HEALTH EFFECTS INSTITUTE

Virtual Workshop on Non-Tailpipe PM Emissions and Exposure
November 12-13, 2020
9:45 am – 2:30 pm EST

AGENDA

Chairs: *Allen Robinson, Carnegie Mellon University and HEI Research Committee* and *Meredith Franklin, University of Southern California*

DAY 1: Methods to Measure Emissions and Develop Emissions Factors

09:45 am **Workshop opens — Participants join the virtual meeting room.**

10:00 am **Welcome and Introduction to the Workshop**

Welcoming remarks
Dan Greenbaum, HEI

HEI perspective on non-tailpipe particulate matter
Rashid Shaikh, HEI

Purpose and objectives of the workshop
Allison Patton, HEI

Research Committee perspective
Allen Robinson, Carnegie Mellon University

10:15 am **Session 1: Health Effects of Non-Tailpipe Emissions: Current Knowledge**
Chair: *Allen Robinson*

Assessing human exposure for health effects studies of non-tailpipe emissions
Meredith Franklin, University of Southern California

Toxicology and health effects of non-tailpipe emissions
Miriam Gerlofs-Nijland, RIVM, The Netherlands

Perspectives from regulators and manufacturers
Kathryn Sargeant, U.S. Environmental Protection Agency
Sonya Collier, California Air Resources Board
Sarah Amick, U.S. Tire Manufacturers Association
Laurie Holmes, Motor & Equipment Manufacturers Association and Brake Manufacturers Council

Q&A with the speakers

11:15 am 10-minute break

11:25 am	**Session 2: Characterizing Non-Tailpipe Particulate Matter Emissions** Chair: *Meredith Franklin*
	Brake wear particle mass emissions: Measurement techniques and recent results *Alan Stanard, Eastern Research Group*
	Characterizing non-tailpipe PM emissions: Current status and challenges *Hiroyuki Hagino, Japan Automobile Research Institute*
	Tire and road wear particles (TRWP): Generation, characterization, and airborne assessment *Kimm Jarden, The Tire Industry Project (TIP)/Goodyear Tire & Rubber Co*
	Emissions factors for non-tailpipe particulate matter *Darrell Sonntag, U.S. Environmental Protection Agency*
	Q&A with the speakers
12:45 pm	Lunch break
1:15 pm	Logistics of breakout sessions *HEI Staff*
1:20 pm	**Breakout Session 1: To address questions related to the measurement of emissions and development of emission factors and begin to consider how emissions can be used to characterize exposure**
2:00 pm	Summary of discussions *Allen Robinson*
2:25 pm	Final comments for Day 1 *Dan Greenbaum, HEI*
2:30 pm	**Adjourn Day 1**

DAY 2: Implications for Exposure and Health – Getting from Emissions to Exposure Estimates for Health Studies

09:45 am **Participants join the virtual meeting room**

10:00 am **Welcome and Introduction to Day 2 of the Workshop**
Annemoon van Erp, HEI

10:05 am **Recap of Day 1**
Meredith Franklin, University of Southern California

10:10 am **Session 3: Measuring and Modeling Concentrations of Non-Tailpipe Particulate Matter**
Chair: *Meredith Franklin*

Field measurement of tailpipe and non-tailpipe particulate matter
Greg Evans, University of Toronto, Canada

A case study characterizing non-tailpipe emissions in Boston
Petros Koutrakis, Harvard T.H. Chan School of Public Health

Chemical transport and dispersion models for exposure assessment
Heather Holmes, University of Utah

Land use regression models for exposure assessment of non-tailpipe PM constituents and sources
Meng Wang, University at Buffalo, SUNY

Q&A with the speakers

11:15 am 10-minute break

11:25 am **Panel Discussion: Identifying Potential Impacts of Non-Tailpipe Particulate Matter**
Chair: *Allen Robinson*

Panelists:
Gerard Hoek, Utrecht University, The Netherlands
Michael Jerrett, University of California, Los Angeles
Matti Maricq, Ford
Giorgio Martini, Joint Research Centre of the European Commission

12:00 pm Lunch break

12:30 pm **Breakout Session 2: To address questions related to exposure assessment and research needs for health studies and begin to focus on research priorities**

1:05 pm	**Identifying Research Priorities** Report back on breakout groups and discuss general discussion on themes identified in the groups Moderator: *Meredith Franklin*
1:40 pm	5-minute break
1:45 pm	**Identifying Research Priorities, continued** Group identification of research priorities from the themes that are discussed, ending with brief reflections Moderator: *Allen Robinson*
2:25 pm	**Final comments and way forward** *Dan Greenbaum, HEI*
2:30 pm	**Workshop concludes**