approaches to reducing the burden of compliance with the federal general conformity regulations (40 CFR 93 Subpart B). In particular, two approaches will be discussed—(1) establishing a facility-specific emissions budget in a state implementation plan (SIP) and (2) obtaining a federal agency-specific list of projects that are presumed to conform (PTC) with SIPs in accordance with 40 CFR 93.153(f). The Air Force Aeronautical Systems Center will discuss establishing a SIP emissions budget for Air Force Plant 42, which is located in Southern California. The establishment of an emissions budget in a SIP can provide a facility greater operational flexibility and can greatly enhance the ability of a facility to accommodate mission changes that are associated with large amounts of emissions. Jacobs Consultancy will discuss the Federal Aviation Administration's (FAA) initiative to develop a PTC list. The FAA is the first and only federal agency to take advantage of the provisions of 40 CFR 93.153(f) to establish a PTC list. By having a PTC list, the FAA is expected to incur long-term savings of valuable resources that can be diverted to support other mission-critical initiatives. In addition to discussing these two compliance approaches, the panel will also discuss the revisions to the federal general conformity regulations, which are expected to include several changes designed to reduce the burden of compliance with general conformity requirements. The U.S. Environmental Protection Agency will discuss the revisions to the federal general conformity regulations.

Panelists:

- Surendra Joshi, Air Force Aeronautical Systems Center
- Darcy Zarubiak, Jacobs Consultancy

EP-1 (3)

Room: Telus 110

6/23/2010 10:20 AM

Paper

Greenhouse Gas Issues

Sponsoring Committee(s): EP-1

Chair: William Allan, AECOM Environment

Co-Chair: Howard Balentine, AECOM Environment

10:20 AM

Paper#: 1027

Framework for Reducing Greenhouse Gas Emissions and Driving Sustainable Changes in Energy Usage

R. Ross; Saginaw Valley State University, Saginaw, MI

10:40 AM

Paper#: 712

The New Mandatory Greenhouse Gas (GHG) Reporting Rule Does It Change Anything For Power Generation Facilities?

J. Sibblies, PE; Independent Consulting, Somerset, NJ

11:00 AM

Paper#: 847

Carbon Dioxide Capture and Storage - The Need for Standardization

P. Boileau; CSA Standards, Ottawa, ON, Canada

EP-2 (1)

Room: Telus 111

6/23/2010 10:20 AM

Panel

Energy Policy: Comparative Risks

Sponsoring Committee(s): EP-2

Chair: Rob Farber, Southern California Edison

The White House just issued its first annual report of the task force on restoring the middle class. The Task Force is working to ensure that the jobs created as the economy begins to recover are good jobs. The White House has outlined a program to quickly generate job growth in small businesses, clean energy and infrastructure. One area of industrial growth is creating middle-class jobs to build a domestic clean energy sector. A strong manufacturing sector is a cornerstone of American competitiveness and a critical part of the White House economic strategy. As the U.S. addresses the challenges of globalization and technological change, it is vital to have a concerted effort across the Administration to support an innovative, vibrant manufacturing sector. The Administration has expanded its commitment to R&D targeted at new manufacturing; expanding the Technology Innovation Program, making permanent the research and experimentation tax credit. The Recovery Act has already provided \$2.3 billion in tax credits for the manufacturing sector. The Recovery Act is providing \$90 billion with leveraging up to \$150 billion in clean energy projects. An important issue which the Task Force is addressing is to balance environmental considerations with increased manufacturing. How does one comply with existing environmental regulations in air quality and waste and keep expanding American industry competitive on a global scale.

EP-3 (1)

Room: Glen 205

6/23/2010 10:20 AM

Paper

Legal and Liability Issues

Sponsoring Committee(s): EP-3

Chair: Lee Hoffman, Pullman & Comley LLC

Co-Chair: Charles Denton, Barnes & Thornburg

10:20 AM

Paper#: 9

Internet Sources for Energy and the Environment Compliance Information

C. B. Simonsen; Seyfarth Shaw LLP, Chicago, IL

10:40 AM

Paper#: 983

Beyond Reporting: The Wider Legal Implications of the Mandatory GHG Reporting Rules

N. Mather; McLennan Ross LLP, Edmonton, AB, Canada

TECHNICAL SESSIONS

11:00 AM

Paper#: 1029

Climate Change 101: Understanding the Effects of Emerging Climate Change Law and Policy on Your Business

T. Meadows; Miller Thomson LLP, Edmonton, AB, Canada

ES-1 (1)

Room: Glen 201

6/23/2010 10:20 AM

Panel

Projectile Propellant and Pollution Prevention for Projectile Production

Sponsoring Committee(s): ES-1

Chair: Murray Kuhns, Sage Ltd.

Co-Chair: John Stallings, Department of the Air Force, Aeronautical Systems Center

Panel members will discuss biofuel applications in projectile use. Substitution of standard fuels with renewable fuels such as ethanol will be discussed. Pollution prevention techniques will be applied to other aspects of projectile production techniques. Application of multiple additives will be discussed. Possible fuel additives discussed will range from ethanol to biodiesel, which may be included in fuel formulations. Additives will be of biological origin. Origin of biofuels will be considered when analyzing biofuels additives. Cellulostic feedstocks are possible sources of new additives for projectile fuel

ITF-11 (1)

Room: Telus 109

6/23/10 10:20 AM

Panel

Legal Framework for First Nations/Tribes in Resource Protection and Management

Sponsoring Committee(s): ITF-11

Chair: J. Stephen Hartsfield, National Tribal Air Association/National Tribal Environmental Council

In ever-evolving understanding of past treaties and agreements, Canadian First Nations and Tribes in the United States explore what this means in resources access protected in these treaties and agreements. This led to cooperative co-management of natural resources with Federal, Provincial and State agencies. With many areas in Canada still not under treaty agreements or were not under a treaty agreement until recently, many First Nations and Provinces are looking at the next chapter and path of understanding treaties and agreements.

WM-1 (1)

Room: Glen 203 [Back-to-back with WR-2 (2)]

6/23/2010 10:20 AM

Paper

Integrated Waste Management, Waste Prevention, and Recycling

Sponsoring Committee(s): WM-1

Chair: Marjorie Clarke, City College of New York

Co-Chair: Samuel Vigil, CA Poly. State University

10:20 AM

Paper#: 37

Innovative Approach to Florida's 75% Recycling Goal

S. C. Bolyard; University of Central Florida, Orlando, FL

10:40 AM

Paper#: 726

Pollution Prevention through Energy Optimization at Wastewater Treatment Facilities

N. Devata, B. Kura; University of New Orleans, New Orleans, LA

WR-2 (2)

Room: Glen 203 [Back-to-back with WM-1 (1)]

6/23/2010 11:00 AM

Paper

Human and Ecological Risks from Industrial Wastes

Sponsoring Committee(s): WR-2

Chair: Bhaskar Kura, University of New Orleans

Co-Chair: Radha Krishnan, Shaw Environmental

11:00 AM

Paper#: 739

Characterization of Topsoil Samples and Analysis of the Distribution of Heavy Metals in Parral Chihuahua

L. M. Rodriguez Vazquez,¹ E. F. Herrera,² V. H. Ferman,¹ J. Carrillo,² D. Aranda,² L. Saenz¹; ¹Instituto Tecnológico de Parral, Chihuahua, Mexico, ²Centro de Investigación en Materiales Avanzados, Chihuahua, Mexico

11:20 AM

Paper#: 811

A Scheme for Laboratory Liquid Waste Sorting and Management for Colleges in Taiwan

G. T. Wang,¹ P. Tsou,¹ L. Chiang,¹ C. Chao²; ¹Fooyin University, Kaohsiung, Taiwan, ²National Cheng Kung University, Tainan, Taiwan

YP (1)

Room: Telus 108

6/23/2010 10:20 AM

Panel

Young Professional's Guide to Getting Involved

Sponsoring Committee(s): YP

Chair: Laurel Peterson, Hoefler Consulting Group

This session will provide an overview of the organizational structure of the Air and Waste Management Association. Discussion will include the various open committee and council positions, as well as information on how people can volunteer and what to expect once they have volunteered.

Panelists:

- Steve Rybolt, Port of Seattle
- Laurel Peterson, Hoefler Consulting Group
- Brad Waldron, NGE, LLC

WED. PM1

Mega Poster Session

Room: Macleod A & B

6/23/2010 1:20 PM

Technical Council Coordinator: Constance Senior, Reaction Engineering

Sponsoring Committee(s): AB-1

Chair: James Flanagan, RTI International

Co-Chair: Charles McDade, University of California, Davis

TECHNICAL SESSIONS

Paper#: 1143

Copper Contamination of Ambient PM_{2.5} Samples in the Chemical Speciation Network

J. R. Turner; Washington University in St. Louis, Saint Louis, MO

Paper#: 820

Carbonaceous and Ionic Components of Atmospheric Fine Particles in Beijing and Its Impacts on Atmospheric Visibility

J. Zhou; Institute of Earth Environment, Chinese Academy of Sciences, Xi'an, China

Paper#: 823

Source Apportionment of PAHs in Air in South-Eastern Finland

M. K. Vestenius, S. Leppänen, P. Anttila, K. Kyllönen, H. Hellen, H. Hakola; Finnish Meteorological Institute, Helsinki, Finland

Paper#: 864

Investigating the Seasonal and Spatial Patterns of Urban and Rural PM_{2.5} Speciated Aerosol Composition Data from the IMPROVE and CSN Networks from 2005-2008

J. L. Hand,¹ B. A. Schichtel,² W. C. Malm,² W. White,³ L. Ashbaugh,³ C. McDade,³ M. Pitchford⁴; ¹Colorado State University, Fort Collins, CO, ²National Park Service, Fort Collins, CO, ³University of California, Davis, Davis, CA, ⁴NOAA, Las Vegas, NV

Paper#: 933

Characterization and Source Attribution of Atmospheric Fine Particulate Organic Matter

Y. Jia,¹ S. Bhat,² M. P. Fraser¹; ¹Arizona State University, Tempe, AZ, ²ENVIRON International Corporation, Houston, TX

Paper#: 956

EPA's PM_{2.5} Chemical Speciation Network (CSN): Evaluation of Historical Round-Robin X-ray Fluorescence Data

A. McWilliams,¹ J. B. Flanagan,¹ R. Jayanty,¹ R. Sarver²; ¹RTI International, Research Triangle Park, NC, ²Chester LabNet, Tigard, OR

Paper#: 17

Proficiency Testing Program for Stack Particulate Measurements

Y. Kuo,¹ S. Huang,² W. Lin,² C. Chen²; ¹Chung Hwa University of Medical Technology, Tainan, Taiwan, ²College of Public Health, National Taiwan University, Taipei, Taiwan

Paper#: 217

PMF Apportionment of Primary and Secondary Fine Particulate Material in the Salt Lake Valley: Winter 2009

D. J. Eatough,¹ R. Kuprov,¹ J. C. Hansen,¹ N. Olson²; ¹Brigham Young University, Provo, UT, ²Utah State Department of Air Quality, Salt Lake City, UT

Paper#: 1072

Anthropogenic Particles Study of Chihuahua-Mexico, Morphology and Elemental Composition

B. Trujillo-Navarrete,¹ F. Paraguay-Delgado,¹ A. Campos-Trujillo,¹ J. Carrillo Flores,¹ E. Herrera-Peraza,¹ R. Mamani-Paco,² T. Castro²; ¹Center for Advanced Materials Research, S.C., Chihuahua, Mexico, ²Universidad Nacional Autónoma de México, México D.F., Mexico

Sponsoring Committee(s): AB-2

Chair: Lynn Mazzoleni, Michigan Technological University

Co-Chair: Yuegang Zuo, University of Massachusetts Dartmouth

Paper#: 675

Identification of Climate and Health Relevant Atmospheric Organic Compounds

L. R. Mazzoleni,¹ J. P. LeClair,¹ J. L. Collett²; ¹Michigan Technological University, Houghton, MI, ²Colorado State University, Fort Collins, CO

Paper#: 685

Structural Elucidation of Climate Relevant CHNOS Compounds in Atmospheric Organic Matter by Ultra-High Resolution Mass Spectrometry

J. P. LeClair,¹ J. L. Collett,² L. Mazzoleni¹; ¹Michigan Tech University, Houghton, MI, ²Colorado State University, Fort Collins, CO

Paper#: 722

Separations of Atmospheric Water-Soluble Organic Compounds by Advanced Liquid Chromatographic Methods

S. S. Orłowski, L. R. Mazzoleni; Michigan Tech University, Houghton, MI

Paper#: 988

3-Months Continuous, Winter-Ozone-Precursor Monitoring at Boulder Wyoming

R. J. O'Brien,¹ L. Sherman,² C. Kirk²; ¹VOC Technologies, Inc, Damascus, OR, ²Air Resource Specialists, Ft. Collins, CO

Paper#: 851

Investigation and Improvement of Water Usage for Biodiesel Manufacturing

Q. Tu; University of Cincinnati, Cincinnati, OH

Sponsoring Committee(s): AB-3

Chair: George Schewe, Trinity Consultants

Co-Chair: Kenneth Morrison, Hatch

Paper#: 790

Dispersion Modeling of Mercury Using AERMOD: A Case Study for a Coal-Fired Power Plant in Texas

L. Merin, M. Sattler; University of Texas at Arlington, Arlington, TX

Paper#: 877

Comparative Analysis Using Observation Based and MM5 Generated Meteorological Data with AERMOD in Southern California

J. Baker, R. Wu, S. Lee, T. Chico, C. Langner; South Coast Air Quality Management District, Diamond Bar, CA

Paper#: 886

Constructing AERMOD-Ready Meteorological Input Using a Mesoscale Model

S. Lee, C. Langner; South Coast Air Quality Management District, Diamond Bar, CA

Paper#: 1103

Observation of the Nocturnal Variation of Ozone Reservoir Layers in Southern Taiwan

C. H. Lin,¹ C. H. Lai,¹ Y. L. Wu²; ¹Fooyin University, Kaohsiung, Taiwan, ²National Cheng-Kung University, Tainan, Taiwan

TECHNICAL SESSIONS

Paper#: 1206

Oil Mist Deposition Modeling with AERMOD and CHARM

G. J. Schewe,¹ J. Wilcox,² M. Eltgroth³; ¹Trinity Consultants, Covington, KY, ²Trinity Consultants, Atlanta, GA, ³Mark Eltgroth, LLC, Lometa, TX

Paper#: 1035

A Comparison of Predicted Acid Deposition in Alberta using the RELAD and CMAQ Models

D. A. Lyder, L. Cheng; Government of Alberta, Edmonton, AB, Canada

Sponsoring Committee(s): AB-7

Chair: Jim Jetter, U.S. EPA

Co-Chair: Glenn Morrison, University of Missouri - Rolla

Paper#: 629

Evaluation of Heavy Metals in PM₁₀ Collected from Subway Stations Located in Seoul

J. Sohn; Korea University, Seoul, Korea, Republic of

Paper#: 733

Analysis of Train-Induced Wind Characteristics in the Subway Tunnel

K. Lee,¹ S. Kim,¹ J. Lee,¹ I. Lee,¹ H. Lee,² S. Bae³; ¹The University of Seoul, Seoul, Korea, Republic of, ²University of Incheon, Incheon, Korea, Republic of, ³R&D Center, Seoul Metro, Seoul, Korea, Republic of

Paper#: 1130

The Assessments of Air Pollution Exposure Risks and Health Effects for Commuters in Various Transportations

S. Kang, C. Tseng, S. Yen, H. Wang; National Taipei University of Technology, Taipei, Taiwan

Paper#: 799

A Study on Particulate Matter Mass in the Seoul Subway Tunnel

M. Lee; Univ. of Seoul, Seoul, Korea, Republic of

Paper#: 1105

Characterization of Particulate Matter in Public Transport Buses Operating on Biodiesel and ULSD Fuels

A. Kumar, A. Kadiyala, D. Somuri, K. Shandilya; University of Toledo, Toledo, OH

Paper#: 137

The Effects of Using Essential Oils on Indoor Levels of Particulate Matter and Total Volatile Organic Compounds in the Spa Centers in Taiwan

D. Hsu,¹ J. Chen²; ¹National Kaohsiung First University of Science and Technology, Kaohsiung, Taiwan, ²Department of Occupational Safety and Health, Chang-Jung Christian University, Tainan, Taiwan

Paper#: 1395

Relationship between Tire/Pavement Noise and Pavement Characteristics Using Empirical Approach

H. Lee, P. Sachakamol, L. Dai; University of Regina, Regina, SK, Canada

Sponsoring Committee(s): AE-1

Chair: Constance Senior, Reaction Engineering

Paper#: 627

The Effects of Mg²⁺ on the Bivalent Mercury Adsorption Behaviors in Ca-Based and Dual-Alkali FGD Absorption Systems

Y. Wang, Y. Liu, Z. Wu; Department of Environmental Engineering, Zhejiang University, Hangzhou, China

Paper#: 744

Effects of Copper Salt Impregnation on Activated Carbon's Properties and Removal of Low-Concentration Mercury from Simulated Coal-Fired Utility Flue Gases

H. Hsi, T. Chang, S. Chen; National Taipei University of Technology, Taipei, Taiwan

Paper#: 750

Heterogeneous Mercury Reaction Chemistry on Activated Carbon

J. Wilcox, E. Sasmaz, A. Kirchofer, S. Lee; Stanford University, Stanford, CA

Paper#: 997

High Temperature Sorption of Mercury on Non-Carbon Based Sorbents in Packed Beds

Y. Li, J. O. L. Wendt; University of Utah, Salt Lake City, UT

Paper#: 1048

Gas-Phase Mercury Oxidation by Halogens: Effects of Bromine and Chlorine

G. Silcox,¹ P. Buitrago,¹ C. Senior,² B. Van Otten²; ¹University of Utah, Salt Lake City, UT, ²Reaction Engineering International, Salt Lake City, UT

Sponsoring Committee(s): AE-2

Paper#: 136

Synthesis, Characterization and Catalytic Performance of MGFE₂O₄ Nanospheres for SO₂ Removal

X. Li,¹ L. Zhao,² Q. Zhao,² Y. Shi,² G. Chen,² G. Chen,³ G. Chen⁴; ¹School of Environmental and Biological Sciences and Technology, Dalian University of Technology, China, Dalian, China, ²School of Environmental and Biological Sciences and Technology, Dalian University of Technology, Dalian, ³Department of Chemical and Biomolecular Engineering, the Hong Kong University of Science & Technology, Hong Kong, China, ⁴Department of Chemical and Biomolecular Engineering, the Hong Kong University of Science & Technology, Clear Water Bay, Kowloon, Hong Kong, China

Paper#: 569

Filtration Characteristic of Foam Filters at Extremely Low Face Velocity

J. Cho,¹ S. Huang,¹ C. Chen,² Y. Kuo,³ C. Chen¹; ¹National Taiwan University, Taipei, Taiwan, ²Institute of Occupational Safety and Health, CLA, Taipei, Taiwan, ³Chung Hwa University of Medical Technology, Tainan, Taiwan

TECHNICAL SESSIONS

Paper#: 860

The Environmental Impact Analysis of the Hsue-shan Tunnel Shaft Waste Gas on the Growth of *Keteleeria davidiana* var. *formosana* Hayata in Taiwan Cow-tail Fir Area

C. Tseng,¹ C. Huan,² H. Lo,³ W. Hsiao,⁴ Y. Tseng,⁵ M. Wang,¹ C. Chang²; ¹National Ilan University, Yilan, Taiwan, ²National Ilan University / professor, Yilan, Taiwan, ³National Taiwan University / professor, Yilan, Taiwan, ⁴Tungnan University / graduate student, Yilan, Taiwan, ⁵National Ilan University, Ilan, Taiwan

Sponsoring Committee(s): AM-1

Paper#: 725

Concrete Carbonation in Simulated Field Curing Conditions, as a Sink for Carbon Dioxide

A. M. Uribe-Ramirez; University of Cincinnati, Cincinnati, OH

Paper#: 1022

Assessing Black Carbon and PAHs Emission Reduction through Biofuel Substitution in Urban Transportation

S. Liang, T. Keener; University of Cincinnati, Cincinnati, OH

Paper#: 107

The Importance of the Generation and Application of Emission Factors for Developing Countries

I. V. Cureño, H. Bravo, R. Sosa; Universidad Nacional Autonoma de Mexico, D.F., Mexico

Paper#: 683

Marine Emission Inventory Tool Enhancements and Emission Control Area (ECA) Analysis

K. Bolechowsky; ClearSky Engineering, Okotoks, AB, Canada

Sponsoring Committee(s): AM-2, AM-5

Chair: Christopher Rogers, MACTEC Engineering & Consulting, Inc.

Paper#: 687

NIST Gas Standards for Atmospheric Monitoring of Greenhouse Gases and Ozone Precursors

G. Rhoderick; National Institute of Standards and Technology (NIST), Gaithersburg, MD

Paper#: 835

Advances in Ozone Measurement Traceability

J. E. Norris,¹ R. Wielgosz,² J. Viallon,² F. R. Guenther¹; ¹NIST, Gaithersburg, MD, ²BIPM, Sevres, France

Paper#: 900

Preparation and Analysis of NO and NO₂ Gas Standard: Reference Materials in Aluminum Compressed Gas Cylinders

W. J. Thorn; National Institute of Standards and Technology, Gaithersburg, MD

Paper#: 1407

Examining the Relationships between Ambient Mercury and Sulfur Measurements

C. M. Rogers,¹ T. F. Lavery,² W. Tucker,³ H. K. Howell³; ¹MACTEC Engineering & Consulting, Inc., Jacksonville, FL, ²Thielsch Engineering, Inc., Cranston, RI, ³MACTEC Engineering & Consulting, Inc, Gainesville, FL

Sponsoring Committee(s): AM-3

Paper#: 135

Trend in Diesel Particulate Matter (DPM) Concentrations Associated with a Major Rail Yard Facility in Northern CA

R. J. Countess; COUNTESS ENVIRONMENTAL, Westlake Village, CA

Paper#: 150

Detection of Greenhouse Gas Precursors Emitted by Vehicular Engines by Using Analytical Techniques

M. S. Sthel, G. Mothé, M. V. Rocha, L. S. Campos, M. P. P. Castro, M. G. da Silva, H. Vargas; UENF, Campos Goytacazes-RJ, Brazil

Paper#: 179

Comparison of Chinese Herbal Oils and Lemon Oil in Formation of Secondary Organic Aerosol

Y. M. Sun; Chung Hwa University of Medical Technology, Tainan, Taiwan

Paper#: 566

Source Contribution of PM₁₀ Using the Positive Matrix Factorization Model in Anyang City, Korea

K. Min-Youl, L. Tae-Jung, K. Dong-Sool; Kyung Hee University, Yongin-si, Korea, Republic of

Paper#: 607

Air Toxics in El Paso, Texas

R. J. Tropp,¹ L. Chen,¹ D. Zhu,¹ J. C. Chow,¹ J. G. Watson,¹ B. Zielinska,¹ W. Li²; ¹Desert Research Institute, Reno, NV, ²University of Texas at El Paso, El Paso, TX

Paper#: 613

Optimization of Operating Efficiency for Solar Cell Applied for Wireless Sensor for an Ambient Air Monitoring

P. Huntra; University of Cincinnati, Cincinnati, OH

Paper#: 857

Measurements of the Speciation of Ozone Precursor from Kaoping Petrochemical/Industrial Area in Taiwan

C. Lai,¹ Y. Wu,² C. Lin,¹ S. Yeh¹; ¹Fooyin University, Kao-Hsiung Hsien, Taiwan, ²National Cheng-Kung University, Tainan, Taiwan

Paper#: 986

Characterization of Polycyclic Aromatic Hydrocarbons in Canada for Use in Risk Assessment

G. L. Daly,¹ R. Saldanha,¹ S. Capstick,¹ T. Repaso-Subang,¹ J. Cartier²; ¹Golder Associates, Mississauga, ON, Canada, ²Health Canada, Ottawa, ON, Canada

Sponsoring Committee(s): AO-1, AO-2

Paper#: 557

Monitoring Multiple Trace Gas Species during Secondary Organic Aerosol Formation in a Smog Simulation Chamber with Mid-IR and UV Spectroscopic Methods

T. McIntyre, M. T. Parsons, I. Sydoryk, A. Lim, W. Jäger, J. Tulip; University of Alberta, Edmonton, AB, Canada

TECHNICAL SESSIONS

Paper#: 190

Simplified and Low Cost Optical Remote Sensing Technology for Fence Line Monitoring of Fugitive Releases

W. A. Mitchell,¹ E. D. Thoma,¹ C. Secrest²; ¹US E.P.A., RTP, NC, ²US E.P.A., Washington, DC

Paper#: 743

Ammonia Gas Sensing Via a Color Change Mesoporous Adsorbent Incorporated in an Optical Sensing Instrument

Y. Chang, H. Bai; Institute of Environmental Engineering, National Chiao Tung University, Hsinchu, Taiwan, Taiwan

Paper#: 1085

Development of a Next Generation Open Path Laser Detection Platform

C. Parker; Boreal Laser Inc., Spruce Grove, AB, Canada

Paper#: 1155

Methods to Reduce Sample Heating of a TSI 3563 Nephelometer when Measuring Light Scattering Coefficients at High Relative Humidities

B. T. Brem, T. C. Bond, M. J. Rood; University of Illinois at Urbana - Champaign, Urbana, IL

Sponsoring Committee(s): AT-3

Paper#: 187

The Short-Term Effects and Vulnerability of Particulate Air Pollution on Daily Mortality at 99 Townships in Taiwan

P. Wu,¹ P. Tsai,² C. Lin,³ S. Lung,³ Z. Huang,² H. Su²; ¹Dept. of Occupational Safety and Health, Chang Jung Christian University, Tainan, Taiwan, ²Department of Environmental and Occupational Health, College of Medicine, National Cheng Kung University, Tainan, Taiwan, ³Research Center for Environmental Changes, Academia Sinica, Taipei, Taiwan

Sponsoring Committee(s): EE

Paper#: 208

Temporal Sensitivity Key to Modeling Ozone Impacts on Vegetation

D. A. Grantz,¹ R. Heath,² K. Burkey,³ H. Vu¹; ¹University of California, Parlier, CA, ²University of California, Riverside, CA, ³USDA Agricultural Research Service, Raleigh, NC

Paper#: 172

The Cell Toxicity Assessment of TiO₂ and SiO₂ Nanoparticles with Electro Spray Generation System

Y. Wu,¹ Y. Teng,² I. Chung,² Y. Lai,¹ P. Chiang,¹ C. Chang¹; ¹National Ilan University, Ilan, Taiwan, ²Chia-Nan University of Pharmacy and Science, Tainan, Taiwan

Paper#: 171

Study on the Treatment of Chlorinated VOCs with Prepared Metal Photocatalyst

Y. W. Lee,¹ C. M. Ma,² J. L. Shie,³ C. T. Chang,⁴ F. T. Jeng⁵; ¹Department of Environmental Engineering, National I-Lan University, Graduate student, Yilan, Taiwan, ²Department of Cosmetic Application and Management, Assistant Professor, Ilan, Taiwan, ³Department of Environmental Engineering, National I-Lan University, Professor, Yilan, Taiwan, ⁴National Ilan University, Yilan, Taiwan, ⁵Graduate Institute of Environmental Engineering, National Taiwan University, Professor, Taipei, Taiwan

Paper#: 1069

Evaluation and Validation of a New Developed Livestock Odor Dispersion Model (LODM)

Z. Yu,¹ H. Guo,¹ C. Lague²; ¹University of Saskatchewan, Saskatoon, SK, Canada, ²University of Ottawa, Ottawa, ON, Canada

Paper#: 1156

Characteristics and Control Methods of Oil Mist and Fine Particles from Meat Cooking Restaurants

S. Park,¹ S. Choi,¹ G. Park,¹ J. Kim,¹ C. Bong,² S. J. Park,² U. Hwang,³ J. Kim⁴; ¹KOFIRST E&E Co. Ltd., Gunpo-city, Gyeonggi-do, Korea, Republic of, ²Greenbee Environmental Research Institute Co. Ltd., Incheon, Korea, Republic of, ³Dept. of Civil Engineering, Gyeongbok Provincial College, Yecheon-gun, Gyeongbuk, Korea, Republic of, ⁴Dept. of Environmental Engineering, Hanseo University, Seosan-city, Chungnam, Korea, Republic of

Sponsoring Committee(s): EI

Paper#: 855

Pre-Feasibility Study of Wind Resource Potential Using MM5, CALMET and Statistical Analysis

S. Hartono, R. Bianchi, D. Anders; Golder Associates, Mississauga, ON, Canada

Sponsoring Committee(s): EP

Paper#: 1060

Towards a Lighting Protocol for Oil and Gas Facilities in Alberta

R. G. Dechesne,¹ R. W. King,¹ W. S. Donaldson,¹ S. Jahrig,² B. McCurdy,³ B. Wispinski⁴; ¹Royal Astronomical Society of Canada - Calgary Centre, Calgary, AB, Canada, ²Light Efficient Communities, Edmonton, AB, Canada, ³Royal Astronomical Society of Canada - Edmonton Centre, Edmonton, AB, Canada, ⁴Beaver Hills Initiative, Strathcona County, AB, Canada

Paper#: 200

Key Aspects of Environmental Approvals for Biomass-Fired Energy Projects

R. Hardegger,¹ J. Linkimer,² T. Kinder,² B. McLean³; ¹Barr Engineering Company, Minneapolis, MN, ²Barr Engineering Company, Ann Arbor, MI, ³Cook Engineering, Thunder Bay, ON, Canada

Paper#: 35

Regulatory Change and Its Impact on a Site's Applicability Requirements Register

T. Polakowski; Citation Technologies, Scottsdale, AZ

Paper#: 1204

The Identification of Air Quality Management Areas in South Africa

G. M. Scott; South African Department of Environmental Affairs, Pretoria, South Africa

Paper#: 1093

Highly Reactive Volatile Organic Compound (HRVOC) Emission Reductions - Flares

S. Bhat,¹ C. J. Colville,¹ S. H. Ramsey,¹ G. Yarwood²; ¹ENVIRON International Corporation, Houston, TX, ²ENVIRON International Corporation, Novato, CA

TECHNICAL SESSIONS

Sponsoring Committee(s): ES

Paper#: 1088

Integrated Approach to Sustainability Management at BCIT

K. Acosta,¹ P. Beauchemin,² O. Petrov,¹ L. Sampson,¹ B. Dabrowski,¹ J. Moore¹; ¹British Columbia Institute of Technology, Burnaby, BC, Canada, ²Envirochem Services Inc, North Vancouver, BC, Canada

Sponsoring Committee(s): ES-1

Paper#: 15

Radionuclide NESHAP Compliance and Implementation at U.S. DOE Oak Ridge Facilities

M. P. Humphreys; U.S. Department of Energy, Oak Ridge, TN

Sponsoring Committee(s): ET

Paper#: 1034

A Study of the Relationship between Vehicle Specific Power and In Vehicle Carbon Monoxide Concentration

J. Hu, B. Albrinck, M. Lu; University of Cincinnati, Cincinnati, OH

Paper#: 553

The National Near-Road Mobile Source Air Toxics Study: Las Vegas

S. Kimbrough,¹ R. Shores,¹ D. Whitaker,¹ B. Mitchell,¹ R. Baldauf,¹ A. Vette,¹ D. Vallero,¹ C. Croghan,¹ G. Hagler,¹ J. Hirtz,¹ V. Martinez,² K. Black³; ¹US EPA, RTP, NC, ²FHWA, Washington, DC, ³FHWA, Baltimore, MD

Paper#: 556

Characterization and Variability of Pollutant Concentrations for the Las Vegas Implementation of the National Near-Road Mobile Source Air Toxics Study

S. Kimbrough, R. Shores, D. Whitaker, B. Mitchell, R. Baldauf, A. Vette, D. Vallero, C. Croghan, G. Hagler, J. Hirtz; US EPA, RTP, NC

Paper#: 861

A Field and Modeling Study to Assess the Potential Mitigation of Near-Road Air Pollution by Vegetative and Structural Barriers

G. S. W. Hagler,¹ M. Lin,² A. Khlystov,² W. Tang,³ M. J. Freeman,³ R. W. Baldauf,⁴ V. Isakov,¹ J. Faircloth,¹ D. K. Heist,¹ S. G. Perry,¹ A. F. Vette,¹ R. F. Snow⁵; ¹US EPA, Office of Research and Development, Research Triangle Park, NC, ²Duke University, Durham, NC, ³Lockheed Martin Corporation, Information Systems & Global Services, Durham, NC, ⁴US EPA, Office of Research and Development and Office of Transportation and Air Quality, Research Triangle Park, NC, ⁵ARCADIS, Research Triangle Park, NC

Paper#: 957

A Survey of Typical Arsenic and Lead Concentrations in Soil in Railroad Corridors

J. R. Ash,¹ K. Matsumoto²; ¹GEI Consultants, Inc., Woburn, MA, ²Stanford University, Palo Alto, CA

Paper#: 1152

MOVES2010 Project-Scale Modal Emission Factors

M. Claggett; Federal Highway Administration, Santa Fe, NM

Paper#: 168

Projection of Oil Consumption and CO₂ Emissions from Automobiles in China through 2030 with Different Propulsion/Fuel System Scenarios

B. Lin, Y. Wu, Z. Yang, K. He, J. Hao; Tsinghua University, Beijing, China

Paper#: 1416

Monitoring of Air Toxic Particulate Pollutants from Heavily Trafficked New Jersey Turnpike: An Urban Community

J. Shin, K. Jung, F. Artigas; New Jersey Meadowlands Commission, Lyndhurst, NJ

Paper#: 1154

The Greenhouse Gas Emissions Inventory from Ships in Korea

S. Park,¹ S. Choi,¹ G. Park,¹ Y. Hong,¹ H. Lee,² C. Bong,³ U. Hwang⁴; ¹KOFIRST E&E Co. Ltd., Gunpo-city, Gyeonggi-do, Korea, Republic of, ²Dept. of Civil and Environmental Engineering, University of Incheon, Incheon, Korea, Republic of, ³Greenbee Environmental Research Institute Co. Ltd., Incheon, Korea, Republic of, ⁴Dept. of Civil Engineering, Gyeongbuk Provincial College, Yecheon-gun, Gyeongbuk, Korea, Republic of

Sponsoring Committee(s): IF

Paper#: 1928

Impact of Platform Screen Door Installation onto the PM₁₀ Characteristics in Seoul Metropolitan Subway Station

T. J. Lee,¹ H. K. Ko,¹ D. S. Kim,¹ J. S. Jeon,² H. Lee³; ¹Kyung Hee University, Gyeonggi-do, Korea, Republic of, ²Seoul Metropolitan Institute of Public Health and Environment, Seoul, Korea, Republic of, ³University of Incheon, Incheon, Korea, Republic of

Sponsoring Committee(s): WM

Chair: David Minott, Environmental Resources Management (ERM)
Co-Chair: Samuel Vigil, CA Poly. State University

Paper#: 573

Mechanical Sludge Utilization for Land Application

B. L. Drozdowski; Alberta Research Council, Edmonton, AB, Canada

Paper#: 620

Review the Performance of Aeration Systems (Activated Sludge) with Fixed Bed for the Treatment of Wastewater with High Organic Load

A. Hayat-Bakhsh; Azad University of Tehran (Research & Science Campus), Tehran, Iran, Islamic Republic of

Paper#: 792

A Characterization of Contaminants in Beneath of the Landfill

Y. Han, J. Lee, K. Park, J. Kim, M. Oh, J. Kim, S. Kim; The University of Seoul, Korea, Korea, Republic of

TECHNICAL SESSIONS

Paper#: 798

The Investigation of the Using Rate of Standard Garbage Bag in the Automated Pneumatic Waste Collection System in Korea

J. Park,¹ S. Woo,¹ S. Moon,¹ B. Oh,² M. Lee,³ J. Lee¹; ¹University of Seoul, Seoul, Korea, Republic of, ²Division of Biotechnology, Chonbuk National University, Chonbuk, Korea, Republic of, ³Daisung Green Tech Co., Ltd, Seoul, Korea, Republic of

Paper#: 873

Coastal Paper Mill Uses Innovative Approach to Power Boiler Flyash Disposal

C. Madland; Golder Associates Ltd., Calgary, AB, Canada

Paper#: 788

Production of Bioenergy via the Combined Processes Using Radio-Frequency Plasma and Catalysts

W. Tu,¹ J. Shie,² C. Chang,¹ C. Chang,³ J. Kuo,⁴ S. Yang,⁴ C. Hsi,⁵ D. Shaw,⁶ D. Lee,⁷ C. Lin¹; ¹Graduate Institute of Environmental Engineering, National Taiwan University, Taipei, Taiwan, ²Department of Environmental Engineering, National I-Lan University, Ilan, Taiwan, ³Department of Environmental Science and Engineering, Tung-Hai University, Taichung, Taiwan, ⁴Department of Mechanical Engineering, National Taiwan University, Taipei, Taiwan, ⁵Environmental Protection Administration of Taiwan, Taipei, Taiwan, ⁶Chung-Hua Institution for Economic Research, Taipei, Taiwan, ⁷Department of Chemical Engineering, National Taiwan University, Taipei, Taiwan

Paper#: 795

The Study of Chlorides Behavior in Calcinating Process of Washed Fly Ash from Municipal Solid Waste Incinerator

F. Zhu,¹ M. Takaoka,¹ K. Oshita,¹ Y. Kitajima,² Y. Inada,² S. Morisawa¹; ¹Dept. of Urban & Environmental Engineering, the Graduate School of Engineering, Kyoto University, Kyoto City, Japan, ²High Energy Accelerator Research Organization, Institute of Material Structure Science, Tsukuba, Japan

Paper#: 824

Fermentative Hydrogen Production from Cellulosic Wastes with a Thermophilic Bacteria *Clostridium* Strain TCW1

N. Ye, C. Chung, C. Huang; Tunghai University, Taichung, Taiwan

Sponsoring Committee(s): WR

Paper#: 152

Application of Surfactant-Assisted Electrokinetic (SAEK) Process Coupled with Carbon Nanotube Barrier on Chlorinated Solvent Removal from Soil Matrix

C. Yuan,¹ C. Hung,² W. Huang¹; ¹National University of Kaohsiung, Kaohsiung City, Taiwan, ²National Kaohsiung First University of Science and Technology, Kaohsiung City, Taiwan

Paper#: 189

Chemical Washing of As-Contaminated Soil at Elevated Temperatures

S. Oh, J. Son, S. Choi, S. Moon, S. Yoon; University of Ulsan, Ulsan, Korea, Republic of

Paper#: 1149

The Chemical Compatibility Tests for Laboratory Mixed Wastes

P. Tsou,¹ G. Wang,¹ L. Chiang,¹ C. Chao²; ¹Fooyin University, Dep. of Environmental Engineering and Science, Kaohsiung County, Taiwan, ²National Cheng Kung University, Sustainable Environment Research Center, Tainan, Taiwan

WED. PM2

AB-1 (1a)

Room: Telus 104

6/23/2010 3:20 PM

Paper

PM Emission Measurements

Sponsoring Committee(s): AB-1

Chair: Jay Turner, Washington University in St. Louis

Co-Chair: Michael Meyer, MetOne

3:20 PM

Paper#: 1045

Instruments and Methodology for Determining Particulate Emissions and Particle Size Distributions from Open Detonations

M. Lindsay,¹ B. Jensen,¹ J. Koenig,¹ G. Palmer²; ¹CH2M Hill, Salt Lake City, UT, ²Hill Air Force Base, Hill AFB, UT

3:40 PM

Paper#: 1006

Experimental Measurement of PM_{2.5} Emission Factors for Lab-Scale Flares

J. D. McEwen,¹ K. A. Thomson,² M. R. Johnson¹; ¹Carleton University, Ottawa, ON, Canada, ²National Research Council, Ottawa, ON, Canada

4:00 PM

Paper#: 588

Particulate Emission Factors from Welding Al-Li Alloy

K. Carr, B. Kura; University of New Orleans, New Orleans, LA

AB-2 (1a)

Room: Macleod A2

6/23/2010 3:20 PM

Paper

Ambient Studies, Measurements, and Modeling

Sponsoring Committee(s): AB-2

Chair: Luis Diaz-Robles, Catholic University of Temuco

Co-Chair: Kent Hoekman, Desert Research Institute

3:20 PM

Paper#: 45

Examining the Impact of Two Atmospheric Chemical Mechanisms on Air Quality

G. Sarwar,¹ R. Mathur,¹ K. Schere,¹ B. Henderson,¹ W. Goliff,² W. Stockwell³; ¹USEPA, RTP, NC, ²University of California at Riverside, Riverside, CA, ³Howard University, Washington, DC

3:40 PM

Paper#: 590

Measurements of NO_y, NO₂, PAN, and k₁ during the 2009 Upper Green River Ozone Study

D. Fitz, K. Bumiller; University of California, Riverside, CA

TECHNICAL SESSIONS

4:00 PM

Paper#: 1021

Effect of the CMAQ Sea-Salt Module on Aerosol Concentrations and Composition: A Case Study in the Lower Fraser Valley, British Columbia, Canada

B. Zhang,¹ X. Xu,¹ W. Jiang,² C. di Cenzo,³ P. Bhave,⁴ U. Shankar,⁵ S. Roselled⁴; ¹University of Windsor, Windsor, ON, Canada, ²National Research Council of Canada, Ottawa, ON, Canada, ³Environment Canada, Vancouver, BC, Canada, ⁴U.S. Environmental Protection Agency, Research Triangle Park, NC, ⁵University of North Carolina, Chapel Hill, NC

4:20 PM

Paper#: 1043

Implementation of Surf-Zone Sea-Salt Emissions in CMAQ and a Preliminary Modelling Impact Study in the Lower Fraser Valley, British Columbia

X. Xu,¹ B. Zhang,¹ S. Smyth,² W. Jiang,² C. di Cenzo,³ P. V. Bhaved⁴; ¹University of Windsor, Windsor, ON, Canada, ²National Research Council of Canada, Ottawa, ON, Canada, ³Environment Canada, Vancouver, BC, Canada, ⁴U.S. Environmental Protection Agency, Research Triangle Park, NC

AB-3 (2a)

Room: Telus 105

6/23/2010 3:20 PM

Paper

Ozone and PM_{2.5} Modeling

Sponsoring Committee(s): AB-3

Chair: Ralph Morris, ENVIRON International Corporation

Co-Chair: Robert Paine, AECOM

3:20 PM

Paper#: 688

CAC Emission Distribution in Alberta, Canada

B. Zhang, A. Springer, M. Davies; Stantec Consulting Ltd., Calgary, AB, Canada

3:40 PM

Paper#: 1067

Characteristics of Measured Ground-Level Ozone in the Capital Region of Alberta

W. Kindzierski; University of Alberta, Edmonton, AB, Canada

4:00 PM

Paper#: 1094

Response of Daily Maximum 8 Hour Ozone and RRFs (Relative Response Factors) to Changes in Meteorological Schemes: A Comparison of Seven Scenarios

Y. Kim, J. Fu; University of Tennessee, Knoxville, TN

AB-3 (3a)

Room: Telus 110

6/23/2010 3:20 PM

Paper

Regulatory Model Applications

Sponsoring Committee(s): AB-3

Chair: Anthony Schroeder, Trinity Consultants

Co-Chair: David Long, American Electric Power

3:20 PM

Paper#: 859

Limitations of the BPIP Building Selection Algorithm in Determining the Inputs to PRIME and a Practical Work Around
M. F. Jammer, M. Rawlings; Golder Associates Ltd., Mississauga, ON, Canada

3:40 PM

Paper#: 908

The Effect of Mechanical Mixing Height Approximations in AER-MET on AERMOD

A. Schroeder, G. Schewe, J. Colebrook; Trinity Consultants, Covington, KY

4:00 PM

Paper#: 631

AERMOD Low Wind Speed Evaluation Study: Results and Implementation

R. J. Paine, J. A. Connors; AECOM, Westford, MA

AB-7 (3)

Room: Telus 101/102 [Back-to-back with AB-7 (4)]

6/23/2010 3:20 PM

Paper

Indoor Air Quality - Biocontaminants

Sponsoring Committee(s): AB-7

Chair: Michael McGinley, St. Croix Sensory, Inc.

Co-Chair: Jim Jetter, U.S. EPA

3:20 PM

Paper#: 1113

Change of Airborne Fungal Profiles after Typhoon Morakot in Flooded Homes of Southern Taiwan

H. J. Su, N. Y. Hsu, P. Y. Chen; Department of Environmental and Occupational Health, College of Medicine, National Cheng Kung University, Tainan, Taiwan

3:40 PM

Paper#: 797

The Characteristics of Bioaerosols in School Laboratory, Classroom and Office

H. Hung,¹ T. Yang,¹ Y. Kuo,² Y. Lan,¹ F. Chen¹; ¹Yuanpei University, Hsinchu, Taiwan, ²Chung Hwa University of Medical Technology, Tainan Hsien, Taiwan

AB-7 (4)

Room: Telus 101/102 [Back-to-back with AB-7 (3)]

6/23/2010 4:00 PM

Paper

Indoor Air Quality - Vapor Intrusion

Sponsoring Committee(s): AB-7

Chair: Matthew Traister, O'Brien & Gere Engineers, Inc.

Co-Chair: Warren Kindzierski, University of Alberta

TECHNICAL SESSIONS

4:00 PM

Paper#: 180

Persistent and Pernicious Fallacies Related to Vapor Intrusion
B. Eklund; URS, Austin, TX

4:20 PM

Paper#: 697

Time-Integrated Quantitative Sampling in Vapor Intrusion Investigations

H. G. Trethewey, J. W. Hodny, J. E. Whetzel, H. S. Anderson; W.L. Gore & Associates, Elkton, MD

4:40 PM

Paper#: 959

Soil Vapour Intrusion Risk Assessment Strategies

M. Hamilton; Dillon Consulting Limited, Calgary, AB, Canada

AE-1 (4)

Room: Glen 209

6/23/2010 3:20 PM

Paper

Implementation of Mercury Control Technologies for Coal Fired Power Plants

Sponsoring Committee(s): AE-1

Chair: Sharon Sjostrom, ADA-ES

3:20 PM

Paper#: 1403

Beneficial Removal of Mercury from Coal-Fired Boiler Exhaust by a Spray Dry Adsorber and Baghouse

R. N. Saikaly,¹ C. S. Hibbard,² D. Marchese,¹ B. McLaughlin¹; ¹CDM, Pittsburgh, PA, ²CDM, Cambridge, MA

3:40 PM

Paper#: 638

Full Scale Testing of Novel Mercury Control Strategy by Means of Powdered Activated Carbon, Bromine Combustion Additives and Selective Precipitation

P. Elliott; Evonik Energy Services LLC, Kings Mountain, NC

4:00 PM

Paper#: 198

Assessment of Mercury Removal in a Powdered Activated Carbon Control System on a Pulverized Coal Boiler

J. L. Fleming,¹ J. Cooper²; ¹Eli Lilly & Company, Indianapolis, IN, ²Cooper Environmental Services, LLC, Portland, OR

AE-2 (1a)/(1b)

Room: Glen 208

6/23/2010 3:20 PM

Paper

Air Treatment Technologies

Sponsoring Committee(s): AE-2

Chair: Thomas Turner, Turner Envirologic, Inc.

Co-Chair: Howard Hohl, Eisenmann Corp.

3:20 PM

Paper#: 1420

Case History Review: Demanding Applications for Regenerative Thermal Oxidizer

B. Schmidt; EISENMANN Corporation, Crystal Lake, IL

3:40 PM

Paper#: 157

The Effect of O₂, RH and Temperature for Novel Removal Plant Hormone Technology

Y. Lin,¹ J. Tzeng,¹ C. Weng²; ¹National Chungsing University, Taichung City, Taiwan, ²I-Shou University, Kaohsiung, Taiwan

4:00 PM

Paper#: 870

Enhanced Rotary Concentrator Performance using Ceramic-Bound Activated Carbon Honeycombs

J. D. Perry; MWV MeadWestvaco, North Charleston, SC

4:20 PM

Paper#: 574

Preparation of Activated Carbon from Petroleum Coke by Microwave

H. Chen, Z. Hashisho; University of Alberta, Edmonton, AB, Canada

AM-1 (3)

Room: Macleod A4

6/23/2010 3:20 PM

Paper

Fire Emissions and Biomass Burning: Research to Management

Sponsoring Committee(s): AM-1

Chair: Lawrence Friedl, NASA

3:20 PM

Paper#: 131

Ozone Measurement Instrument (OMI) Sensor for Biomass Burning Aerosol Optical Properties

A. Bridhikitti,¹ T. J. Overcamp,¹ P. D. Gerard²; ¹Clemson University, Anderson, SC, ²Clemson University, Clemson, SC

3:40 PM

Paper#: 582

Emission Factors of PAHs, Carbonyls, VOCs, PM_{2.5} and Elemental and Organic Carbon from the Pre-Harvest Burning of Florida Sugarcane

C. Wu,¹ D. L. Hall,¹ Y. Hsu,² J. Stormer,³ G. Engling,⁴ K. Capeto,¹ J. Wang,¹ K. Yu¹; ¹University of Florida, Gainesville, FL, ²Wood Buffalo Environmental Association, Ft. McMurray, AB, Canada, ³Palm Beach County Health Department, West Palm Beach, FL, ⁴Research Center for Environmental Changes, Academia Sinica, Taipei, Taiwan

4:00 PM

Paper#: 584

Remote Sensing Observations of SE Asian Biomass-Burning Aerosols' Optical Properties and Their Limiting-Factors

A. Bridhikitti,¹ T. J. Overcamp,¹ P. D. Gerard²; ¹Clemson University, Anderson, SC, ²Clemson University, Clemson, SC

TECHNICAL SESSIONS

4:20 PM

Paper#: 837

Gaseous and Particulate Emissions from Prescribed Burning in Pine Dominated Forest Ecosystems of the South-Eastern United States

K. Baumann,¹ M. Fort,¹ J. J. Schauer,² D. R. Blake,³ B. E. Hartsell,⁴ E. S. Edgerton⁵; ¹ARA Inc., Morrisville, NC, ²University of Wisconsin, Madison, WI, ³University of California, Irvine, CA, ⁴ARA Inc., Plano, TX, ⁵ARA Inc., Cary, NC

AO-1 (1)

Room: Telus 103

6/23/2010 3:20 PM

Paper

Novel Optical Remote Sensing Instrumentation

Sponsoring Committee(s): AO-1

Chair: Mark Modrak, ARCADIS

Co-Chair: Christian Parker, Boreal Laser

3:20 PM

Paper#: 856

Standoff Identification and Quantification of Smokestack Emissions with an Imaging Fourier-Transform Spectrometer

P. Tremblay,¹ S. Savary,² A. Villemaire,² M. Rolland,² M. Chamberland,² V. Farley²; ¹Centre d'optique, photonique et laser, Université Laval, Quebec, QC, Canada, ²Telops, Quebec, QC, Canada

3:40 PM

Paper#: 1195

In-Situ Real-Time Monitoring of Gaseous SO₃ by Quantum Cascade Laser

C. Laush; IMACC, Round Rock, TX

4:00 PM

Paper#: 148

Greenhouse Gases Detection with Quantum Cascade Laser Photoacoustic Spectroscopy

M. V. Rocha,¹ M. S. Sthel,¹ M. G. da Silva,¹ A. Miklòs,² D. U. S. Schramm,¹ H. Vargas¹; ¹UENF, Campos dos Goytacazes - RJ, Brazil, ²Fraunhofer Institute for Building Physics, Stuttgart, Germany

4:20 PM

Paper#: 669

LasIR-R - The New Generation RoHS-Compliant Gas Analyzers

A. Chanda, G. I. Mackay, K. L. Mackay; Unisearch Associates Inc., Concord, ON, Canada

EI-3 (1)

Room: Telus 106

6/23/2010 3:20 PM

Paper

Environmental Issues Facing Commercial and Industrial Energy Sources

Sponsoring Committee(s): EI-3

Chair: Mick Durham, Grain Processing Corp

3:20 PM

Paper#: 618

Lessons Learned for Greenhouse Gas Monitoring for Combustion Sources

D. Hughes; Cardinal Engineering, Inc., Oklahoma City, OK

3:40 PM

Paper#: 711

Mandatory Greenhouse Gas Reporting for Waste-to-Energy Facilities: Monitoring Requirements and Other Issues

T. St. Clair; CDM, Houston, TX

4:00 PM

Paper#: 544

Process Heating Fits into the Sustainability Triangle?

M. G. Cohodes; Hydro-Thermal, Waukesha, WI

4:20 PM

Paper#: 1393

Market and Availability of Emission Reduction Credits for Fuel Switching by a Coal-Fired Institutional Boiler Plant

C. S. Hibbard,¹ R. Saikaly²; ¹CDM, Cambridge, MA, ²CDM, Pittsburgh, PA

EI-4 (2)

Room: Glen 206

6/23/2010 3:20 PM

Paper

Emissions Issues in the Oil and Gas Industry

Sponsoring Committee(s): EI-4

Chair: Richard Siegel, R & B Consulting Services

3:20 PM

Paper#: 836

Fuel Quality (and Air Quality) vs. Greenhouse Emissions Gases-The Challenge of Oil Refineries

G. R. Rodrigues,¹ W. N. Chan,² J. B. Perisse,¹ R. C. P. Bittencourt,¹ D. Saggese¹; ¹PETROBRAS, Rio de Janeiro - RJ, Brazil, ²PETROBRAS, Paulinia, SP, Brazil

3:40 PM

Paper#: 922

A Comprehensive Emissions Inventory of Upstream Oil and Gas Activities in the Rocky Mountain States

A. Bar-Ilan,¹ J. R. Grant,¹ R. I. Parikh,¹ A. K. Pollack,¹ D. Henderer,² K. Sgamma³; ¹ENVIRON International Corporation, Novato, CA, ²Buys & Associates, Inc, Littleton, CO, ³Independent Petroleum Association, Denver, CO

4:00 PM

Paper#: 821

Air Emissions Management in Petroleum Refineries - Challenges for Modernization Project's Permits

G. R. Rodrigues,¹ W. N. Chan,² R. Correa,³ A. F. Rozza³; ¹PETROBRAS, Rio de Janeiro - RJ, Brazil, ²PETROBRAS, Paulinia, SP, Brazil, ³PETROBRAS, Cubatão, SP, Brazil

TECHNICAL SESSIONS

4:20 PM

Paper#: 619

Greenhouse Gas Reporting Rule Developments for the Oil and Gas Industry

D. Hughes; Cardinal Engineering, Inc., Oklahoma City, OK

ES-4 (4)

Room: Glen 202

6/23/2010 3:20 PM

Panel

Climate Legislation and Greenhouse Gas Emission Reductions

Sponsoring Committee(s): ES-4, EI-2

Chair: CV Mathai, APS

The U.S. Senate is in the process of adopting a bill to reduce GHG emissions using an economy-wide cap & trade approach, similar to that in the bill adopted by the House of Representatives. This Panel will discuss various issues associated with the proposed legislation. In the event climate legislation gets bogged down in the Senate, the U.S. EPA is moving forward with its own regulatory program to reduce GHG emissions, in accordance with the 2007 Supreme Court Decision. The Panel will also discuss the EPA's proposed and anticipated regulatory programs, especially those related to the power generation sector.

ES-4 (3)

Room: Glen 201 [Back-to-back with ES-4 (5)]

6/23/2010 3:20 PM

Paper

Product Sustainability

Sponsoring Committee(s): ES-4

Chair: Thomas Morahan, Delta Global Corporate Consultancy

3:20 PM

Paper#: 220

Cost Analyses of Biodiesel Productions Using Vegetable and Recycled Waste Cooking Oils-Case in Taipei County of Taiwan

C. H. Chang; Chung Yuan Christian University, Chung-Li, Taiwan, Taiwan

3:40 PM

Paper#: 747

Governmental Strategies for the Sustainable of the Industry of the Plastic in Mexico

S. Jiménez Vidal,¹ N. Simón Dominguez,² L. Rivas Tovar,³ C. Klinger Kaufman²; ¹Instituto Politécnico Nacional, ESCA Tepepan, México, Mexico, ²Universidad Nacional Autónoma de México, FCA, México, Mexico, ³Instituto Politécnico Nacional, ESCA Sto. Tomás, México, Mexico

ES-4 (5)

Room: Glen 201 [Back-to-back with ES-4 (3)]

6/23/2010 4:00 PM

Paper

Sustainability

Sponsoring Committee(s): ES-4

Chair: Thomas Morahan, Delta Global Corporate Consultancy

4:00 PM

Paper#: 561

The Origins and Future of the Sustainability Movement

B. A. Morgan; Cal Poly, San Luis Obispo, CA

4:20 PM

Paper#: 201

Sustainability and Proactive Product Stewardship: Improved Outcomes for Now and for the Future

T. W. Hesterberg,¹ W. B. Bunn,¹ E. Ardiente,¹ T. Slavin,¹ J. Shih,¹ J. Martinicky,¹ D. Pikely,¹ P. Goenka,¹ F. Alido,¹ D. A. Kaden²; ¹Navistar, Inc., Warrenville, IL, ²DakTox, LLC, Arlington, MA

4:40 PM

Paper#: 1144

Nitrogen Derivatives Transformation Identification from Parks and Gardens Irrigation with Wastewater Treatment Residuals in Chihuahua Mexico

C. J. Navarro-Gomez,¹ E. Herrera-Peraza,¹ M. S. Espino-Valdes,² V. Collins-Martinez¹; ¹Center for Advanced Materials Research, S.C, Chihuahua, Mexico, ²Universidad Autonoma de Chihuahua, Chihuahua, Mexico

ES-5 (2)

Room: Telus 111

6/23/2010 3:20 PM

Panel

Renewable Energy and Clean Technologies

Sponsoring Committee(s): ES-5

Chair: Sardar Hassan, Dept. of Defense IG Office

Combustion of fossil fuels is a major source of greenhouse gases, mainly carbon dioxide. In case of incomplete combustion we also have emission of methane, another major greenhouse gas. Thus to reduce greenhouse gas emissions for climate change management, it is necessary to replace fossil fuels by renewable and clean sources of energy. It is also necessary to come up with cleaner manufacturing and industrial technologies that are energy efficient and emit less greenhouse gases. This panel of experts will be answering questions on the newest approaches to renewable energy and cleaner industrial processes.

Panelists:

- Alex DePillis, Eco-Energy
- Keith Forbes, SAIC
- Bhaskar Kura, University of New Orleans
- Ronald Breault, Department of Energy / NETL

ITF-11 (2)

Room: Telus 109

6/23/10 3:20 PM

Panel

Energy, Economics, the Environment and First Nations

Sponsoring Committee(s): ITF-11

Chair: Peter Snow, Snow and Associates Inc.

First Nations explore what the regional economic development means to their communities, and how these development impacts energy, economics and the environment, from their own Reserves to their region, province, Canada and the world.

TECHNICAL SESSIONS

LC (2)

Room: Glen 205

6/23/2010 3:20 PM

Panel

CO₂ Capture and Storage (CCS)

Chair: Brent Lakeman, Alberta Innovates-Technology Futures

Co-Chair: Rick Tofani, Alberta Innovates-Technology Futures

The Panel Session has four (4) presenters followed by a panel discussion. The Session will highlight Alberta's approach to implementing CO₂ capture and storage and will focus on Alberta's investment in large-scale integrated CCS demonstrations and the establishment of a CCS Framework for the province.

WM-1 (2)

Room: Glen 203

6/23/2010 3:20 PM

Paper

Municipal Waste Management Issues, Electronics, and C&D Wastes

Sponsoring Committee(s): WM-1

Chair: Samuel Vigil, CA Poly. State University

Co-Chair: Marjorie Clarke, City College of New York

3:20 PM

Paper#: 216

Biological Waste Treatment Dual Stream Opportunities

R. Aho; EWS LLC, Marquette, MI

3:40 PM

Paper#: 552

Average Weights of Waste Electronic Materials in Alberta in 2009

J. K. O'Neil; Stantec Consulting Ltd., Edmonton, AB, Canada

4:00 PM

Paper#: 1192

Planning On-Site Construction Waste Management: Prediction of Quantities

B. A. S. Wimalasena, J. Y. Ruwanpura, P. Hettiaratchi; University of Calgary, Calgary, AB, Canada

YP (4)

Room: Telus 108

6/23/2010 3:20 PM

Panel

Understanding Air Toxics

Sponsoring Committee(s): YP, AM-5

Chair: Hilary Hafner, Sonoma Technology Inc.

Co-Chair: Garrett Hoeksema, Golder Associates Ltd.

There are 188 Hazardous air pollutants (HAPs) defined in the Clean Air Act Amendments of 1990. HAPs are also referred to as air toxics. Air toxics are those pollutants known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects. Examples of toxic air pollutants include benzene (found in gasoline), Perchloroethylene (emitted from some dry cleaning facilities), methylene chloride (used as a solvent and paint stripper by a number of industries), and metals such as arsenic, mercury, chromium, and lead compounds. This session is designed to provide young professionals with an introduction to and background on air toxics: • What are air toxics and their sources? • What are the effects of air toxics on human health? • Why analyze ambient air toxics data? • What types of data analyses should be performed? This panel session is designed for those who are interested in learning more about the fundamentals related to air toxics. This panel session is sponsored by the Young Professionals (YPs) as well as AM-5.

Panelists:

- **Hilary Hafner**, Sonoma Technology Inc.
- **Garrett Hoeksema**, Golder Associates Ltd.

THURSDAY, JUNE 24

Keynote

Room: Hyatt - Regency Ballroom 4-9

6/24/2010 7:30 AM

Transforming North American Energy Systems

See page 15 for details on the Keynote.

THURS. AM1

AB-1 (2)

Room: Telus 104

6/24/2010 9:00 AM

Paper

PM Modeling

Sponsoring Committee(s): AB-1

Chair: Luis Diaz-Robles, Catholic University of Temuco

Co-Chair: Prakash Doraiswamy, State University of New York at Albany

9:00 AM

Paper#: 559

Realizing the Economic Value of PM-Equivalent Ammonia Reductions

J. C. Lester,¹ R. L. David,¹ R. E. Morris,² B. Koo²; ¹ENVIRON International Corporation, Los Angeles, CA, ²ENVIRON International Corporation, Novato, CA

TECHNICAL SESSIONS

9:20 AM

Paper#: 880

Evaluation of Multi-Year Temporal and Spatial Trends in Model-Predicted EC and NO₂ Concentrations in Connecticut and Massachusetts

P. Doraiswamy,¹ C. Hogrefe,¹ W. Hao,² K. Civerolo,² J. Ku,² G. Sistla,² K. Demerjian¹; ¹University at Albany, State University of New York, Albany, NY, ²New York State Department of Environmental Conservation, Albany, NY

9:40 AM

Paper#: 658

Comparison of Estimates of Secondary Organic Carbon in Atlanta

J. E. Pachon, T. Russell, J. Mulholland; Georgia Institute of Technology, Atlanta, GA

10:00 AM

Paper#: 812

Source Apportionment of Fine Particles in Rural Area of Northwestern China

C. Zhu; Institute of Earth Environment, Chinese Academy of Sciences, Xi'an, China

10:20 AM

Paper#: 659

Fugitive Dust Dispersion Using LIDAR Measurements and a Stochastic Lagrangian Model

T. Sapsis,¹ S. Koloutsou-Vakakis,² M. J. Rood,² B. J. Kim,³ M. R. Kemme³; ¹Massachusetts Institute of Technology, Boston, MA, ²University of Illinois, Urbana, IL, ³U.S. Army Engineer Research and Development Center - Construction Engineering Research Lab, Champaign, IL

AB-3 (4)

Room: Telus 105

6/24/2010 9:00 AM

Paper

Meteorology of the Atmosphere

Sponsoring Committee(s): AB-3

Chair: Jesse The, Lake Environmental Software, Inc.

Co-Chair: Russell Lee, R F Lee Consulting

9:00 AM

Paper#: 814

Estimation of Effective Zone by Pure Sea/Land Breeze around Incheon Coastal Area using Numerical Simulation Technique

R. Pokhrel, H. Lee; Univeristy of Incheon, Incheon, Korea, Republic of

9:20 AM

Paper#: 575

An Implementation of an Automatic Numerical Weather Prediction System in Western Canada

R. J. Chapman; RWDI AIR Inc, Calgary, AB, Canada

9:40 AM

Paper#: 1109

Historical Spatial Temporal Distribution of Rainfall Trends in Mexico

Á. R. C. Terán,¹ V. B. Davydova,² M. M. Rosengaus,² E. M. C. Gutiérrez³; ¹CIEMAD-IPN and SMN-CONAGUA, Mexico, D.F., Mexico, ²SMN-CONAGUA, Mexico, D.F., Mexico, ³CIEMAD-IPN, Mexico, D.F., Mexico

AE-2 (2a)

Room: Glen 208

6/24/2010 9:00 AM

Paper

Novel Air Pollution Control

Sponsoring Committee(s): AE-2

Chair: Howard Hohl, Eisenmann Corp.

9:00 AM

Paper#: 85

Capture and Recovery of Organic Gases with Activated Carbon Fiber Cloth, Electrothermal Desorption, and Post-Desorption Treatment

K. E. Mallouk, D. L. Johnsen, M. J. Rood; University of Illinois at Urbana-Champaign, Urbana, IL

9:20 AM

Paper#: 72

Effect of Support Acid Pretreatment of Nanoscale Copper-based Catalysts in the CH₄-SCR Reaction

C. Hung; Yung-Ta Institute of Technology & Commerce, Pingtung, Taiwan

9:40 AM

Paper#: 71

Characterization and Reactivity of Cu-La-Ce Ternary Catalyst in the Selective Catalytic Oxidation of Ammonia to Nitrogen

C. Hung; Yung-Ta Institute of Technology & Commerce, Pingtung, Taiwan

10:00 AM

Paper#: 178

Study on the Treatment of Dichloromethane with Prepared Pt/TiO₂ Photocatalyst

S. Liou,¹ Y. Li,¹ C. Chang,¹ J. Ma²; ¹National Ilan University, Ilan, Taiwan, ²ST. Mary's Medicine Nuasing and Management College, Ilan, Taiwan

AT-3 (1)

Room: Telus 103

6/24/2010 9:00 AM

Paper

Air Toxics Health Effects

Sponsoring Committee(s): AT-3

Chair: Suresh Santanam, Syracuse Center of Excellence

TECHNICAL SESSIONS

9:00 AM

Paper#: 207

Risk Assessment using Portable FTIR Multi-Component Gas Analyzer for Quantifying Fugigant Gases in Sea and Land Cargo Containers

J. Bourbonnais, S. Valling, J. Cornish; Gasmag Technologies inc., La Prairie, QC, Canada

9:20 AM

Paper#: 974

Exposures to 1-Bromopropane among Workers as a Result of the Pending Ban on PERC Use in New Jersey Dry Cleaners

J. Blando,¹ D. Schill,¹ M. De La Cruz,² L. Zhang,² J. Zhang²; ¹New Jersey Department of Health and Senior Services, Trenton, NJ, ²UMDNJ School of Public Health, Piscataway, NJ

EE-5 (3)

Room: Glen 201

6/24/2010 9:00 AM

Panel

Corporate Risk Management Strategies

Sponsoring Committee(s): EE-5

Chair: Ram Ramanan, ICF International

The panelists will discuss the business impact and value of alternative approaches to address these issues

Panelists:

- Ray Picard, Hara
- Ram Ramanan, ICF International
- Aaron Schroeder, ICF International

EI-1 (3)

Room: Telus 106

6/24/2010 9:00 AM

Paper

NESHAP Compliance and Implementation at Federal Facilities

Sponsoring Committee(s): EI-1

Chair: Martin Wheeler, Tinker Air Force Base

Co-Chair: Howard Saxion, CH2M HILL

9:00 AM

Paper#: 146

Defense Land Systems and Miscellaneous Equipment (DLSME) NESHAP Applicability Assessment in the Draft Rule Stage at a Federal Facility

D. Kinard,¹ M. Wheeler,² H. Saxion¹; ¹CH2M HILL, Oklahoma City, OK, ²Tinker Air Force Base, Oklahoma City, OK

9:20 AM

Paper#: 191

NESHAP Compliance Practical Lessons Learned

B. Ziebro,¹ T. Wheeler²; ¹The Benham Companies, Norman, OK, ²Tinker Air Force Base, Tinker AFB, OK

9:40 AM

Paper#: 875

Ranking of Chemicals Measured in Emissions from R&D Facilities

M. Y. Ballinger,¹ C. Duchsherer²; ¹PNNL, Seattle, WA, ²PNNL, Richland, WA

10:00 AM

Paper#: 819

Mobile Emission Inventory Guidance for the U.S. Air Force Materiel Command

H. Saxion,¹ K. Watkins,² M. York³; ¹CH2M HILL, Oklahoma City, OK, ²CH2M HILL, Silver Spring, MD, ³CH2M HILL, Corvallis, OR

10:20 AM

Paper#: 84

Overcoming Challenges While Preparing a Baseline Mobile Air Emissions Inventory for Hill Air Force Base

S. Rasmussen,¹ G. Palmer,¹ M. Carter,² M. York³; ¹Hill Air Force Base, Hill AFB, UT, ²CH2M Hill, Salt Lake City, UT, ³CH2M Hill, Corvallis, OR

EI-2 (2a)

Room: Glen 206

6/24/2010 9:30 AM

Panel

Nuclear Renaissance - Expediting the Permitting of New Nuclear Power Generation

Sponsoring Committee(s): EI-2

Chair: Hal Taback, Hal Taback Company

With the growing need for energy in the Western World, the related global climate issues and the recent advances in nuclear power generation with significantly less Uranium waste, nuclear energy is re-emerging as a viable answer. For the past three years A&WMA has included sessions on nuclear energy at its annual meeting bringing prominent speakers from government (DOE & EPA), industry and the public sector to present and debate as panelist or keynote speakers. This panel will bring the attendees up to date with the U.S. and Canadian actions to promote and install this technology.

Panelists:

- Sal Galub, U.S. DOE
- Finis Southworth, AREVA NP Inc.
- David Rasmussen, U.S. ITER Fusion Project Leader
- Frank Princiotta, U.S. EPA

EP-1 (5)

Room: Glen 202 [Back-to-back with EP-1 (8)]

6/24/2010 9:00 AM

Paper

PM_{2.5} and Ozone Nonattainment Strategies

Sponsoring Committee(s): EP-1

Chair: Tony Colella, AECOM

TECHNICAL SESSIONS

9:00 AM

Paper#: 893

Using a Multi-Pollutant Evaluation Method to Study the Economics of Selective Catalytic Reduction

D. C. Belik; Bay Area Air Quality Management District, San Francisco, CA

9:20 AM

Paper#: 748

Competing Air Quality and Waste Management Goals with Permitting Composting Facilities in California

J. Koehler,¹ W. W. Popenuck²; ¹AECOM, Oakland, CA, ²Air Quality Consultant, Orick, CA

9:40 AM

Paper#: 879

Uncertainty in Estimating PM_{2.5} Emissions from Gas-Fired Combined Cycle and IGCC Power Plants

G. England,¹ A. David,² J. Ruud³; ¹ENVIRON International Corporation, Irvine, CA, ²ENVIRON International Corporation, Los Angeles, CA, ³Fluor Enterprises, Inc., Irvine, CA

EP-1 (8)

Room: Glen 202 [Back-to-back with EP-1 (5)]

6/24/2010 10:00 AM

Paper

NAAQS Policy

Sponsoring Committee(s): EP-1

Chair: Arijit Pakrasi, Shaw Environmental, Inc.

10:00 AM

Paper#: 106

Transitioning to PM_{2.5} Assessment Tools for Emission Inventory and Regulatory Applications

E. T. Barfield,¹ J. H. Southerland²; ¹BEST Consulting, Apex, NC, ²NC Division of Air Quality, retired, Cary, NC

10:20 AM

Paper#: 591

Comparison of State Recommendations and Methodologies for Defining Partial-County Lead Nonattainment Areas under the 2008 Lead National Ambient Air Quality Standard and Comparative Air Dispersion Lead Modeling for Pennsylvania Lead Sources

G. Biebuyck, T. Wickstrom; Liberty Environmental, Inc., Reading, PA

ES-5 (3)

Room: Telus 101/102

6/24/2010 9:30 AM

Paper

Greenhouse Gas Impacts, Technology, and Climate Policy

Sponsoring Committee(s): ES-5

Chair: Ann Marie Bourgeois, SIDD

Paper#: 86

The Role of Technology in Mitigating Climate Change

F. T. Princiotta; USEPA, Research Triangle Park, NC

Paper#: 182

America's Domestic Greenhouse Gas Policies and the Effects on the Industrial Sector

D. Hooper; Brown and Caldwell, Walnut Creek, CA

ET-1 (1a)

Room: Telus 109

6/24/2010 9:00 AM

Paper

Off-Road Sources: Airports, Rail, Marine, and Construction

Sponsoring Committee(s): ET-1

Chair: Roger Wayson, Volpe Trans. System Center

Co-Chair: Carrie Reese, North Central Texas Council of Governments

9:00 AM

Paper#: 83

Emissions Inventory for Central Florida with Emphasis on On-Road and Non-Road Sources

C. Cooper, J. Ross, M. Radford, O. Duarte, W. Champion; UCF, Orlando, FL

9:20 AM

Paper#: 935

PM Trends in the Vicinity of Airports

G. Noel,¹ R. L. Wayson²; ¹Volpe Transportation Systems Center, Cambridge, MA, ²Volpe Transportation Systems Center, Cottonwood Shores, TX

9:40 AM

Paper#: 970

Comparative Assessment of In-Use Emissions of Passenger Railroad Locomotives Using Portable Emission Measurement Systems

H. Frey, H. Choi, B. Graver, G. Sandhu; North Carolina State University, Raleigh, NC

10:00 AM

Paper#: 698

Current and Future Diesel Emission Estimation from Agricultural Sector

E. Winijkul, F. Yan, T. C. Bond; University of Illinois at Urbana-Champaign, Urbana, IL

IF (1)

Room: Telus 108

6/24/2010 9:00 AM

Panel

Air Quality and Environmental Initiatives in Asia - Part 1

Sponsoring Committee(s): IF

Chair: Frank Lee, The Hong Kong Polytechnic University

Co-Chair: Junji Cao, Institute of Earth Environment, CAS

Paper#: 159

Environment, Climate Change and Energy Efficiency (ECCEE): An Integrated Approach to Air Quality Management, Philippine Setting

E. G. Alabastro, M. R. J. Fernando; Air and Waste Management Philippine Section Inc., Quezon City, Philippines

TECHNICAL SESSIONS

Paper#: 1980

Source Apportionment of Visibility in Hong Kong

A. Lau,¹ Q. Bian,² Z. Yuan,¹ J. Yu³; ¹HKUST Fok Ying Tung Graduate School, Nansha, Guangzhou, China, ²Hong Kong University of Science and Technology (HKUST), Hong Kong, ³Hong Kong University of Science and Technology (HKUST), Kowloon, Hong Kong

Paper#: 1981

Source Apportionment Using Multilinear Receptor Model of Hong Kong Aerosols

A. Lau,¹ Z. Yuan,¹ J. Yu,¹ P. Louie²; ¹HKUST Fok Ying Tung Graduate School, Nansha, Guangzhou, China, ²Hong Kong University of Science and Technology, Kowloon, Hong Kong

Paper#: 1982

Resolving Urban Morphology in High-resolution Atmospheric Models and its Implication on Air Quality Studies

A. Chan, A. Lau, J. Fung; The Hong Kong University of Science and Technology, Kowloon, Hong Kong

WM-1 (3)

Room: Glen 203

6/24/2010 9:00 AM

Panel

Achieving Zero Waste - Status Report

Sponsoring Committee(s): WM-1

Chair: Marjorie Clarke, City College of New York

Co-Chair: Sam Vigil, Cal Poly. State University

The paradigm shift from integrated solid waste management to zero waste systems is underway, more in some places than others. This panel explores what constitutes a zero waste system (i.e., robust waste prevention legislation and incentives, reuse, recycling and composting education, enforcement and infrastructure), and explores progress made by jurisdictions that are implementing zero waste systems, and how they are achieving it.

Panelists:

- **Bob Gedert**, California Resource Recovery Association
- **Marjorie Clarke**, City College of New York

WM-4 (1)

Room: Glen 204

6/24/2010 9:00 AM

Paper

Medical Waste Management

Sponsoring Committee(s): WM-4

Chair: Anne Woolridge, Independent Safety Services Ltd.

Co-Chair: Stephen Musson, U.S. EPA

9:00 AM

Paper#: 223

Research into Healthcare Waste: Barriers and Opportunities from Academic, Medical and Waste Contractor Perspectives

A. C. Woolridge,¹ R. Fairweather,² H. Williams³; ¹Independent Safety Services Limited, Nottingham, United Kingdom, ²Veolia Environnement, London, United Kingdom, ³The University of Northampton, Northampton, United Kingdom

9:20 AM

Paper#: 587

Wet Scrubber Control Strategy to Meet the New HMIWI Mact Standard

A. Bartocci; Envitech, Inc., San Diego, CA

9:40 AM

Paper#: 844

Environmentally Friendly Medical Waste Recycling Using Plasma-Gasification-Melting (PGM) and Wet Scrubbing Technology

A. Bartocci,¹ L. Dor²; ¹Envitech, Inc., San Diego, CA, ²Environmental Energy Resources, Ltd. (EER), Ramat-Gan, Israel

THURS. AM2

AB-1 (1b)

Room: Telus 105

6/24/2010 11:10 AM

Paper

PM Emission Measurements

Sponsoring Committee(s): AB-1

Chair: Peter Mueller, TropoChem

Co-Chair: Jay Turner, Washington University in St. Louis

11:10 AM

Paper#: 1012

Polarization Correction of Sun-Light Scattering for Sky-Scattered Solar Radiation Based Plume Transmissivity Measurements

R. Devillers,¹ K. A. Thomson,¹ M. R. Johnson²; ¹National Research Council, Ottawa, ON, Canada, ²Carleton University, Ottawa, ON, Canada

11:30 AM

Paper#: 734

Deposition Studies of Vehicle-generated PM Near a Highway in Lake Tahoe Basin

D. Zhu,¹ H. Kuhns,¹ J. A. Gillies,¹ V. Etyemezian,² A. W. Gertler,¹ S. Brown³; ¹Desert Research Institution, Reno, NV, ²Desert Research Institution, Las Vegas, NV, ³Nevada Tahoe Conservation District, Zephyr Cove, NV

11:50 AM

Paper#: 123

Quantitative Assessment of Releasability of Asbestos from Soil Using the Releasable Asbestos Field Sampler

J. Kominsky,¹ J. Thornburg,² W. Barrett,³ F. Hall,¹ J. Konz⁴; ¹Environmental Quality Management, Inc., Cincinnati, OH, ²RTI International, Research Triangle Park, NC, ³U.S. EPA, Cincinnati, OH, ⁴U.S. EPA, Washington, DC

12:10 PM

Paper#: 984

Evaluation of Cooling Tower Drift Measurement Techniques

K. Hennon, D. Wheeler; Clean Air Engineering, Powell, TN

AB-1 (3)

Room: Telus 109

6/24/2010 11:10 AM

Paper

International PM Measurements/Data Analysis

Sponsoring Committee(s): AB-1

Chair: Michael Meyer, MetOne

Co-Chair: Charles McDade, University of California, Davis

Thursday, June 24

TECHNICAL SESSIONS

11:10 AM

Paper#: 1017

Challenges in Assessing Cumulative Effects Using the Canada Wide Standard for PM_{2.5}

B. Burkholder,¹ M. Murphy²; ¹Stantec, Markham, ON, Canada, ²Stantec, Fredericton, NB, Canada

11:30 AM

Paper#: 708

Adjusting TEOM PM_{2.5} Values to Account for the Under-Estimated Values During Winter Season

D. C. Fudge; BC Ministry of Environment, Prince George, BC, Canada

11:50 AM

Paper#: 580

Correlation between Mass of Fine Particles PM_{2.5} and Chemical Composition of PM_{2.5} Acid Aerosols Northeast Mexico City in 2004

Y. I. Falcon; Universidad Autonoma Metropolitana, Mexico City, Mexico

12:10 PM

Paper#: 44

The Changes of Fine Particles Pollutant in Beijing and Its Ambient Areas during the 2008 Olympics

J. Xin, Y. Wang, G. Tang; State Key Laboratory of Atmospheric Boundary Layer Physics and Atmospheric Chemistry, Institute of Atmospheric Physics, Chinese Academy of Science, Beijing, China

AB-2 (1c)

Room: Glen 208

6/24/2010 11:10 AM

Paper

Ambient Studies, Measurements, and Modeling

Sponsoring Committee(s): AB-2

Chair: Alan Gertler, Desert Research Institute

Co-Chair: Barbara Zielinska, Desert Research Institute

11:10 AM

Paper#: 883

Observations of Ammonia from Several Different Sites in Colorado

D. E. Day; Colorado State University, Fort Collins, CO

11:30 AM

Paper#: 979

An Ensemble Method for Trajectory-Based Source Apportionment of Airborne Concentrations at Rocky Mountain National Park, Colorado

K. A. Gebhart,¹ B. A. Schichtel,¹ W. C. Malm,¹ M. G. Barna,¹ M. A. Rodriguez,² J. Collett²; ¹National Park Service, Fort Collins, CO, ²Colorado State University, Fort Collins, CO

11:50 AM

Paper#: 989

VOC Concentrations in the Ambient Air of Bogota City: Source Identification and Apportionment

J. F. Franco,¹ J. A. Pacheco,¹ L. C. Belalcazar,² E. Behrentz¹; ¹Universidad de los Andes, Bogotá, Colombia, ²Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland

12:10 PM

Paper#: 1023

Annual Cycle in Reduced and Oxidized Forms of Atmospheric Nitrogen Species at Rocky Mountain National Park

C. M. Carrico,¹ J. L. Collett,¹ S. M. Kreidenweis,¹ E. Levin,¹ M. Schurman,¹ D. Day,¹ K. Beem,¹ J. Ray,² B. Schichtel,³ W. Malm³; ¹Colorado State University, Fort Collins, CO, ²U.S. National Park Service, Denver, CO, ³U.S. National Park Service, Fort Collins, CO

12:30 PM

Paper#: 163

Measurement and Analysis of Non-Methane Volatile Organic Compounds Emissions from Concentrated Animal Feeding Operations in North Carolina

I. C. Rumsey,¹ V. P. Aneja,¹ W. A. Lonneman²; ¹North Carolina State University, Raleigh, NC, ²Senior Environmental Employment Program, U.S. Environmental Protection Agency, Research Triangle Park, NC

AB-3 (2b)

Room: Telus 110

6/24/2010 11:10 AM

Paper

Ozone and PM_{2.5} Modeling

Sponsoring Committee(s): AB-3

Chair: Ralph Morris, ENVIRON International Corporation

Co-Chair: Robert Paine, AECOM

11:10 AM

Paper#: 132

Impacts of Refinery Flare Operations and Emissions Variability on Ozone Formation in the Houston-Galveston-Brazoria Area

E. McDonald-Buller, R. T. Pavlovic, F. Alhajeri, Y. Kimura, D. T. Allen; University of Texas at Austin, Austin, TX

11:30 AM

Paper#: 919

A Seasonal Analysis of Regional Transport of the Houston Urban Plume

M. Dionisio, E. McDonald-Buller, D. T. Allen; University of Texas at Austin - CEER, Austin, TX

11:50 AM

Paper#: 899

A New Algorithm in CAMx to Reduce Excessive Vertical Transport over Complex Terrain

C. Emery, E. R. Tai, R. E. Morris, G. Yarwood; ENVIRON International Corporation, Novato, CA

AE-1 (5a)

Room: Glen 209

6/24/2010 11:10 AM

Paper

Innovative CO₂ Control Technologies

Sponsoring Committee(s): AE-1

Chair: Katherine Dombrowski, URS Corporation

Co-Chair: Arijit Pakrasi, Shaw Environmental, Inc.

TECHNICAL SESSIONS

11:10 AM

Paper#: 59

Results from Experimental Evaluations of Post-Combustion CO₂ Sorbents

H. Krutka,¹ S. Sjoström,¹ C. Martin,¹ T. Campbell,¹ A. O'Palko²;
¹ADA-Environmental Solutions, Littleton, CO, ²DOE NETL,
Morgantown, WV

11:30 AM

Paper#: 670

Comparisons of Sorbent Costs for CO₂ Capture from Gas Stream

F. Su, C. Lu, H. Chen; National Chung Hsing University, Taichung, Taiwan

11:50 AM

Paper#: 626

CO₂ Capture by Amine-Functionalized Silica-Based Microporous and Mesoporous Materials

L. Lin, H. Bai; National ChiaoTung University, HsinChu, Taiwan

AM-1 (4)

Room: Macleod A2

6/24/2010 11:10 AM

Paper

Global Greenhouse Gas and Carbon Black Emissions Inventory and Factors Development

Sponsoring Committee(s): AM-1

Chair: Tom Driscoll, U.S. EPA

11:10 AM

Paper#: 972

Executive Order 13514 - Sustainability Through GHG Inventory and Emissions Reduction

J. Graul, M. Baghoomian; Northrop Grumman Corporation, Clearfield, UT

11:30 AM

Paper#: 599

Comparing and Contrasting Greenhouse Gas Emission Quantification for Global Oil & Natural Gas Industry Sector Operations

K. Ritter,¹ J. Keating,² M. Lev-On,³ T. M. Shires⁴; ¹American Petroleum Institute, Washington, DC, ²BP North America, Chicago, IL, ³The LEVON Group, Thousand Oaks, CA, ⁴URS Corporation, Austin, TX

11:50 AM

Paper#: 904

Black Carbon Emission Factor Assessment

J. Goldsmith, R. Neulicht, M. Icenhour; RTI International, Research Triangle Park, NC

AM-3 (1a)

Room: Telus 104

6/24/2010 11:10 AM

Paper

Characterizing Air Quality and Monitoring for Environmental Effects in the Athabasca Oil Sands Region of Alberta, Canada - Part 1

Sponsoring Committee(s): AM-3

Chair: Kevin Percy, Wood Buffalo Environmental Association

Co-Chair: Alan Legge, Biosphere Solutions

11:10 AM

Paper#: 1194

The Wood Buffalo Environmental Association: Monitoring in the Athabasca Oil Sands Region, Alberta, Canada

C. MacEachern; Wood Buffalo Environmental Association, Fort McMurray, AB, Canada

11:30 AM

Paper#: 914

The WBEA Air Quality Monitoring Network: History of Operation and Current Status

D. M. Phillips; Syncrude Canada Ltd., Fort McMurray, AB, Canada

11:50 AM

Paper#: 1091

Development/Application of a Comprehensive Data Management System for the Athabasca Oil Sands Region

M. Hansen; Rawin Consulting Inc, Calgary, AB, Canada

12:10 PM

Paper#: 1068

Development and Application of Statistical Approaches for Air Quality Data Management

M. Nosal; The University of Calgary, Calgary, AB, Canada

12:30 PM

Paper#: 1079

Ten-Year Trends in Regional Air Quality for Criteria Pollutants in the Athabasca Oil Sands Region

W. Kindzierski, M. Gamal El-Din, P. Chelme-Ayala; University of Alberta, Edmonton, AB, Canada

Thursday, June 24

TECHNICAL SESSIONS

EDC

Room: Glen 201

6/24/2010 11:10 AM

Panel

Opportunities and Challenges in Environmental Education and Training

Sponsoring Committee(s): EDC

Chair: Ashok Kumar, University of Toledo

This panel session will cover a variety of topics related to challenges in delivering environmental education, training, and outreach related to topics of sustainability, green products, energy, entrepreneurship, and engineering curriculum.

Panelists:

- **Michael Kleinman**, University of California, Irvine
- **Prahlad Murthy**, Wilkes University
- **Christi Veleta**, City of Jacksonville Environmental Protection Board
- **William Auberle**, Northern Arizona University

El-1 (4)

Room: Telus 106

6/24/2010 11:10 AM

Panel

Title V Permit Streamlining

Sponsoring Committee(s): El-1

Chair: La Weeda Ward, Edwards Air Force Base

This panel will discuss Title V Permit Streamlining actions at Edwards AFB under current and proposed regulatory climates. To reduce the complexities created by adding Title V on top of an already robust compliance program, installations such as Edwards Air Force Base (Edwards) have developed and implemented streamlining options into their Title V Program. The first streamlining option that was implemented was based on the "Permit Shield" provisions of the Title V program (40 CFR § 70.6(f)). In the case of Edwards AFB, a permit shield was sought from the Aerospace NESHAP requirements. This permit streamlining action consolidated all local and federal aerospace coating requirements into one set of permit conditions and made Aerospace NESHAP requirements essentially transparent. A renewed Title V permit was granted that contains 'shield' language in all of Edwards' coating operations. Edwards' Title V Aerospace NESHAP Permit Shield effectively shields the coating operations from duplicate requirements as applicable conditions are written and streamlined directly into the permit. This panel will also discuss EPA's final Flexible Permitting Rule, finalized on October 6, 2009 (74 FR 51418) and its contribution to the efforts of current and future Title V Permit Streamlining actions. The objective of this presentation is to share an approach and practical steps that helped Edwards AFB significantly streamline and enhance its Title V compliance program. Of particular focus is the development of the Aerospace NESHAP Permit Shield and the benefits achieved in terms of program efficiency and compliance improvements. This panel will also discuss EPA's final Flexible Permitting Rule, finalized on October 6, 2009 (74 FR 51418) and its contribution to the efforts of current and future Title V Permit Streamlining actions.

Panelists:

- **La Weeda Ward**, Edwards Air Force Base
- **Massie Hatch**, URS Corporation
- **John Gilliland**, URS Corporation

El-2 (2b)

Room: Glen 206

6/24/2010 11:10 AM

Panel

Nuclear Renaissance - Expediting the Permitting of New Nuclear Power Generation

Sponsoring Committee(s): El-2

Chair: Hal Taback, Hal Taback Company

See description for El-2 (2a) on page 93.

EP-1 (7)

Room: Macleod A1

6/24/2010 11:10 AM

Panel

Implementing New Source Review: State & Local Agency Issues & Differences

Sponsoring Committee(s): EP-1

Chair: David Jordan, ERM

Panel members will discuss issues pertaining to implementing NSR rules from a state and local agency perspective. Topics would include regional consistency, interaction with public interest groups, and interaction with EPA.

Panelists:

- **Joann Held**, Air Toxics Analysis Services
- **Harry Klodowski**, Hull & Klodowski LLC
- **Jack Broadbent**, Bay Area Air Quality Management District

EP-2 (2)

Room: Telus 111

6/24/2010 11:10 AM

Panel

Impact of Climate Change - an Economic Perspective

Sponsoring Committee(s): EP-2

Chair: Ram Ramanan, ICF International

The panelists will discuss the business impact and value of alternative approaches to address these issues.

Panelists:

- **Marc Lemmond**, U.S. Department of Commerce
- **Jim Cormack**, TransCanada
- **Ram Ramanan**, ICF International

EP-8 (3)

Room: Glen 202

6/24/2010 11:10 AM

Paper

Practical Environmental Management System Lessons

Sponsoring Committee(s): EP-8

Chair: Daniel Reinke, ERM

Co-Chair: Patricia Brush, Air Liquide Process & Construction North America

11:10 AM

Paper#: 600

Health, Safety and Environmental Indicators - Choosing the Right Ones

P. Brush; Air Liquide Process & Construction, Inc., Houston, TX

TECHNICAL SESSIONS

11:30 AM

Paper#: 564

An Integrated Approach for Managing Environmental Matters on Asset Decommissioning Projects

R. Well,¹ H. Campbell²; ¹Enfos, Inc., Naperville, IL, ²ConocoPhillips, Calgary, AB, Canada

ES-5 (8)

Room: Telus 101/102

6/24/2010 11:10 AM

Panel

The Science and Implications of the Global Temperature Record

Sponsoring Committee(s): ES-5

Chair: Flint Webb, SAIC

Co-Chair: Anne Marie Bourgeois, SIDD

There has been a lot of discussion lately about the trend of global temperatures, are they increasing or decreasing and how much of it is due to anthropogenic sources or to natural phenomena. There are some that have pointed out that the recent temperature data does not support the conclusion that global temperature rises are due to man-made activities but could be a result of natural fluctuations caused by solar cycles or orbital fluctuations. Recent disclosures of e-mails and admissions that there were errors in some of the data analysis have added fuel to the fires of this debate. This panel will attempt to tackle these issues in a neutral forum that will provide various perspectives on climate science data and the implications of whether recent climate changes are man-made or not.

Panelists:

- Elwynn Taylor, Iowa State University

ET-1 (1b)

Room: Macleod A3

6/24/2010 11:10 AM

Paper

Off-Road Sources: Airports, Rail, Marine, and Construction

Chair: Roger Wayson, Volpe Trans. System Center

Co-Chair: Carrie Reese, North Central Texas Council of Governments

11:10 AM

Paper#: 577

Air Emissions Footprint from Cruise Vessels

C. L. Morrison,¹ D. Wolf²; ¹Shaw Environmental & Infrastructure Group, Concord, CA, ²TRC Solutions, Concord, CA

11:30 AM

Paper#: 816

Comparison Analysis of the Marine Air Emissions using Tier 1 and Tier 3 Methods in a Portal Area

J. Song, H. Lee; University of Incheon, Incheon, Korea, Republic of

11:50 AM

Paper#: 1912

Transportation Emissions Model for Canadian Ports

B. McEwen; SNC-Lavalin Environment Inc., Vancouver, BC, Canada

IF (2)

Room: Telus 108

6/24/2010 11:10 AM

Panel

Air Quality and Environmental Initiatives in Asia - Part 2

Sponsoring Committee(s): IF

Chair: Frank Lee, The Hong Kong Polytechnic University

Co-Chair: Junji Cao, Institute of Earth Environment, CAS

Paper#: 1983

An Air Quality Management Support System for Hong Kong and the Pearl River Delta

L. Ying, A. Lau, J. Fung; Hong Kong University of Science & Technology, Kowloon, Hong Kong

Paper#: 1985

Ultrasonic Spray Pyrolysis Synthesis of Porous Bi₂WO₆ Microspheres and Their Visible Light Induced Photocatalytic Removal of NO

S. Lee, Y. Huang; The Hong Kong Polytechnic University, Hong Kong, China

Paper#: 1986

Determination of Biogenic Volatile Organic Compounds (BVOCs) from Cleaning Products via SPME/GC-FID Analysis

S. Lee, Y. Huang, K. Ho; The Hong Kong Polytechnic University, Hong Kong, China

WM-1 (4)

Room: Glen 205

6/24/2010 11:10 AM

Panel

Generating Value from Integrated Solid Waste Management

Sponsoring Committee(s): WM-1

Chair: Ian Terry, Millennium EMS Solutions Ltd.

This panel session has four presenters and will discuss integrated waste management (IWM) approaches and strategies. Speakers will represent both municipally owned/operated waste management facilities and privately owned/operated waste management facilities and government regulatory agencies. The use of a number of different treatment options for the municipal solid waste (MSW) stream while ensuring the site specific regulatory, economic and social considerations will also be discussed.

WM-3 (3)

Room: Glen 203

6/24/2010 11:10 AM

Paper

Landfill and BioGas Systems - Energy Recovery, Gas Treatment, and Utilization

Sponsoring Committee(s): WM-3

Chair: David Minott, Environmental Resources Management (ERM)

Co-Chair: Lee Lundberg, Veolia Water North America

TECHNICAL SESSIONS

11:10 AM

Paper#: 52

Opportunities for Generating Electricity from Mpererwe Municipal Solid Waste Landfill

A. Mwesigye; Makerere University, Kampala, Uganda

11:30 AM

Paper#: 1145

Gas, We Got It! A Series of Landfill Gas Recovery Case Studies and the Resulting Cost Benefit Analysis

A. Muriel, C. Cherneff, M. Webb; Mount Royal, Calgary, AB, Canada

11:50 AM

Paper#: 610

Production of Pipeline Quality Gas from Landfill Gas at King County Cedar Hills Regional Landfill

M. Rahman, V. Okereke; King County, Seattle, WA

12:10 PM

Paper#: 567

Upgrading of Biogas by Electrothermal Swing Adsorption onto Activated Carbon Fiber Cloth - Towards an Industrial Process

S. Giraudet, B. Boulinguez, P. Le Cloirec; Ecole Nationale Supérieure de Chimie de Rennes, Rennes, France

WR-2 (3)

Room: Glen 204

6/24/2010 11:10 AM

Panel

Green Remediation – Principles and Lessons Learned from Success Stories

Sponsoring Committee(s): WR-2

Chair: Harish Rao, ARCADIS U.S. Inc.

Sustainability is a term that is incorporated into a wide range of environmental areas including what is routinely identified as green remediation. Cleanup activities use energy, water and materials resources to achieve cleanup objectives, which creates an environmental footprint. Optimizing environmental performance to order to implement effective cleanups that are sustainable can conserve resources and minimize the remedial activity's environmental footprint. This panel will focus on the important elements or principles for achieving green remediation and present green remediation case studies as well as lessons learned from these actual projects.

THURS. PM1

AB-2 (2)

Room: Telus 108

6/24/2010 2:20 PM

Paper

Photochemistry and Organic Aerosols

Sponsoring Committee(s): AB-2

Chair: Barbara Zielinska, Desert Research Institute

Co-Chair: Yuegang Zuo, University of Massachusetts Dartmouth

2:20 PM

Paper#: 108

Detailed Modeling of Alkene Chemistry within Condensed Chemical Mechanisms

G. Heo,¹ Y. Kimura,¹ E. McDonald-Buller,¹ D. T. Allen,¹ W. P. L. Carter,² G. Yarwood,³ G. Z. Whitten⁴; ¹University of Texas at Austin, Austin, TX, ²University of California, Riverside, CA, ³ENVIRON International Corporation, Novato, CA, ⁴Smog Reyes, Point Reyes Station, CA

2:40 PM

Paper#: 205

Inhalable Particulate Matter from Common Organic Vapours

K. M. McDonald, E. Schnitzler, Z. Petriw; Concordia University College of Alberta, Edmonton, AB, Canada

3:00 PM

Paper#: 717

High Spring Time Ozone in Northern Latitudes

D. C. Fudge; BC Ministry of Environment, Prince George, BC, Canada

3:20 PM

Paper#: 783

Source Apportionment of PM_{2.5} Organic Carbon in Hong Kong Using Positive Matrix Factorization of Secondary and Primary Organic Tracer Data

J. Yu, D. Hu, Q. Bian, A. K. Lau; Hong Kong University of Science & Technology, Hong Kong, Hong Kong

AB-3 (3c)

Room: Telus 101/102

6/24/2010 2:20 PM

Paper

Regulatory Model Applications

Chair: Anthony Schroeder, Trinity Consultants

Co-Chair: David Long, American Electric Power

2:20 PM

Paper#: 578

Identifying a Temporally Representative Modelling Period

E. Anglo; AMEC Earth & Environmental, Calgary, AB, Canada

2:40 PM

Paper#: 1008

Modeling Challenges Posed by the New NAAQS for PM_{2.5}, Sulfur Dioxide and Nitrogen Dioxide

D. Heinold, R. Paine; AECOM, Westford, MA

3:00 PM

Paper#: 193

Site-Specific Meteorological Monitoring for AERMOD: Model Sensitivity to Measurements of Solar and Net Radiation

T. S. Wickstrom; Liberty Environmental, Inc., Reading, PA

3:20 PM

Paper#: 863

Buoyant Line Plume Model Sensitivity Analysis

B. Cosic, M. Jammer, S. Capstick; Golder Associates Ltd., Mississauga, ON, Canada

TECHNICAL SESSIONS

AE-1 (5b) Room: Glen 209

6/24/2010 2:20 PM

Paper

Innovative CO₂ Control Technologies

Sponsoring Committee(s): AE-1

Chair: Katherine Dombrowski, URS Corporation

Co-Chair: Arijit Pakrasi, Shaw Environmental, Inc.

2:20 PM

Paper#: 784

Experimental Study of a Biocatalyst-Promoted Carbonate Absorption Process for CO₂ Capture from Post-Combustion Flue Gases

A. Khodayari,¹ Y. Lu,² M. Rostam Abadi,¹ M. Rood¹; ¹Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, Urbana, IL, ²Institute of Natural Resource Sustainability, University of Illinois at Urbana-Champaign, Urbana, IL

2:40 PM

Paper#: 36

Chemical Looping Combustion Technology

M. Nikoo, A. Chambers; Alberta Research Council, Edmonton, AB, Canada

3:00 PM

Paper#: 608

Rapid Synthesis of Silica Supported Cu-TiO₂ Fine Catalyst Particles for CO₂ Photoreduction

W. Wang, J. Park, P. Biswas; Washington University in St. Louis, St. Louis, MO

AE-2 (2c)

Room: Glen 208

6/24/2010 2:20 PM

Paper

Novel Air Pollution Control

Sponsoring Committee(s): AE-2

Chair: Howard Hohl, Eisenmann Corp.

2:20 PM

Paper#: 213

Removal of MtBE by Using Carbon Doped TiO₂/ITO Nanocrystalline Thin Film Photocatalysts under the Illumination of Visible Light

C. Hung,¹ K. Tsai,¹ C. Yuan,² K. Wu³; ¹National Kaohsiung First University of Science and Technology, Kaohsiung, Taiwan, ²National Kaohsiung University, Kaohsiung, Taiwan, ³National Kaohsiung Marine University of Science and Technology, Kaohsiung, Taiwan

2:40 PM

Paper#: 594

Photochemical Degradation of BTEX in Waste Gas: Experiments and Modeling

A. De Visscher, M. Rezaei, F. Mahmoudkhani, C. H. Langford, E. Vaisman; University of Calgary, Calgary, AB, Canada

3:00 PM

Paper#: 628

Photo-Degradation of Acetone Vapor with CNT/TiO₂ Composites Fabricated by Plasma Enhanced Chemical Vapor Deposition

W. Zeng, F. Su, C. Lu; Dept. of Environmental Engineering, National Chung Hsing University, Taichung, Taiwan

3:20 PM

Paper#: 211

One-Step Synthesis of Iron Impregnated Carbon Spheres and Their Potential for Use in Air Quality Applications

J. D. Atkinson, S. A. Dastgheib, M. Rostam-Abadi, M. J. Rood; University of Illinois Urbana-Champaign, Urbana, IL

3:40 PM

Paper#: 699

Removal of Propylene and Butylene Gas Using Biofiltration

M. Rani; University of Texas at Arlington, Arlington, TX

AM-2 (1)

Room: Macleod A2

6/24/2010 2:20 PM

Paper

Source Apportionment Applications

Sponsoring Committee(s): AM-2

Chair: Hilary Hafner, Sonoma Technology, Inc.

2:20 PM

Paper#: 995

Source and Fate of Methane within an Urban Setting

G. O'Sullivan, B. J. Min, C. D. Sandau; TRIUM Inc., Cochrane, AB, Canada

2:40 PM

Paper#: 142

Woodsmoke Source Apportionment and Home Infiltration Study in the Rural Annapolis Valley, Nova Scotia, Canada

M. D. Gibson,¹ T. J. Ward,² J. R. Guernsey,¹ A. J. Wheeler,³ M. P. Seaboyer,¹ P. Bazinet,¹ G. H. King,¹ N. K. Brewster,¹ J. Kuchta,¹ R. Potter,¹ D. M. Stieb³; ¹Dalhousie University, Halifax, NS, Canada, ²University of Montana, Missoula, MT, ³Health Canada, Ottawa, ON, Canada

3:00 PM

Paper#: 828

Assessing Source Contributions to Ambient Metal Air Toxic Concentrations in Reading, Pennsylvania

G. Biebuyck, M. Zeiders, T. Wickstrom; Liberty Environmental, Inc, Reading, PA

AM-3 (1b)

Room: Telus 104

6/24/2010 2:20 PM

Paper

Characterizing Air Quality and Monitoring for Environmental Effects in the Athabasca Oil Sands Region of Alberta, Canada - Part 2

Sponsoring Committee(s): AM-3

Chair: Kevin Percy, Wood Buffalo Environmental Association

Co-Chair: Alan Legge, Biosphere Solutions

TECHNICAL SESSIONS

2:20 PM

Paper#: 1625

Emission Characterization Plans for the Alberta Oil Sands Region

J. Watson, J. Chow, X. Wang, S. D. Kohl; Desert Research Institute, Reno, NV

2:40 PM

Paper#: 1626

Heavy-Duty Diesel Emissions in the Alberta Oil Sands Region

J. Chow, X. Wang, S. D. Kohl, S. Gronstal, J. Watson; Desert Research Institute, Reno, NV

3:00 PM

Paper#: 1066

Novel Approach to Co-Measurement of Volatile Organic Compounds and Sulphur Compounds in the Athabasca Oil Sands Region

R. J. OBrien; VOC Technologies, Damascus, OR

3:20 PM

Paper#: 848

Application of Ambient Ion Monitor in Northeastern Alberta

Y. Hsu,¹ M. Landis²; ¹Wood Buffalo Environmental Association, Fort McMurray, AB, Canada, ²U.S. Environmental Protection Agency, Research Triangle Park, NC

3:40 PM

Paper#: 563

Passive Monitoring to Estimate N (NO₂, HNO₃, NH₃) Exposure in Remote Areas and Geospatial Analysis to Optimize Networks

A. Bytnerowicz,¹ W. Fraczek,² S. Schilling,¹ M. Hansen,³ D. Alexander¹; ¹USDA Forest Service, Riverside, CA, ²Environmental Systems Research Institute, Redlands, CA, ³Wood Buffalo Environmental Association, Fort McMurray, AB, Canada

AT-1 (2)

Room: Telus 103

6/24/2010 2:20 PM

Paper

Air Toxics Emissions, Source Characterization, and Regulatory Developments

Sponsoring Committee(s): AT-1

Chair: Paul Siebert, Weston Solutions, Inc.

2:20 PM

Paper#: 637

Air Toxic Emissions Impact from Natural Gas Compressor Turbines

G. Misra,¹ R. Kura²; ¹El Paso Corporation, Birmingham, AL, ²El Paso Corporation, Houston, TX

2:40 PM

Paper#: 197

Final GACT Standards for Chemical Manufacturing Area Sources

T. L. Dillow, REM, J. D. Marteny, P.E.; Dixon Environmental, Baltimore, MD

EE-5 (4a)/(4b)

Room: Glen 201

6/24/2010 2:20 PM

Paper

Recent Experience with Risk Assessment and Management

Sponsoring Committee(s): EE-5

Chair: John Koehler, Environmental Resources Management

Co-Chair: Heidi Rous, PCR Services Corporation

2:20 PM

Paper#: 1073

Are Chemical Emissions from the Oil Sands Presenting a Threat to Human Health?

B. Koppe; Intrinsic Environmental Sciences Inc., Calgary, AB, Canada

2:40 PM

Paper#: 1062

Potential Human Health Risks Associated with Large Game Meat Consumption in the Vicinity of an Operating Hazardous Waste Facility in Northern Alberta

G. L. Brown,¹ G. Latonas,² A. Sutherland,³ D. Freckleton³; ¹Intrinsic Environmental Sciences Inc., Calgary, AB, Canada, ²Sulphur Experts Inc, Calgary, AB, Canada, ³Earth Tech AECOM, Swan Hills, AB, Canada

3:00 PM

Paper#: 689

Three Case Studies of Ecological Risk for the NO_x - SO_x Secondary National Ambient Air Quality Standards Review

M. E. Deerhake,¹ J. Phelan,¹ M. Cutrofello,¹ M. Barber,¹ J. Cajka,¹ A. W. Rea,² R. W. Waite,³ G. Tennant⁴; ¹RTI International, Research Triangle Park, NC, ²U.S. Environmental Protection Agency, National Exposure Research Laboratory, Research Triangle Park, NC, ³U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, NC, ⁴U.S. Environmental Protection Agency, Office of Air Quality Planning Standards, Research Triangle Park, NC

3:20 PM

Paper#: 723

Predicted Human Exposures Associated with Cement Manufacturing Emissions via Air Compared with Multi-Media Exposures (Soil, Local Plants, and Local Wild Fish and Game)

D. Treissman, E. Haack, E. Baulk, D. Rhydderch, G. Ramesh; WorleyParsons, Calgary, AB, Canada

3:40 PM

Paper#: 581

Can Conventional Ammunition Igloos Be Used for Residences - An Environmental Evaluation

K. Hoddinott; US Army, Street, MD

TECHNICAL SESSIONS

EI-1 (6)

Room: Telus 106

6/24/2010 2:20 PM

Paper

Industrial Wastewater Treatment on Federal Facilities

Sponsoring Committee(s): EI-1

Chair: Gordon Champneys, Hill AFB Industrial Waste Treatment Plant

Co-Chair: Michael McFarland, Utah State University

2:20 PM

Paper#: 1905

Sustainable Treatment of Metal Finishing Wastes from Aerospace Maintenance Operations Using Sodium Dimethyl Dithiocarbamate

M. McFarland,¹ C. Glarborg,² M. Ross,² G. Champneys²; ¹Utah State University, River Heights, UT, ²Industrial Wastewater Treatment Plant, Hill AFB, UT

2:40 PM

Paper#: 1906

Management of Biological Materials in Wastewater from Research & Development Facilities

E. A. Raney,¹ T. W. Moon,¹ M. Y. Ballinger²; ¹Pacific Northwest National Laboratory, Richland, WA, ²Pacific Northwest National Laboratory, Seattle, WA

3:00 PM

Paper#: 1908

Treatment of Wastewater from Munitions Production and Handling

S. Maloney; Construction Engineering Research Laboratory Engineer Research, Champaign, IL

3:20 PM

Paper#: 1907

Simultaneous Removal of Perchlorate and Energetic Compounds in Munitions Wastewater by Zero-Valent Iron and Perchlorate Respiring Bacteria

B. Kim,¹ D. Cha²; ¹U.S. Army Corps of Engineers/ERDC-CERL, Champaign, IL, ²University of Delaware, Newark, DE

EP-1 (9)

Room: Macleod A3

6/24/2010 2:20 PM

Panel

Implementing the PM_{2.5} New Source Review (NSR) Program

Sponsoring Committee(s): EP-1

Chair: Gary McCutchen, RTP Environmental Associates, Inc.

Co-Chair: Raj Rao, U.S. EPA

Although the first PM_{2.5} NAAQS was promulgated more than a decade ago, EPA, until 2009, had allowed use of PM₁₀ as a surrogate for PM_{2.5} in conducting the analyses required for PSD and nonattainment area permits. The new PM_{2.5} provisions, however, are incomplete (the significant impact levels, significant monitoring levels, and PSD increments have not been promulgated), the test method for condensable particulate matter (CPM) has not been promulgated, and there is no official model usable for all the PM_{2.5} components. This panel will discuss problems with the current and future PM_{2.5} NSR rule and its implementation.

Panelists:

- **Jeff Chaffee**, Bison Engineering
- **Gurinder (Gary) Saini**, RTP Environmental Associates, Inc.

EP-2 (3)

Room: Glen 206

6/24/2010 2:20 PM

Paper

Economics of Environmental Compliance

Sponsoring Committee(s): EP-2

Chair: Jeff Muffat, 3M

Co-Chair: Robert Slater, Coleman Bright & Associates

2:20 PM

Paper#: 550

The Economic Co-Benefits of Reducing Energy Consumption and Greenhouse Gas Emissions

T. W. Hesterberg,¹ J. Shih,¹ W. B. Bunn,¹ E. Ardiente,¹ P. Goenka,¹ T. Slavin,¹ T. Sexton,¹ D. A. Kaden²; ¹Navistar, Inc., Warrenville, IL, ²DakTox, LLC, Arlington, MA

2:40 PM

Paper#: 753

Smart Utilization of Waste Materials: Flyash-Based Pervious Concrete to Reduce Runoff in Critical Areas of New Orleans

N. J. Mattei,¹ B. Kura,¹ F. Fromherz,² A. Ochoa¹; ¹University of New Orleans, New Orleans, LA, ²Fromferz Engineers, Kenner, LA

3:00 PM

Paper#: 1107

Solar Power Feasibility for Wastewater Collection and Treatment

A. Sengupta,¹ B. Kura,¹ R. J. Delaune²; ¹University of New Orleans, New Orleans, LA, ²Digital Engineering & Imaging Inc, Kenner, LA

3:20 PM

Paper#: 68

Simple and Easy Actions to Make a Better World

T. Ceoldo Rubira; MWM INTERNATIONAL Industria de Motores da America do Sul Ltda, São Paulo, Brazil

TECHNICAL SESSIONS

EP-8 (4)

Room: Telus 105

6/24/2010 2:20 PM

Paper

Developing and Verifying Greenhouse Gas Emission Inventories

Sponsoring Committee(s): EP-8

Chair: Harish Rao, ARCADIS U.S., Inc.

Co-Chair: Daniel Reinke, ERM

2:20 PM

Paper#: 1028

Preparing GHG Emission Inventories for a Federal Facility Using Current Web-Based Applications

S. Dolan, M. Baghoomian, J. Gaul, Northrop Grumman Corporation, Clearfield, UT

2:40 PM

Paper#: 1033

Lessons Learned in the Performance of Greenhouse Gas Compliance Audits under the Specified Gas Emitters Regulation in Alberta

A. Raphael,¹ H. Balentine²; ¹AECOM, Calgary, AB, Canada,

²AECOM, Camarillo, CA

3:00 PM

Paper#: 1000

GHG Emission Verification Under Alberta's Specified Gas Emitters Regulation

K. Bolechowsky; ClearSky Engineering, Okotoks, AB, Canada

3:20 PM

Paper#: 1911

A Practical Framework for Corporate GHG Management in British Columbia

G. Olszewski; SNC-Lavalin Environment Inc., Burnaby, BC, Canada

ES-4 (6)

Room: Glen 202

6/24/2010 2:20 PM

Panel

Ethics of Power Generation Technologies

Sponsoring Committee(s): ES-4

Chair: Pamela Heckel, University of Cincinnati

INTRODUCTION How sustainable is renewable energy? Do new technologies have unintended consequences? Are financial incentives required? Does it impact our nation's strategic defense plan? Will implementation undermine our homeland security? **OBJECTIVE** This interactive session requires audience participation to evaluate 12 case studies, each designed to increase energy self-sufficiency. Using the think-pair-share learning strategy, groups evaluate the sustainability of different renewable energy applications. **SUMMARY** The quest to reduce our dependence on foreign fossil fuels has inspired new solutions. To be sustainable, these solutions must be economically viable without overwhelming health costs or harmful environmental effects. Environmental professionals trained to evaluate the pros and cons of a situation are more likely to consider the long term effects of the proposed solution **ACKNOWLEDGEMENTS** Dr. Heckel is supported by the National Institute of Environmental Health Sciences Molecular Epidemiology in Children's Environmental Health Training Grant T32 ES010957 Post Doctoral Fellowship.

Panelists:

- **Pamela Heckel**, University of Cincinnati
- **Christi Veleta**, City of Jacksonville
- **Joann Held**, Air Toxics Analyst Services

ES-5 (9)

Room: Telus 111

6/24/2010 2:20 PM

Panel

Taking Advantage of Carbon Markets - A Roundtable on Trading under International Greenhouse Gas Regimes

Sponsoring Committee(s): ES-4, EP-3

Chair: David Heger, Barnes & Thornburg LLP

The international GHG market has been called a "mosaic" of mandatory and voluntary regimes, including allowance-based trading programs; project-based offset and credit mechanisms; and voluntary trading. The objective of this panel is to identify, summarize, and compare these various regimes in Europe, Canada and the United States, as well as examine the opportunities (and risks) associated with participation in these markets. Topics covered will likely include (but may not be limited to) eligibility for participation in various international markets, development of emerging GHG trading programs and markets, lessons learned so far from more established markets (e.g. EU and Alberta), comparison of formal versus over-the-counter markets, "early action" and voluntary program risk and opportunity, and plans for and impact of future harmonization of international markets.

Panelists:

- **Scott Harder**, Harder International
- **Michael Radcliffe**, FirstCarbon Solutions
- **Jack Holdsworth**, Failsafe Canada Inc.

TECHNICAL SESSIONS

ET-1 (2)

Room: Macleod A1

6/24/2010 2:20 PM

Paper

Mobile Source Emissions

Sponsoring Committee(s): ET-1

Chair: Abhilash Vijayan, California Air Resources Board

2:20 PM

Paper#: 975

Quantification of In-Vehicle Concentration of Fine Particulate Matter

X. Liu, Y. Cao, H. Frey; North Carolina State University, Raleigh, NC

2:40 PM

Paper#: 917

Statistical Approach to the Development of a Microscale Model for Estimating Carbon Dioxide Emissions from a Light Duty Gasoline Vehicle

B. Afotey, M. L. Sattler, S. P. Mattingly, V. Chen; University of Texas at Arlington, Arlington, TX

3:00 PM

Paper#: 219

Regional Characteristics and Relevant Factors of Gaseous Pollutant Emissions from Motorcycles

J. Tsai, Y. Yao, W. Chang; Dept. of Environmental Engineering, National Cheng, Tainan, Taiwan

3:20 PM

Paper#: 111

Study on Poisoning of Motorcycle Catalytic Converters

Y. Chen, K. Lee, F. Jeng; National Taiwan University, Taipei, Taiwan

3:40 PM

Paper#: 22

Driver Behavior Variability and Its Effects on Vehicle Exhaust Emissions

I. Moulvi; Levelton Consultants Ltd, Calgary, AB, Canada

LC (3a)

Room: Glen 205

6/24/2010 2:20 PM

Panel

Hydrogen Sulphide Health Research and Risk Assessment - Ten Years Later

Chair: Donald Davies, Intrinsic Inc.

Co-Chair: Tee Guidotti, National Medical Advisory Services

This extended special panel session (track) will have 12 panelists with 6 presentations. The session will be devoted to the presentation of recent research findings on the health effects of hydrogen sulphide, together with a discussion of policy initiatives being taken by leading regulatory agencies aimed at protecting public health and safety through avoidance of over-exposure to hydrogen sulphide. The session will represent an update of information presented at a health research symposium on hydrogen sulphide held at Research Triangle Park, North Carolina in November 2000.

WM-3 (4)

Room: Glen 203

6/24/2010 2:20 PM

Panel

Waste-to-Energy - Pros and Cons for Sustainability

Sponsoring Committee(s): WM-3

Chair: David Minott, Environmental Resources Management (ERM)

Co-Chair: Jack Lauber, Columbia University - Earth Engineering Center

By the late 1980's, waste-to-energy (WTE) had become a controversial proposition in North America, garnering strong support in some locales and determined opposition in others. Twenty years later, WTE remains publicly controversial, although some perceive a recent trend towards increased public acceptance. Emissions of dioxin and mercury from WTE have been dramatically reduced over the past two decades, yet lingering concerns, legitimate or not, continue to fuel opposition to WTE. Concerns persist that increased reliance on WTE could be a disincentive to achieving high recycling rates, yet real-world experience over the past two decades belies that concern. Proponents of WTE correctly assert that a major fraction of the energy produced by WTE facilities is renewable energy and enables a net reduction in greenhouse gas emissions, making a significant contribution to environmental sustainability. Yet, others concerned with sustainability believe that the better solid waste management policy is to focus on achieving "zero waste" generation now, as a more sustainable solution than WTE. In this panel session, panelists from Canada and the U.S. will present and debate their perspectives, pro and con, on the role that WTE should play today in waste management and environmental sustainability.

Panelists:

- **Marjorie Clarke**, Education, Consulting

WR-2 (4)

Room: Glen 204

6/24/2010 2:20 PM

Paper

Innovative Treatment and Management of Industrial Wastes

Sponsoring Committee(s): WR-2

Chair: Radha Krishnan, Shaw Environmental

Co-Chair: Jaclyn Karam, USAF-Rome Research Site

2:20 PM

Paper#: 69

Improvements in Hazardous Wastes Management

T. Ceoldo Rubira,¹ A. S. Gobatto,² G. Garcia³; ¹MWM INTERNATIONAL Industria de Motores da America do Sul Ltda, São Paulo, Brazil, ²INTERNATIONAL Industria Automotiva da America do Sul, Canoas, Brazil, ³MWM INTERNATIONAL Motores, Jesús Maria, Argentina

TECHNICAL SESSIONS

2:40 PM

Paper#: 176

Leaching Mechanism and Strength Characteristics of a Solidified High Carbon Content Waste

M. Saeedi, A. Rezaei Bazkiaei; School of Civil Engineering, Iran University of Science and Technology, Tehran, Iran, Islamic Republic of

3:00 PM

Paper#: 1080

Water Degassing Using Mono-/Poly-dispersed Droplets Falling In Inert Gas

Y. Ji,¹ Z. Tan,² Z. Xu¹; ¹University of Alberta, Edmonton, AB, Canada, ²University of Calgary, Calgary, AB, Canada

3:20 PM

Paper#: 101

U.S. Academic Laboratories Now Have Two RCRA Hazardous Waste Management Options

J. M. Harless; Soil and Materials Engineers, Inc., Plymouth, MI

YP (6)

Room: Telus 109

6/24/2010 2:20 PM

Panel

Tips and Tools for the Techno-Challenged

Chair: Garrett Hoeksema, Golder Associates Ltd.

Co-Chair: Wally Qiu, Stantec Consulting

Ever wondered what a Blackberry can do? Heard of Twitter, Facebook and LinkedIn but have no idea what they are about? Then this session is for you! This session is designed for the techno-challenged, those who don't know a "tweet" from a "poke", or an "app" from an "iTune". Maybe you want to learn how to reconnect with those long lost classmates from your university days, or learn how it's possible to get more work done in less time. Some of the topics include: 1. Mobile communication: How to never leave your work behind by using Blackberries, iPhones, and other smart-phones. 2. Social networking: How to stay in touch with colleagues, former classmates, your favourite celebrities, or even your kids. 3. How computer clusters can make your air quality dispersion modeling experience simpler and more enjoyable. 4. Microsoft "Tool Box": MS Excel as a robust data analysis and basic statistics tool, MS Access as a easy to use database to sort/access/extract large datasets, and MS Sharepoint as a flexible system that allows people from locations around the world to easily work on the same project. This panel session will take a light-hearted, fun approach to present various technologies and its usefulness in today's modern world. Attendees may even learn why their children are constantly on the computer or why they keep bugging you for that iPhone! This session is sponsored by the Young Professionals (YPs).

Panelists:

- **Garrett Hoeksema**, Golder Associates Ltd.
- **Wally Qiu**, Stantec Consulting

THURS. PM2

AB-1 (4)

Room: Telus 101/102

6/24/2010 4:00 PM

Panel

PM - Coarse Air Pollution

Sponsoring Committee(s): AB-1

Chair: James Flanagan, RTI International

Co-Chair: Charles McDade, University of California, Davis

The panel will discuss the current state of knowledge about PM-coarse air pollution: measurement techniques, composition, sources, and remediation options. Additional topics might be included according to the interests of the panel members. Some potential questions for discussion include:

- What are the special analytical issues for speciation of PM-coarse?
- Are special extraction techniques required to adequately mimic human exposure pathways — for example, using mild extraction techniques for water soluble fractions rather than total digestion?
- What are the implications of the locational and seasonal variability of composition in PM-coarse?
- What monitoring technologies are available for PM-coarse? Discuss advantages and disadvantages.
- What new monitoring programs are being planned for the U.S. and Canada?

Panelists:

- **Eric Edgerton**, ARA, Inc.
- **Julia Lester**, Environ Corp.
- **Jonathan Thornburg**, RTI International
- **Jay Turner**, Washington University

AB-2 (1d)

Room: Telus 108

6/24/2010 4:00 PM

Paper

Ambient Studies, Measurements and Modeling

Chair: Kent Hoekman, Desert Research Institute

Co-Chair: Alan Gertler, Desert Research Institute

4:00 PM

Paper#: 565

Vertical Distribution of Ozone in the Low Atmosphere around the Coastal Region of Metro Kaohsiung

H. Tsai,¹ Y. Liu,¹ C. Yuan,¹ C. Hung,² C. Lin,³ Y. Lin,¹ L. Chien¹;

¹National Sun Yat-sen University, Kaohsiung, Taiwan, ²National Kaohsiung First University of Science & Technology, Kaohsiung, Taiwan, ³National Kaohsiung Marine University, Kaohsiung, Taiwan

4:20 PM

Paper#: 611

Application of the Diurnal Curve Space Technique to Ambient Ozone Measurements at Selected Sites in Alberta

P. D. Reid,¹ M. J. Davies,¹ W. Qiu²; ¹Stantec Consulting Ltd., Calgary, AB, Canada, ²Stantec Consulting Ltd., Edmonton, AB, Canada

TECHNICAL SESSIONS

4:40 PM

Paper#: 709

Assessment of Spatial Variability of Air Pollution Across NYC Based on Street-Level Measurements: The New York City Community Air Survey (NYCCAS)

H. M. Eisl,¹ J. Clougherty,² T. Matte,² D. Kass,² I. Kheirbek,² Z. Ross,³ J. E. Gorczynski,¹ S. Markowitz¹; ¹CBNS-Queens College, CUNY, Flushing, NY, ²New York City Department of Health and Mental Hygiene, New York, NY, ³ZevRoss Spatial Analysis, Ithaca, NY

5:00 PM

Paper#: 834

Comparison of Passive and Continuous Measurements of O₃, SO₂ and NO₂ in the Athabasca Oil Sands Region

Y. Hsu, K. Percy, M. Hansen; Wood Buffalo Environmental Association, Fort McMurray, AB, Canada

5:20 PM

Paper#: 1191

Polycyclic Aromatic Hydrocarbons (PAHs) Changes Posed by Residential Wood Combustion Scenarios on an Urban Area; an Application in Temuco, Chile

L. Diaz-Robles,¹ N. Schiappacasse,¹ N. Araneda,¹ I. Perez,¹ J. S. Fu²; ¹Air Quality Unit, School of Environmental Engineering, Catholic University of Temuco, Temuco, Chile, ²Department of Civil & Environmental Engineering, University of Tennessee, Knoxville, TN

AB-3 (5b)

Room: Telus 110

6/24/2010 4:00 PM

Paper

Air Quality Specialized Modeling

Sponsoring Committee(s): AB-3

Chair: Mervyn Davies, Stantec Consulting

Co-Chair: Lloyd Schulman, TRC Environmental Corp.

4:00 PM

Paper#: 728

Assessing the Impact of Organic Air Pollutants from a Natural Gas Compressor Station

A. Rich, M. L. Sattler; University of Texas at Arlington, Arlington, TX

4:20 PM

Paper#: 538

A Novel Use of the AERMOD Dispersion Model: The Near Field Application of AERMOD as an Emission Estimation Tool

R. Mahabir,¹ M. Jammer,¹ K. Edwards,² J. Lasowski²; ¹Golder Associates Ltd., Mississauga, ON, Canada, ²ArcelorMittal Dofasco, Hamilton, ON, Canada

4:40 PM

Paper#: 713

Air Pollution Dispersion in Traffic Tunnels: A Case Study of SOUK SAGHEER Traffic Tunnel, Makkah, Saudi Arabia

Y. T. Matbouli, T. Husain; Memorial University of Newfoundland, St. John's, NL, Canada

5:00 PM

Paper#: 977

Air Quality Dispersion Modelling: A Comparison Between AER-MOD and Physical Wind Tunnel

J. Alberico, M. Craig; RWDI Inc., Guelph, ON, Canada

AB-6 (3)

Room: Telus 109

6/24/2010 4:00 PM

Paper

Periodic Evaluation of Current and Predicted Visibility Conditions

Sponsoring Committee(s): AB-6

Chair: Scott Archer, Bureau of Land Management

Co-Chair: Joseph Adlhoch, Air Resource Specialists, Inc.

4:00 PM

Paper#: 558

Visibility Management in the Lower Fraser Valley, British Columbia

M. Kellerhals,¹ K. Jones,² S. Sakiyama,¹ R. Vingarzan²; ¹BC Ministry of Health Living and Sport, Victoria, BC, Canada, ²Environment Canada, Vancouver, BC, Canada

4:20 PM

Paper#: 1083

The Development of a Visibility Index for the Lower Fraser Valley of British Columbia

S. Sakiyama, M. Kellerhals; Ministry of Healthy Living and Sport, Victoria, BC, Canada

AE-2 (2d)

Room: Glen 208

6/24/2010 4:00 PM

Paper

Novel Air Pollution Control

Chair: Howard Hohl, Eisenmann Corp.

4:00 PM

Paper#: 16

Study on the Conversion of Methane into CO₂ and Performance Assessment with Mesoporous Catalyst at Low Temperature

L. C. Chao, L. L. Min, C. C. Tang, M. C. Ming, C. C. San; Department of Environmental Engineering, Tapei, Taiwan

4:20 PM

Paper#: 793

Plasma-Assisted Catalysis for Degradation of Vinyl Chloride

M. Yuan,¹ Y. Lin,¹ C. Chang,¹ C. Chang,¹ J. Shie,² C. Wu³; ¹Graduate Institute of Environmental Engineering, National Taiwan University, Taipei, Taiwan, ²Department of Environmental Engineering, National I-Lan University, I-Lan, Taiwan, ³Department of Environmental Engineering, Dayeh University, Changhua, Taiwan

4:40 PM

Paper#: 153

Photocatalytic Treatment of Volatile Organics in Air: Plasma Modified vs. Standard Titanium Dioxide

S. Sumitsawan, M. L. Sattler, R. B. Timmons; The University of Texas at Arlington, Arlington, TX

TECHNICAL SESSIONS

5:00 PM

Paper#: 165

Fabrication of Semiconductor ZnS Microspheres and Photo-Catalytic Degradation of Gaseous Acetone

X. Li, L. Wan, Q. Zhao, Y. Shi, G. Chen; Dalian University of Technology, Dalian, China

AE-2 (3)

Room: Glen 209

6/24/2010 4:00 PM

Paper

Biotreatment, Biotransformation, Biocatalysis for Treatment of Air Contaminants

Sponsoring Committee(s): AE-2

Chair: Rakesh Govind, University of Cincinnati

Co-Chair: Kevin Moss, Tri-Mer Corporation

4:00 PM

Paper#: 830

Adsorptive Biofiltration of Sulfur Compound Odors

R. Govind, J. Goncalves; University of Cincinnati, Cincinnati, OH

4:20 PM

Paper#: 825

Meeting MACT with Multiphase

K. Moss,¹ R. Gravley,¹ R. Govind²; ¹Tri-Mer Corporation, Owosso, MI, ²University of Cincinnati, Cincinnati, OH

4:40 PM

Paper#: 648

Performance Validation of the First China and U.S. Installations of the Patented MÓNASHELL Biological Air Treatment System

B. Naples; Bord na Mona Environmental Products U.S. Inc, Greensboro, NC

5:00 PM

Paper#: 551

Integrated Scheme of Cyclic Adsorption/Desorption Beds and Trickle Bed Air Biofilter Treating a Dynamic Mixture of n-Hexane and Benzene

A. Aly Hassan, G. A. Sorial; University of Cincinnati, Cincinnati, OH

AM-3 (1c)

Room: Telus 104

6/24/2010 4:00 PM

Paper

Characterizing Air Quality and Monitoring for Environmental Effects in the Athabasca Oil Sands Region of Alberta, Canada - Part 3

Sponsoring Committee(s): AM-3

Chair: Kevin Percy, Wood Buffalo Environmental Association

Co-Chair: Alan Legge, Biosphere Solutions

4:00 PM

Paper#: 664

Sulfur and Nitrogen Deposition Monitoring in the Athabasca Oil Sands Region

M. E. Fenn, C. S. Ross; U.S. Forest Service, PSW Research Station, Riverside, CA

4:20 PM

Paper#: 1002

Geospatial Deposition Mapping Using Lichens in the Athabasca Oil Sands Region

S. Berryman,¹ J. Straker,¹ S. Krupa,² M. Davies,³ J. Ver Hoef,⁴ G. Brenner⁵; ¹Stantec, Sidney, BC, Canada, ²University of Minnesota, St. Paul, MN, ³Stantec, Calgary, AB, Canada, ⁴Ver Hoef Statistical Consulting, Fairbanks, AK, ⁵Pacific Analytics, LLC, Scio, OR

4:40 PM

Paper#: 818

Multi-Element Analysis of Epiphytic Lichen Samples from the Athabasca Oil Sands Region

E. S. Edgerton,¹ J. Fort,¹ K. Baumann,¹ S. Berryman,² J. Graney,³ M. S. Landis,⁴ S. Krupa⁵; ¹Atmospheric Research & Analysis, Inc., Cary, NC, ²Stantec Consulting, Ltd., Sidney, BC, Canada, ³Binghamton University, Binghamton, NY, ⁴USEPA, Research Triangle Park, NC, ⁵University of Minnesota, St. Paul, MN

5:00 PM

Paper#: 741

The Wood Buffalo Environmental Association Jack Pine Forest Monitoring Program: Results from Organic and Mineral Components of Upland Soils

S. Visser,¹ J. Straker,² L. Turchenek³; ¹University of Calgary, Calgary, AB, Canada, ²Stantec, Sidney, BC, Canada, ³AMEC, Edmonton, AB, Canada

5:20 PM

Paper#: 1009

Going Forward - Enhancing the Terrestrial Environmental Effects Monitoring Program

K. E. Percy; Wood Buffalo Environmental Association, Fort McMurray, AB, Canada

AM-4 (1)

Room: Macleod A2

6/24/2010 4:00 PM

Paper

Source Monitoring

Sponsoring Committee(s): AM-4

Chair: Len Nelms, Tetra Tech EMI

Co-Chair: Ray Merrill, Eastern Research Group

TECHNICAL SESSIONS

4:00 PM

Paper#: 155

Remote Detection and Quantification of Fugitive Emission Sources Using Ambient Measurements

R. Sikora,¹ J. Harvey,² D. Prince³; ¹Keyera Energy, Calgary, AB, Canada, ²EnCana Corporation, Calgary, AB, Canada, ³Airdar Inc., Edmonton, AB, Canada

4:20 PM

Paper#: 735

Predictive Emissions Monitoring Systems (PEMS): Regulation of Alternative Monitoring Systems in Canada

D. S. N. Maftej,¹ A. D. Ciccone,² P. R. Niejadlik,² M. Jammer²; ¹Ontario Ministry of the Environment, Toronto, ON, Canada, ²Golder Associates Ltd., Mississauga, ON, Canada

4:40 PM

Paper#: 905

Comparison of PM10 Measurements Using Dilution and Traditional Methods at a Gas-Fired Combined Cycle Plant

G. C. England,¹ C. Matis,² K. Crosby,³ G. Rubenstein⁴; ¹ENVIRON International Corporation, Irvine, CA, ²GE Energy, Schenectady, NY, ³The Avogadro Group, LLC, Antioch, CA, ⁴Sierra Research, Sacramento, CA

EI-1 (5)

Room: Telus 106

6/24/2010 4:00 PM

Panel

Integrated Solid Waste Management and Quality Recycling at Federal Facilities

Sponsoring Committee(s): EI-1

Chair: Michael McFarland, Utah State University

Co-Chair: Mark Ross, Hill Air Force Base

Within federal facilities, management of solid waste continues to be an important environmental challenge. To reduce disposal costs, federal facilities emphasize an integrated solid waste management approach, which focuses on reduction, reuse, and recovery of recyclable materials. Beyond reducing materials handling and disposal costs, the integrated solid waste management approach has the potential of yielding significant greenhouse gas (GHG) emission reductions. Source reduction and recycling can result in reduced GHG emissions during the manufacturing process and reducing disposal of organic wastes minimizes the generation of methane from landfills. Recent consideration of integrated solid waste management approach suggests that climate change, energy policy and economic sustainability are impacted by the efficiency of material use. Because of the strategic importance of materials use in reducing the environmental impact of their operations, federal facility managers are focused on integrating material life cycle principles into solid waste management decision-making. These principles involve acknowledging the energy and material balances associated with the extraction, transportation, processing, consumption, recycling and final disposal of materials and products. The objective of the current panel will be to evaluate the current methods implemented at federal facilities to achieve sustainable integrated solid waste management goals. Potential topics shall include:

- Reduction of material life cycle impacts across the material supply chain
- Mitigation of greenhouse gas emissions through integrated solid waste management
- Reduction in material inputs through reuse and recycling
- Substitution of less toxic and more renewable materials
- Reducing the solid waste footprint through substitution of services for products

Panelists:

- **Rasel Hossain**, Alberta Environment, Northern Region
- **William Eng**, U.S. Army
- **Nancy Carper**, Brooks Air Force Base
- **D.L. Scott Edwards**, A4 Construction Engineering
- **Teresa Perkins**, Department of Energy

Thursday, June 24

TECHNICAL SESSIONS

El-2 (3)

Room: Glen 201

6/24/2010 4:00 PM

Panel

Clean Air Interstate Rule - Version 2.0

Sponsoring Committee(s): El-2

Chair: Dan Weiss, Duke Energy

Co-Chair: Paul Farber, Sargent & Lundy

On July 11, 2008, the U.S. Court of Appeals for the D.C. Circuit overturned the Clean Air Interstate Rule (CAIR). When it was adopted in 2005, CAIR was the centerpiece of the U.S. EPA's long term plan to reduce sulfur dioxide (SO₂) and nitrogen dioxide (NO_x) emissions from large point sources in the 28 eastern states. After various legal challenges the courts ultimately remanded the rule back to EPA to address several 'fatal flaws' in the rule. EPA is now ready to propose a new interstate transport rule which makes significant sulfur dioxide and nitrogen dioxide emissions reductions and fixes all the problems identified by the court. This diverse panel of experts will discuss the significant points of the court's decision, what options exist now for the states to address interstate air pollution and how EPA or Congress might attempt to resolve once and for all the legal uncertainties to mitigating contributions to downwind nonattainment areas. The panelist will discuss the current status of EPA's rulemaking efforts to address the issues raised in the CAIR remand, on-going plans by regional and state air quality planning groups to mitigate significant interstate transport, and new approaches and insights into integrated approaches to reducing air pollution through cost-effective local and multi-state programs.

Panelists:

- **Sam Napolitano**, U.S. EPA
- **John Kinsman**, Edison Electric Institute
- **Anna Garcia**, Ozone Transport Commission

El-4 (3)

Room: Macleod A1

6/24/2010 4:00 PM

Panel

Using Cooperative Efforts to Develop Effective Ozone Control Strategies

Sponsoring Committee(s): El-4

Chair: Henry Graham, Louisiana Chemical Association

Co-Chair: Richard Siegel, R & B Consulting Services

The panel will discuss several examples of where cooperative efforts between the petrochemical and other industries, the public, and local regulatory agencies are being employed to expedite improvements in air quality. These areas are Houston, Texas, Baton Rouge, Louisiana and Alberta, Canada. Both the Houston and Baton Rouge areas have a long history of these cooperative efforts and have either achieved attainment with the relevant ozone standards (Baton Rouge) or achieved at least partial attainment (Houston), while in Alberta, this effort is just getting underway. The panel will discuss how resources have been pooled and shared, as well as explore how solutions have been identified and implemented, including emission controls on point sources, mobile sources and area sources, and the role that the EPA's SIP process plays in evaluation and implementation of these strategies. The panel will also explore how information gained by these groups in one area has been applied to another, from identification of additional emission sources to sharing control technologies. The role of voluntary emission reduction activities using new technology to identify and reduce episodic emissions will also be discussed by the panel. In Texas, a state funded program includes a motor vehicle incentive program to reduce diesel engine emissions and research to provide key science insights. In Alberta, a multi-stakeholder forum is focusing on photochemical modelling and related control strategies. In Louisiana, initial efforts focused on reduction of volatile organic compounds. After narrowly exceeding the 1 hour ozone standard in 1999, efforts shifted to control of nitrogen compounds. In 2008, Baton Rouge achieved attainment of both the 1 hour (125 ppb) and 8 hour (84 ppb) standards. Final approval of these accomplishments is pending with EPA. Since ozone predictive models cover large areas, modelling inputs such as meteorological and emission source data can often be shared between areas, such as Baton Rouge and Houston. This has resulted in cost savings, but equally important with the challenging timing required by the SIP process, considerable time savings are possible.

Panelists:

- **Robert Berg**, ExxonMobil Corp.
- **Michael Vince**, Louisiana Department of Environmental Quality
- **Judy Bigon**, ExxonMobil Corp.
- **K. J. (Ken) McGregor**, Imperial Oil Ltd.

EP-2 (4)

Room: Glen 206

6/24/2010 4:00 PM

Paper

Economic Case Studies in Environmental Stewardship and Leadership

Sponsoring Committee(s): EP-2

Chair: Jeff Muffat, 3M

Co-Chair: Robert Slater, Coleman Bright & Associates

TECHNICAL SESSIONS

4:00 PM

Paper#: 160

Sustainable Return On Investment (SROI) for Waste Management

J. C. Parker,¹ F. Kramer²; ¹HDR, Toronto, ON, Canada, ²HDR, Calgary, AB, Canada

4:20 PM

Paper#: 806

Energy Efficiency Development in German and Colombian Manufacturing Sectors at Different Aggregation Levels: A Non Parametric Analysis

C. I. Pardo Martinez; University of Wuppertal, Wuppertal Institute and University of La Salle, Wuppertal, Germany

4:40 PM

Paper#: 110

Prospect of Natural Gas Industry in Iran

H. Omidvar; Nigc, Tehran, Iran, Islamic Republic of

EP-8 (5)

Room: Telus 105

6/24/2010 4:00 PM

Paper

Performance Improvement with Technology

Sponsoring Committee(s): EP-8

Chair: Daniel Schmid, 3M

Co-Chair: Harish Rao, ARCADIS U.S., Inc.

4:00 PM

Paper#: 202

Improved Environmental Stewardship at Data Centers through EMS Implementation

T. L. Dillow, REM, J. D. Marteny, P.E.; Dixon Environmental, Baltimore, MD

4:20 PM

Paper#: 947

Evaluation of Accident Reporting Processes in the Department of Defense

S. Q. Hassan, G. Marquardt; Department of Defense, Arlington, VA

4:40 PM

Paper#: 674

Effective Data Stewarding Measures in Support of EESOH-MIS

S. Rasmussen,¹ D. Bird²; ¹Hill AFB, Hill AFB, UT, ²EM-Assist, Layton, UT

ES-1 (2)

Room: Glen 202

6/24/2010 4:00 PM

Panel

Energy Efficiency - Best Practices and Case Studies

Sponsoring Committee(s): ES-1

Chair: Ram Ramanan, ICF International

The panelists will discuss the business impact and value of alternative approaches to address these issues.

Panelists:

- Ray Picard, Hara
- Ram Ramanan, ICF International
- Peter Rowles, ICF International

ES-5 (4)

Room: Telus 111

6/24/2010 4:00 PM

Paper

Greenhouse Gas Mitigation Strategies

Sponsoring Committee(s): ES-5

Chair: Ann Marie Bourgeois, SIDD

4:00 PM

Paper#: 1150

British Columbia Green House Gas Mitigation and Air Quality Initiatives

T. J. Wakelin; BC Ministry of Environment, Victoria, BC, Canada

4:20 PM

Paper#: 1077

Local Government Action Towards Energy Efficiency and Sustainability

A. Shalpin,¹ M. Peters,² A. Ravin³; ¹CDM, Cambridge, MA, ²CDM, Chicago, IL, ³CDM, New Orleans, LA

4:40 PM

Paper#: 120

Development of a Green Vehicle Evaluation and Selection Tool (GVEST)

R. B. Singh,¹ D. Shintani,² S. E. Gingrich²; ¹ENVIRON EC (CANADA), INC., Mississauga, ON, Canada, ²City of Toronto, Fleet Services Division, Toronto, ON, Canada

5:00 PM

Paper#: 1032

Oil & Gas Sector Greenhouse Gas Reporting Protocol Development

T. Moore,¹ L. Gribovicz²; ¹Western Regional Air Partnership, Fort Collins, CO, ²Western Regional Air Partnership, Cheyenne, WY

Thursday, June 24

TECHNICAL SESSIONS

LC (3b)
Room: Glen 205

6/24/10 4:00 PM

Panel

Hydrogen Sulphide Health Research and Risk Assessment -Ten Years Later

Chair: Donald Davies, Intrinsic Inc.

Co-Chair: Tee Guidotti, National Medical Advisory Services

See description for LC (3a) on page 105.

WM-3 (5)
Room: Glen 203

6/24/2010 4:00 PM

Paper

Biomass Gasification and Waste-to-Energy Applications

Sponsoring Committee(s): WM-3

Chair: David Minott, Environmental Resources Management (ERM)

Co-Chair: Samuel Vigil, CA Poly. State University

4:00 PM

Paper#: 1146

Solid Waste and Biomass Gasification

S. Vigil; Civil and Environmental Engineering Department, California Polytechnic State University, San Luis Obispo, CA

4:20 PM

Paper#: 147

Plasma Gasification: Recovering Energy from Waste

P. van Nierop; Alter NRG Corp., Calgary, AB, Canada

4:40 PM

Paper#: 833

Green Energy from Bioprocessing of Waste Sludge

R. Govind; PRD Tech, Inc., Cincinnati, OH

5:00 PM

Paper#: 787

Options for Deriving Energy From Biosolids - Conventional and Emerging Processes

L. Lundberg; Veolia Water North America, Baden, PA

5:20 PM

Paper#: 76

Small Scale Biomass Gasification for Combined Heat and Power Production

S. Trottier, A. K. Chambers, M. E. Olson; Alberta Research Council, Edmonton, AB, Canada

FRIDAY, JUNE 25

FRI. AM1

AB-1 (5)
Room: Telus 101/102
6/25/2010 8:00 AM

Paper

PM Measurements and Data Analysis

Sponsoring Committee(s): AB-1

Chair: Charles McDade, University of California, Davis

Co-Chair: Peter Mueller, TropoChem

8:00 AM

Paper#: 215

Composition and Secondary Formation of Fine Particulate Material in the Salt Lake Valley: Winter 2009

J. C. Hansen,¹ R. Kuprov,¹ D. J. Eatough,¹ T. Cruickshank,² N. Olson³;

¹Brigham Young University, Provo, UT, ²Utah State Department of Air Quality, Salt Lake City, UT, ³Utah State Department of Air Quality, Salt Lake City, UT

8:20 AM

Paper#: 809

Characterization of Primary and Secondary Carbonaceous Aerosols During the Time-Resolved Measurements in Xi'an at Summer: Estimating the Secondary Organic Carbonaceous Using the EC Tracer Method

S. Lliu,¹ J. Cao,¹ Z. Shen,² Z. Zhao¹; ¹SKLLQG, Institute of Earth Environment, Chinese Academy of Sciences, Xi'an, China,

²Department of Environmental Science and Engineering, Xi'an Jiaotong University, Xi'an, China

8:40 AM

Paper#: 1070

Difficulties in Getting PM_{2.5} Monitors Approved as a Federal Equivalent Method

D. C. Fudge; BC Ministry of Environment, Prince George, BC, Canada

9:00 AM

Paper#: 612

Capping the Dust in the Antelope Valley

R. Farber; Southern California Edison, Rosemead, CA

9:20 AM

Paper#: 829

Characteristics of Traffic-Related Emissions: A Case Study in Roadside Ambient Air over Xi'an, China

Z. Shen,¹ J. Cao²; ¹Department of Environmental Science and Engineering, Xi'an Jiaotong University, Xi'an, China, ²SKLLQG, Institute of Earth Environment, Chinese Academy of Sciences, Xi'an, China

AB-3 (5c)
Room: Telus 110

6/25/2010 8:00 AM

Paper

Air Quality Specialized Modeling

Sponsoring Committee(s): AB-3

Chair: Mervyn Davies, Stantec Consulting

Co-Chair: Lloyd Schulman, TRC Environmental Corp.

8:00 AM

Paper#: 841

An All Sources and Cumulative Air Quality Study - City of Toronto

A. Ciccone,¹ C. Morgan,² B. Cosic,¹ R. Mahabir,¹ S. Hartono,¹ I. Yankova,¹ B. Smith,² S. Gower,² C. Dejong²; ¹Golder Associates Limited, Toronto, ON, Canada, ²City of Toronto, Toronto, ON, Canada

TECHNICAL SESSIONS

8:20 AM

Paper#: 937

Modeling of the Radionuclide Transport in the Chihuahua City

E. F. Herrera,¹ L. M. Rodriguez Vazquez,² A. Jazcilevich,³ A. García,³ E. Díaz,³ J. Carrillo¹; ¹CIMAV, Chihuahua, Mexico, ²Instituto Tecnológico de Parral, Chihuahua, Mexico, ³Centro de Ciencias de la Atmosfera, UNAM, Mexico, DF, Mexico

8:40 AM

Paper#: 1059

The Correct Use of Dispersion Models to Simulate Air Quality Impact in Developing Countries

H. A. Bravo,¹ R. Sosa,¹ P. Sanchez,¹ S. Rosas²; ¹CCA UNAM, Mexico City, Mexico, ²CFE, Mexico., Mexico City, Mexico

9:00 AM

Paper#: 1075

Adjusting Calmet Parameters for Modelling in Complex Terrain in Northern British Columbia

D. C. Fudge; BC Ministry of Environment, Prince George, BC, Canada

9:20 AM

Paper#: 1141

Air Quality, Noise and Upper Atmospheric Assessment of the NQIA

M. Milner; RWDI AIR, Langley, BC, Canada

AM-2 (2)

Room: Glen 204

6/25/2010 8:00 AM

Panel

Introduction to the Data Management Aspects of Source Apportionment Studies

Chair: Hilary Hafner, Sonoma Technology, Inc.

Co-Chair: Chris Rogers, MACTEC Engineering & Consulting, Inc.

Many papers discuss the results of source apportionment studies but typically very little detail is provided on how the data were assembled, managed, validated, and prepared for use in source apportionment models. Source apportionment tools are sensitive to the number of samples, amount of data below detection, sample completeness, signal to noise ratios, missing data treatment, uncertainty development, species selection for modeling, seasonal representativeness, and other model requirements. The purpose of this panel discussion will be to highlight key elements of data management for source apportionment studies including development of uncertainties, lessons learned about data handling, and how to best solve common data problems. Discussion will help both experienced analysts and newcomers to source apportionment.

Panelists:

- Jay Turner, Washington University
- Delbert Eatough, Brigham Young University
- Bret Schichtel, National Park Service

AM-3 (2)

Room: Telus 104

6/25/2010 8:00 AM

Paper

Ambient Monitoring

Sponsoring Committee(s): AM

Chair: Fred Dowling, Emission Testing Services, Inc.

8:00 AM

Paper#: 90

Isotope Characteristics of Carbonaceous Aerosols in Urban Atmosphere of China

J. Cao; Institute of Earth Environment, CAS, Xi'an, China

8:20 AM

Paper#: 679

Look Out EPA Method 9, Here Comes the Digital Alternative (Finally)

S. Rasmussen; Hill AFB, Hill AFB, UT

8:40 AM

Paper#: 803

Effect of Precipitation on Air Pollutant Concentration in Seoul, Korea

Y. Sunwoo,¹ S. Kim,¹ Y. Park,² H. Jun,³ M. Park,⁴ K. Hong,¹ J. Woo¹; ¹Dept. of Advanced Technology Fusion, Konkuk University, Seoul, Korea, Republic of, ²JD ECO Corp., Seoul, Korea, Republic of, ³Dept. of Civil Engineering, Seoul National University of Technology, Seoul, Korea, Republic of, ⁴Dept. of Civil Engineering, Hanseo University, Chungcheongnam-do, Korea, Republic of

9:00 AM

Paper#: 616

Air Pollution Effects on the Northern Cordillera Blanca of Peru from a Mountaineers Perspective

F. A. Nederhand,¹ J. Sayago,² B. Wernau,² P. Courtney,² E. Helmuth,³ Q. A. Villafan⁴; ¹American Alpine Club, Alpine Club of Canada, Golden, CO, ²Georgia Dep. of Natural Resources, Atlanta, GA, ³Climblife Mountain Guides, Inc., Estes Park, CO, ⁴Mountain Guide, Huaraz, Peru

AO-1 (2)

Room: Telus 108

6/25/2010 8:00 AM

Paper

Novel Optical Remote Sensing Measurement Techniques

Sponsoring Committee(s): AO-1

Chair: Ram Hashmonay, ENVIRON

Friday, June 25

TECHNICAL SESSIONS

8:00 AM

Paper#: 549

Fugitive Dust Emission Factors of Military Activities Measured by Micro-Pulse Lidar - A Summary of Results

W. Yuen,¹ K. Du,² M. J. Rood,¹ R. A. Hashmonay,³ M. R. Kemme,⁴ B. J. Kim⁴; ¹University of Illinois, Urbana, IL, ²Institute of Urban Environment, Chinese Academy of Sciences, Xiamen, China, ³Environ, Chapel Hill, NC, ⁴U.S. Army Engineer Research and Development Center-Construction Engineering Research Laboratory (ERDC-CERL), Champaign, IL

8:20 AM

Paper#: 1024

Successful Strategies for Using Lidar to Characterize Particles from Point and Diffuse Area Sources

M. D. Wojcik,¹ R. S. Martin,² K. D. Moore¹; ¹Energy Dynamics Laboratory, North Logan, UT, ²Utah State University, Dept. of Civil and Environmental Engineering, Logan, UT

8:40 AM

Paper#: 802

Source Localization with One-Dimensional Radial Plume Mapping Technique Using Two Monitoring Lines

S. Lin,¹ S. Chang,¹ C. Wu²; ¹Institute of Environmental Health, NTU, Taipei, Taiwan, ²Department of Public Health, NTU, Taipei, Taiwan

9:00 AM

Paper#: 804

Integrating Open Path Fourier Transform Infrared and Air Dispersion Models for Emission Source Localizations

C. Yeah,¹ S. Chang,² C. Wu³; ¹Institute of Occupational Medicine and Industrial Hygiene, NTU, Taipei, Taiwan, ²Institute of Environmental Health, NTU, Taipei, Taiwan, ³Department of Public Health, NTU, Taipei, Taiwan

AT-3 (2)

Room: Telus 103 [Back-to-back with AT-3 (3)]

6/25/2010 8:00 AM

Paper

Community Air Toxics Monitoring, Exposure, and Risk

Sponsoring Committee(s): AT-3

Chair: Ray Merrill, Eastern Research Group

Co-Chair: David Heinold, AECOM

8:00 AM

Paper#: 130

Dispersion Modeling of Air Toxics in Corpus Christi, Texas

E. McDonald-Buller,¹ G. McGaughey,¹ Y. Kimura,¹ D. Sullivan,¹ D. T. Allen,¹ G. Yarwood,² U. Nopmongkol,² E. Tai,² C. Colville³; ¹University of Texas at Austin, Austin, TX, ²ENVIRON International Corporation, Novato, CA, ³ENVIRON International Corporation, Houston, TX

8:20 AM

Paper#: 695

Evaluation of a Near-Real Time Ambient Metals Monitor for Measuring Fugitive Hazardous Metal Emissions

K. A. Petterson,¹ J. A. Cooper,¹ D. Bivens,² W. Wetherell,³ J. Turner⁴; ¹Cooper Environmental Services, Portland, OR, ²U.S. Environmental Protection Agency, Research Triangle Park, NC, ³Missouri Department of Natural Resources, Jefferson City, MO, ⁴Washington University, St. Louis, MO

8:40 AM

Paper#: 1095

Personal Exposure to VOCs in a Small Community within the Oil Sands Developing Region of Northeastern Alberta

G. C. Hoeksema,¹ W. B. Kindzierski²; ¹Golder Associates Ltd., Calgary, AB, Canada, ²Department of Public Health Sciences, University of Alberta, Edmonton, AB, Canada

AT-3 (3)

Room: Telus 103 [Back-to-back with AT-3 (2)]

6/25/2010 9:00 AM

Paper

Health and Environmental Effects of Air Toxics

Sponsoring Committee(s): AT-3

Chair: Nora Savage, U.S. EPA

Co-Chair: David Heinold, AECOM

9:00 AM

Paper#: 714

Case Study for Risk Regulations and Innovative Solutions

P. Sycip; South Coast Air Quality Management District, Diamond Bar, CA

9:20 AM

Paper#: 218

Health Risk Assessment from a Toxic Material in an Urban Area

H. Jeong, W. Hwang, E. Kim, M. Han; Korea Atomic Energy Research Institute, Daejeon, Korea, Republic of

EP-1 (11)

Room: Telus 106

6/25/2010 8:00 AM

Paper

Impact Assessment/Siting

Sponsoring Committee(s): EP-1

Chair: Freeman Cheung, AECOM Asia Company Limited

8:00 AM

Paper#: 161

On the Presentation of Air Quality Values in an Environmental Assessment

M. C. Murphy; Stantec Consulting Ltd., Fredericton, NB, Canada

8:20 AM

Paper#: 604

Evaluating Air Pollution Control Rules That Affect Multiple Pollutants

D. Fairley; Bay Area Air Quality Management District, San Francisco, CA

TECHNICAL SESSIONS

8:40 AM

Paper#: 999

Evaluation of Cumulative Effects from Multiple Projects in a Contiguous Area

C. Twaroski, C. Cenci; Barr Engineering, Edina, MN

9:00 AM

Paper#: 745

Quantifying the Impact of Air Pollution on the Urban Environment: A Fuzzy Based Approach

A. Mofarrah, T. Husain; Memorial University, St. John's, NL, Canada

9:20 AM

Paper#: 1036

Environmental Review and Permitting of a New Facility in the Midst of Existing Sources Located Nearby Pristine Natural Resources

L. L. Stegink; Barr Engineering Company, Minneapolis, MN

EP-8 (6)

Room: Telus 105

6/25/2010 8:00 AM

Paper

Greenhouse Gas Emissions Data Collection Tools and Protocols

Sponsoring Committee(s): EP-8

Chair: Daniel Reinke, ERM

Co-Chair: Dan Schmid, 3M

8:00 AM

Paper#: 1064

Developing a Customized Greenhouse Gas Emissions Data Collection and Reporting Tool for Power Generation Facilities

M. Mills,¹ K. Travis²; ¹CDM, Houston, TX, ²CDM, Irvine, CA

8:20 AM

Paper#: 1001

Estimating GHG Emissions from Aggregate Extraction Facilities Using an Innovative Tool

A. H. Freitas, S. Capstick; Golder Associates, Mississauga, ON, Canada

8:40 AM

Paper#: 1198

Greenhouse Gas Inventory - Landfill Gas Emission Protocols

H. G. Rao; LFR Inc., Elgin, IL

9:00 AM

Paper#: 796

Comparison of Methane Emissions Models for Landfills

G. A. Pelletier, A. Tanimoto; CDM, Sacramento, CA

9:20 AM

Paper#: 731

Comparison of Methods for Quantifying Greenhouse Gas Emissions from Waste

E. A. Mohareb, C. A. Kennedy; University of Toronto, Toronto, ON, Canada

ES-5 (5)

Room: Glen 202

6/25/2010 8:00 AM

Panel

Greenhouse Gas Management

Chair: Ram Ramanan, ICF International

The panelists will discuss the business impact and value of alternative approaches to address these issues.

Panelists:

- **Ray Picard**, Hara
- **Ram Ramanan**, ICF International
- **Aaron Schroeder**, ICF International

ES-5 (6)

Room: Telus 111

6/25/2010 8:00 AM

Paper

Climate Change Impacts and Strategies

Sponsoring Committee(s): ES-5

Chair: Flint Webb, SAIC

Co-Chair: Deanne Hughes, Cardinal Engineering, Inc.

8:00 AM

Paper#: 969

Long-Term Trends in Meteorological Parameters and Corresponding Impacts on Air Quality for Midwest USA

A. Chaudhary,¹ T. Keener,¹ J. Lee,¹ J. Yang²; ¹University of Cincinnati, Cincinnati, OH, ²U.S. EPA, Cincinnati, OH

8:20 AM

Paper#: 694

Greenhouse Gas Analysis of Municipal Solid Waste Disposal Alternatives

L. M. Miller, C. S. Hibbard; CDM, Cambridge, MA

8:40 AM

Paper#: 891

Air Quality and Climate Change Adaptation

J. P. Dawson,¹ D. A. Winner,² A. R. Ravishankara³; ¹AAAS Fellow at U.S. Environmental Protection Agency, Washington, DC, ²U.S. Environmental Protection Agency, Washington, DC, ³National Oceanic and Atmospheric Administration, Boulder, CO

9:00 AM

Paper#: 1099

Greenhouse Gas PSD / Title V Tailoring Rule Consequences for New Major Sources

T. J. Raine,¹ M. Mills²; ¹CDM, Carlsbad, CA, ²CDM, Houston, CA

ET-1 (3)

Room: Glen 208

6/25/2010 8:00 AM

Paper

Advanced Technology Vehicle and Alternative Fuel Emissions and Lifecycle Assessments

Sponsoring Committee(s): ET-1

Chair: Rich Baldauf, U.S. EPA

TECHNICAL SESSIONS

8:00 AM

Paper#: 946

Quantifying the Microscale Activity, Energy Use, and Emissions of a Plug-In Hybrid Vehicle Based on In-Use Data

B. Graver, H. Frey; North Carolina State University, Raleigh, NC

8:20 AM

Paper#: 693

Air Quality Impacts of Using Electricity Generation to Charge PHEVs for Daytime Use

T. M. Thompson, M. Webber, D. T. Allen; University of Texas, Austin, TX

8:40 AM

Paper#: 700

Fuel Economy Benefits of Hybrid Electric School Buses in Iowa

S. Hallmark,¹ B. Sperry,² A. Mudgal¹; ¹Department of Civil, Construction, and Environment, Ames, IA, ²Institute for Transportation, Ames, IA

9:00 AM

Paper#: 838

Comparison of In-Use Real World Emissions of Compressed Natural Gas and Diesel Refuse Trucks

J. Zietsman; Texas Transportation Institute, College Station, TX

9:20 AM

Paper#: 1138

The Role of Distribution in Biofuel Life-cycle Emissions

B. Strogen, A. Horvath; University of California, Berkeley, Berkeley, CA

LC (4)

Room: Glen 205

6/25/2010 8:00 AM

Paper

Environmental Issues and Energy and Mitigation Technologies for Alberta

Chair: Randy Rudolph, Millennium EMS Solutions Ltd.

8:00 AM

Paper#: 560

A Review of High-Value Concentrating Solar Thermal Energy Technology Applications for Alberta

G. Ordorica-Garcia, A. Reynolds; Alberta Innovates - Technology Futures (formerly Alberta Research Council), Edmonton, AB, Canada

8:20 AM

Paper#: 210

The Use of Activated and Produced Oil Sands Coke for the Potential Treatment of Process-Affected Mine Tailings Water

C. C. Small, Z. Hashisho, A. C. Ulrich; University of Alberta, Edmonton, AB, Canada

8:40 AM

Paper#: 854

Air Pollutants and Greenhouse Gases Emissions from Alberta Oil Sands Development Projects

S. Han, W. Khan, Z. Hashisho; University of Alberta, Edmonton, AB, Canada

WM-3 (6)

Room: Glen 203

6/25/2010 8:00 AM

Paper

Bioenergy and Alternative Fuels

Sponsoring Committee(s): WM-3

Chair: David Minott, Environmental Resources Management (ERM)

Co-Chair: Lee Lundberg, Veolia Water North America

8:00 AM

Paper#: 12

Alternative Fuels Derived from Solid Waste Plastics

M. Sarker; Natural State Research, Inc., Stamford, CT

8:20 AM

Paper#: 982

Enerkem's Thermo-Chemical Technology Providing Waste Management Opportunities for Cities: The Edmonton Waste-to-Biofuels Project Case

D. Arguin; Enerkem, Montreal, QC, Canada

8:40 AM

Paper#: 736

Study of Microalgae Cultivation in Wastewater

W. Thiansathit, T. C. Keener; University of Cincinnati, Cincinnati, OH

9:00 AM

Paper#: 545

An Overview of Advanced and Accelerated Biological Monitoring in Wastewater Treatment and the Environmental and Economical Opportunities It Presents

D. R. Tracey; LuminUltra Technologies, Ltd., Fredericton, NB, Canada

YP (5)

Room: Telus 109

6/25/2010 8:00 AM

Panel

Managing Generational Differences in the Workplace

Chair: Brad Waldron, NGE

The panel will provide a frank discussion for seasoned professionals on the challenges and benefits of today's Young Professional (YP). Topics will include attracting, managing, retaining and challenging YPs in order to make them successful, with special attention paid to current economic pressures. Today's YPs are the managers and leaders of today and tomorrow, and it is important to understand the role they currently play in order to develop an environment where they can prosper and be successful. Material presented in this discussion will be a mixture of published information and personal experience. All seasoned professionals who work with or manage YPs are encouraged to attend.

Panelists:

- Laurel Peterson, Hoefler Consulting Group
- Nancy Meilahn, CAPE, Inc

TECHNICAL SESSIONS

FRI. AM2

AB-3 (6) Room: Telus 110

6/25/2010 10:20 AM

Paper

Emissions and Air Quality Modeling of the Impacts of Alberta Oil Sands Development

Sponsoring Committee(s): AB-3

Chair: Mark Bennett, CH2M HILL

Co-Chair: Stephen O'Kane, Levelton Consultants Ltd.

10:20 AM

Paper#: 876

Assessment of the Air Quality Impacts of Alberta Oil Sands Development on Tropospheric Ozone and Particulate Matter

R. E. Morris,¹ U. Nopmongkol,¹ G. Mansell,¹ C. Mooney,² S. Cho³;

¹ENVIRON International Corporation, Novato, CA, ²Environment Canada, Edmonton, AB, Canada, ³Oil Sands and Clean Energy Policy Branch, Alberta Environment, Edmonton, AB, Canada

10:40 AM

Paper#: 960

Modeling Ground-Level Ozone in Alberta Oil Sands Region

S. Cho,¹ P. McEachern,¹ R. Morris,² G. Mansell²; ¹Alberta Environment, Edmonton, AB, Canada, ²ENVIRON International Corporation, Novato, CA

11:00 AM

Paper#: 966

A Comparison of CALPUFF Model Performance Using Multiple Years of MM5 Data for the Alberta Oil Sands

R. Jain, C. Bell; Golder Associates Ltd., Calgary, AB, Canada

11:20 AM

Paper#: 867

A Comparison of AERMOD and CALPUFF Models for Regulatory Dispersion Modelling in the Alberta Oil Sands Region

G. Hoeksema, K. Onder, G. Unrau; Golder Associates Ltd., Calgary, AB, Canada

EE-5 (5)

Room: Glen 201

6/25/2010 10:20 AM

Paper

Risk Management & Accidental Release

Sponsoring Committee(s): EE-5

Chair: John Koehler, Environmental Resources Management

10:20 AM

Paper#: 576

Applying Forecast Meteorology and Real-Time Dense Gas Dispersion Modelling to H₂S Emergency Response

D. Cherneski, R. J. Chapman; RWDI AIR Inc., Calgary, AB, Canada

10:40 AM

Paper#: 586

Preventing a Toxic Chemical Disaster: RMPs in Theory and in Practice

C. Muller,¹ C. Christie,² J. Stewart³; ¹Purafil, Inc., Doraville, GA, ²Purafil, Inc. - Environmental Systems Division, Doraville, GA, ³City of Chattanooga, Chattanooga, TN

11:00 AM

Paper#: 653

A Determination of Worst Case Meteorological Conditions to Evaluate Accidental Releases

M. J. E. Davies,¹ K. Ostermann²; ¹Stantec Consulting, Calgary, AB, Canada, ²Energy Resources Conservation Board, Calgary, AB, Canada

11:20 AM

Paper#: 965

Modeling Flammable/Explosive Hazards of Semi-Enclosed Natural Gas Compressors

D. Heinold, C. Szembek, R. Fraser; AECOM, Westford, MA

EI-2 (4)

Room: Glen 206

6/25/2010 10:20 AM

Panel

CO₂ Sequestration – Markets and Options

Sponsoring Committee(s): EI-2

Chair: Sharon Sjostrom, ADA-ES

Co-Chair: Paul Farber, Sargent & Lundy

Carbon capture and sequestration (CCS) from point sources is a critical component in the overall management of global CO₂ emissions. Analysis of the technical and economic implications of CCS on the nation's power needs and requirements for successful long-term implementation will be discussed by a panel of experts. Topics will include technical feasibility, market and regulatory drivers, long and short-term liabilities, alternative approaches, potential markets for purified CO₂, experience sequestering CO₂ from demonstration-scale CO₂ capture projects, and regulatory and legal challenges regarding CO₂ sequestration.

Friday, June 25

TECHNICAL SESSIONS

EP-1 (14)

Room: Telus 104

6/25/2010 10:20 AM

Panel

Canadian Air Regulations & Permitting Issues

Sponsoring Committee(s): EP-1

Chair: David Jordan, ERM

This panel will provide a discussion of Canadian air regulations at a national and provincial level. Topics will include discussion of the differences in air regulatory and permitting approaches between Provinces and pending national regulations.

Panelists:

- **Representative**, Environment Canada
- **Dennis Karl (Invited)**, Environmental Compliance Office, Inc.
- **Representative**, Alberta Environment

EP-3 (2)

Room: Telus 105

6/25/2010 10:20 AM

Panel

Mock Trial: Cross Examination and Impeachment of Expert Witnesses

Sponsoring Committee(s): EP-3

Chair: Neal Weinfield, Greenberg Traurig

Co-Chair: Douglas Soutter, Conestoga Rovers & Associates

This panel is a mock trial that is designed to familiarize environmental scientists with the elements of trial testimony. The mock trial involves witness examination and testimony by experienced trial lawyers that focuses on trial basics such as the leading nature of cross examination and the introduction of evidence, as well as the more complex but common situation where a witness gives testimony that appears to contradict prior out-of-court statements. These out-of-court statements can come in many forms, including but not limited to deposition testimony, the witness's publications, correspondence, damaging e-mails, and even marketing materials from the expert's firm. The mock trial involves the hypothetical case *Agency v. Bravo Petroleum Inc.*, in which a government agency seeks to recover the cost of remediating light non-aqueous phase liquid (LNAPL) in bedrock beneath a tank farm at an abandoned petroleum terminal. It is presumed that as a matter of law, the agency cannot recover the future costs of its remediation if removal of the LNAPL is not "practicable" i.e., feasible and cost effective from an environmental engineering perspective. The "court" audience will hear expert testimony on whether the selected remedial technology can meet this standard. This mock trial will examine the typical methodologies and issues that arise in the court room for environmental experts. It should also serve as a valuable tool addressing the issues that arise when environmental scientists prepare reports, literature, e-mails and marketing material outside of the courtroom.

Panelists:

- **Matthew Prewitt**, Greenberg Traurig
- **Ronald Frehner**, Conestoga Rovers & Associates

ES-4 (7)

Room: Glen 202 [Back-to-back with ES-5 (7)]

6/25/2010 10:20 AM

Paper

Stakeholder Involvement

Sponsoring Committee(s): ES-4

Chair: Scott Golla, Westinghouse

10:20 AM

Paper#: 1110

Green Habitats: Lessons from the Model Townships in the U.S. and India

P. P. Kalbar,¹ S. R. Asolekar,¹ N. Seth,² B. Kura²; ¹Indian Institute of Technology Bombay, Mumbai, India, ²University of New Orleans, New Orleans, LA

ES-5 (7)

Room: Glen 202 [Back-to-back with ES-4 (7)]

6/25/2010 10:40 AM

Paper

Greenhouse Gas Management and Other Environmental Programs

Sponsoring Committee(s): ES-5

Chair: Stanley Hayes, ENVIRON International Corporation

10:40 AM

Paper#: 162

The Significance of Greenhouse Gas Emissions in an Environmental Impact Assessment

M. C. Murphy,¹ M. B. Schroeder²; ¹Stantec Consulting Ltd., Fredericton, NB, Canada, ²Stantec Consulting Ltd., Calgary, AB, Canada

11:00 AM

Paper#: 676

Effective Compliance and Recordkeeping Strategies for Refrigerant Containing Assets

S. Rasmussen,¹ M. Kaschmitter²; ¹Hill AFB, Hill AFB, UT, ²EM-Assist, Layton, UT

ET-1 (4)

Room: Glen 208

6/25/2010 10:20 AM

Paper

Monitoring Near Road Air Quality

Sponsoring Committee(s): ET-1

Chair: Rich Baldauf, U.S. EPA

10:20 AM

Paper#: 1153

Preliminary Information on Ambient Concentrations Measured at the Las Vegas National Near-Roadway MSAT Study Site

M. Claggett,¹ V. Martinez,² S. Kimbrough,³ K. Black⁴; ¹Federal Highway Administration, Santa Fe, NM, ²Federal Highway Administration, San Juan, PR, ³U.S. Environmental Protection Agency, Research Triangle Park, NC, ⁴Federal Highway Administration, Baltimore, MD

TECHNICAL SESSIONS

10:40 AM

Paper#: 51

Air Pollution in India: A Review of Air Quality Monitoring, Trends and Sources

A. Saraswat, M. Kandlikar; University of British Columbia, Vancouver, BC, Canada

11:00 AM

Paper#: 170

Size and Composition Distributions of Fine Particulate Matter Near a Major Road in Beijing, China

S. Song,¹ Y. Wu,¹ L. Yang,¹ X. Fu,² J. Hao²; ¹State Key Joint Laboratory of Environment Simulation and Pollution Control, Beijing, China, ²Department of Environmental Science and Engineering, Beijing, China

11:20 AM

Paper#: 1030

A Comparison of Carbon Monoxide Concentration Variation with Traffic Variables Near the National University of Singapore and the University of Cincinnati

B. Albrinck; University of Cincinnati, Cincinnati, OH

11:40 AM

Paper#: 894

Assessment of Exposure to Traffic-Related Pollution for Epidemiologic Studies

M. Costantini; Health Effects Institute, Boston, MA

LC (6)

Room: Glen 205

6/25/2010 10:20 AM

Panel

Shale Gas Water Management: Flowback Treatment, Re-Use and Disposal

Chair: Bill Berzins, Fossil Water Corporation

Flow-back water from unconventional gas development can contain residual amounts of water treatment additives, total dissolved solids and naturally-occurring radioactive material. The ecological benefits of gas sources closer to consumer's markets is offset by stakeholder concerns regarding protection of aquifers and source waters. The panel will discuss experiences with the treatment, recycling and disposal of waste-water from gas fracking and flow-back. This Panel Session has four presenters.

WM-3 (7)

Room: Glen 203

6/25/2010 10:20 AM

Paper

Landfills and Bioreactors - Gas Production and Greenhouse Gas Emission Reduction

Sponsoring Committee(s): WM-3

Chair: Samuel Vigil, CA Poly. State University

Co-Chair: David Minott, ERM

10:20 AM

Paper#: 195

Gas Production and Settlement Behaviour of Bioreactor Landfills

C. A. Hunte,¹ J. P. A. Hettiaratchi,¹ C. H. Hettiarachchi,² J. N. Meegoda,³ J. Hundal⁴; ¹University of Calgary, Calgary, AB, Canada, ²Lawrence Technological University, Southfield, MI, ³New Jersey Institute of Technology, Newark, NJ, ⁴City of Calgary - Waste and Recycling Services, Calgary, AB, Canada

10:40 AM

Paper#: 881

Optimization of Gas Production in Bioreactor Landfills by Leachate Augmentation

P. A. Jayasinghe, J. P. A. Hettiaratchi, A. K. Mehrotra; University of Calgary, Calgary, AB, Canada

11:00 AM

Paper#: 1015

Voluntary Greenhouse Gas Emission Reductions - A Landfill's Experience with the Climate Action Reserve

T. A. Henning,¹ J. Goetzman,² C. Reichhoff,³ B. Kent⁴; ¹Short Elliott Hendrickson, Inc., Sheboygan, WI, ²City of Superior, Superior, WI, ³Short Elliott Hendrickson, Inc., Duluth, MN, ⁴Short Elliott Hendrickson, Inc., Chippewa Falls, WI

11:20 AM

Paper#: 87

Aerobic Landfill Bioreactors as an Alternative Method of Managing Municipal Solid Waste

D. Greene,¹ M. Hudgins²; ¹SCS Engineers, PC, Asheville, NC, ²SCS Engineers, PC, Charlotte, NC

A&WMA UPCOMING EVENTS

2010

Power Plant Air Pollutant Control "MEGA" Symposium	August 30-Sept 2	Baltimore, MD
Second A&WMA International Greenhouse Gas Measurement Symposium and Workshop	September 8-10	Washington, DC
15th IUAPPA World Clean Air Congress: Achieving Environmental Sustainability in a Resource Hungry World	September 12-16	Vancouver, BC
Vapor Intrusion 2010	September 29-30	Chicago, IL
Symposium on Air Quality Measurement Methods and Technology	November 1-4	Los Angeles, CA

2011

International Conference on Thermal Treatment Technologies and Hazardous Waste Combustors	May 10-12	Jacksonville, FL
A&WMA's 104th Annual Conference and Exhibition	June 21-24	Orlando, FL

Co-sponsored Events

21st Annual Meeting of the International Society of Exposure Science: Advancing Exposure Science for Environmental Health	October 23-27	Baltimore, MD
---	---------------	---------------

Webinars

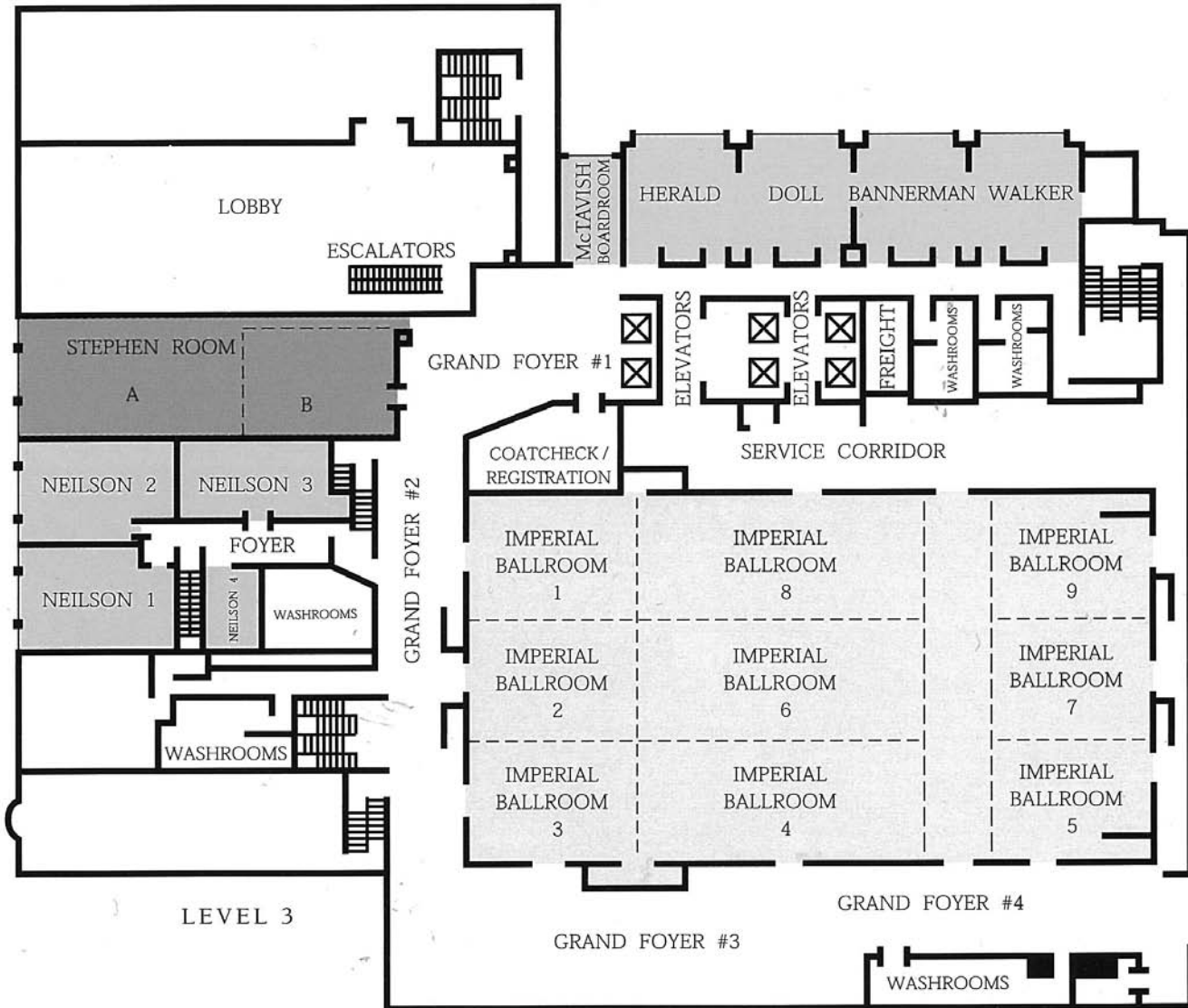
A&WMA offers Webinars throughout the year. Please visit www.awma.org/events for more information on our Webinars and other professional development offerings.

PERSONAL SCHEDULE WORKSHEET

Use this worksheet to plan each day's schedule.

Time	Tuesday June 22	Wednesday June 23	Thursday June 24	Friday June 25
7:00 a.m.				
7:30 a.m.				
8:00 a.m.				
8:30 a.m.				
9:00 a.m.				
9:30 a.m.				
10:00 a.m.				
10:30 a.m.				
11:00 a.m.				
11:30 a.m.				
12:00 p.m.				
12:30 p.m.				
1:00 p.m.				
1:30 p.m.				
2:00 p.m.				
2:30 p.m.				
3:00 p.m.				
3:30 p.m.				
4:00 p.m.				
4:30 p.m.				
5:00 p.m.				
5:30 p.m.				
6:00 p.m.				
6:30 p.m.				
7:00 p.m.				
7:30 p.m.				
8:00 p.m.				

HYATT HOTEL MAP



NOTES

NOTES
