



THE MAGAZINE FOR ENVIRONMENTAL MANAGERS

Also in this issue:

Case Study: Improving Air Quality by Repowering Locomotives in California

Inside the Industry: Recession Brings the Price–Quality Debate to the Fore

EPA Research Highlights: Celebrating Four Decades of Air Pollution Research

# Measuring the Air We Breathe

Current Issues in PM Monitoring



**NEXT MONTH:** 

# 2010 CONFERENCE ISSUE Clean Energy in Western Canada

## **FEATURES**



## **Current Issues in PM Monitoring**

As part of EM's continuing coverage of the current issues in ambient and source measurements of particulate matter (PM), this month's issue includes four articles devoted to the subject, including an update on the National Ambient Air Quality Standards (NAAQS) for lead, an overview of the different approaches to measuring condensable PM, a study of the trace elemental composition of fuel oil, and a measurement/modeling approach to study the spatial distribution of woodsmoke.

# Expanding Lead Monitoring in Support of EPA's Revised NAAQS

by Kevin Cavender and Lewis Weinstock, U.S. Environmental Protection Agency Page 6





#### Measurement of PM<sub>2.5</sub> Emissions and the Proposed Method for Condensables

by Kevin Crosby, The Avogadro Group

## Select Trace Elemental Composition of Fuel Oil Used in the Northeastern United States

by John Graham, Clean Air Task Force







#### **Modeling Pollution from Residential Wood Combustion**

by Michael Brauer, The University of British Columbia, Vancouver; and Paul Miller, George Allen, and Lisa Rector, Northeast States for Coordinated Air Use Management Page 24

#### Case Study:

## Improving Air Quality by Repowering Older Switch Locomotives in California

In November 2009, BNSF Railways was awarded \$8.9 million in American Recovery and Reinvestment Act funding to repower older switch locomotives. It is estimated the funding will provide diesel PM emissions reductions of up to 4.8 tons per year and reduce annual diesel fuel consumption by approximately 30,000 gallons.

by Stephen Cutts and Harold Holmes, California Air Resources Board

Page 30



#### **COLUMNS** Inside the Industry:

Recession Brings the
Price-Quality Debate
to the Fore
EPA Research Highlights:

# SSOCIATION

Pollution Research . . . . . 40

**Celebrating Four Decades of Air** 

Message Iroin
the President
Taking Care of Business
by A. Gwen Eklund

. . 2

#### 2009 Membership Performance Awards . . . 37

2010 Annual
Conference Preview 38
ACE 2010 in Calgary to Focus
on Energy and Environment
by Mark Lowey

The M	ember	Minute		48
awn B	ergen			

#### **DEPARTMENTS**

Product Showcase 29
News Focus42
Advertisers' Index 44
Washington Report 45
Professional Development
Programs
JA&WMA Table of
Contents 46



Calendar of Events . . . . . . 47

Printed on Recycled Paper

EM, a publication of the Air & Waste Management Association (ISSN 1088-9981), is published monthly with editorial and executive offices at One Gateway Center, 3rd Floor, 420 Fort Duquesne Blvd., Pittsburgh, PA 15222-1435. ©2010 Air & Waste Management Association. All rights reserved. Materials may not be reproduced, redistributed, or translated in any form without prior written permission of the Editor. Periodicals postage paid at Pittsburgh and at an additional mailing office. Postmaster: Send address changes to EM, Air & Waste Management Association, One Gateway Center, 3rd Floor, 420 Fort Duquesne Blvd., Pittsburgh, PA 15222-1435. GST registration number: 135238921. Subscription rates are \$265/year for nonprofit libraries and nonprofit institutions and \$405/year for all other institutions. Additional postage charges may apply. Please contact A&WMA Member Services for current rates (1-800-270-3444). Send change of address with recent address label (6 weeks advance notice) and claims for missing issues to the Membership Department. Claims for missing issues can be honored only up to three months for domestic addresses, six months for foreign addresses. Duplicate copies will not be sent to replace ones undelivered through failure of the member/subscriber to notify AXWMA of change of addresss. A&WMA assumes no responsibility for statements and opinions advanced by contributors to this publication. (News expressed in editorials are those of the author and do not necessarily represent and focial position and foci