

Environmental Conference 2009

**Denver, Colorado, USA
21-22 September 2009**

ISBN: 978-1-61567-994-2

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2009) by the National Petrochemical & Refiners Association
All rights reserved.

Printed by Curran Associates, Inc. (2010)

For permission requests, please contact the National Petrochemical & Refiners Association
at the address below.

National Petrochemical & Refiners Association
1667 K Street NW
Suite 700
Washington, D. C. 20006

Phone: (202) 457-0480
Fax: (202) 457-0486

publications@npra.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Emerging Challenges in Ozone, Fine Particulate and Greenhouse Gas Regulation	1
<i>Matthew L. Kuryla</i>	
Digester Gas Energy Utilization: Opportunities and Realities	17
<i>Joseph R. Tamburini</i>	
Using the Comprehensive Performance Evaluation Approach to Optimize Industrial Waste Treatment Facilities	22
<i>Ronald Schuyler</i>	
DIAL – What’s the Real Story?	38
<i>Robert L. Ferry</i>	
Refinery MACT RTR – Changes for Storage Tanks	47
<i>Robert Ferry</i>	
Opportunities and Limitations in the Use of Optical Remote Sensing Technologies	54
<i>Steven Ramsey, Jennifer Keane</i>	
PM_{2.5}NSR – Challenges for Refiners	73
<i>Kenneth N. Weiss, Jeffrey H. Twaddle</i>	
Application of Optical Remote Sensing in the Petroleum and Petrochemical Industries	87
<i>Mark Modrak</i>	
Understanding the Proposed TSCA Inventory Reset and Preparing for the Next TSCA Reporting Cycle	106
<i>Loree J. Fields</i>	
FTIR Technologies for Analysis of Gas Streams at Refineries	115
<i>Donald Chapman</i>	
Case Study: Carbon Canister Design Documentation under Benzene Waste Operations	122
<i>Larry G. Darcey, Ruth A. Cade, Emily L. Leidy</i>	
TMDL Responses and Recourse: A Look at the Calcasieu Estuary TMDL	139
<i>Aimee’ Killeen</i>	
Forthcoming NAAQS Changes and Implementation for PM_{2.5}, SO₂, and NO₂	148
<i>Robert J. Paine, David W. Heinold</i>	
Navigating the NPDES Antidegradation Process: A Success Story	161
<i>David J. Jessup, Michael C. Rach, Charles E. Kramek</i>	
Refinery MACT I Residual Risk Amendments: Monitoring of Heat Exchange Systems	182
<i>Loree J. Fields</i>	
Petrochemical and Refinery Strategies for Investing in Carbon Markets: A Methodology for Evaluating and Selecting Carbon Offset Projects	194
<i>Matthew A. Wilson</i>	
A Coordinated Approach to Achieving NPDES Permit Compliance	202
<i>Anthony Congram, Hal Davis, Patricia Nelson, Greg Pulliam, Bob Davis</i>	
Real Time Monitoring and Constituent Determination of Flare and Fuel Gas Streams Using Micro Gas Chromatography Techniques	217
<i>Steven E. Yuchs</i>	
Comparison of Two Flare Minimization Approaches	223
<i>Mathew George, Michael Dudasko</i>	
Case Study: The LDAR Alternate Work Practice: An AWP Primer and Guide to Practical Implementation and AWP Cost-Effectiveness	232
<i>Joe Wilwerding, David Ranum</i>	
Uncertainty in Greenhouse Gases, Nitrogen Oxides, and Sulfur Oxides Emission Estimates: Technical Considerations and Statistical Calculation Methods	248
<i>Andrew Woerner, Karin Ritter, Terri Shires, Miriam Lev-On</i>	
Impact of Wet Scrubber Blowdown on Refinery Biological Treatment	265
<i>Frank J. Castaldi</i>	
How will the EPA Proposed Monitoring Requirements for Leaks in Cooling Tower Return Lines from Heat Exchangers in Organic HAP Service Affect You?	280
<i>Taras Lewus, John Ditmore, Michelle Serres, Kyle Brzymialkiewicz</i>	
BWON Compliance Benchmarking	320
<i>Larry G. Darcey, Ruth Jimenez-Benning</i>	
Selenium Removal from Refinery Wastewater	345
<i>Yakup Nurdogan, Patrick Evans, John Christiansen</i>	

Flare Emission Reduction Initiative – Balancing Community Expectation, Safety Practice, and Environmental Regulations	366
<i>Pang Mueller, Robert M. Stockdale</i>	
Planning for Termination of Refinery Consent Decrees	387
<i>Charles L. Murphy</i>	
Conducting a Mercury Mass Balance at Petroleum Refineries	397
<i>Mike Falk, Nate Kowalsky</i>	
Strategies for Success: Implementing Community Air Monitoring Programs at Refineries	408
<i>Lisa A. Polos, Dr. Donald S. Gamiles</i>	
Reversing Course: The Obama Administration’s Environmental Agenda and How it Will Impact the Refiner	424
<i>Leann M. Johnson-Koch, Alexandra H. Magill</i>	
Measurement of Gaseous VOC and Greenhouse Gas Content for Pressurized Process Wastewater Streams	434
<i>Leonard Nelms</i>	
Trends in EPA and State Refinery Flare Enforcement	442
<i>Joseph F. Guida, Jess A. McAngus</i>	
Greenhouse Gas Emissions Estimation For Petroleum Refinery Operations in California: A Case Study of the Mandatory Reporting Rule	467
<i>Thomas P. Nelson, Ron Clark</i>	
Case Study: EPA Mandatory Reporting Rule Gap Assessment	483
<i>Lisa Campbell, Richard Oldenkamp</i>	
Regulatory Applicability and Compliance Concerns for ‘Steam Generating Unit’ NSPS at Certain Petroleum Refinery Furnaces	499
<i>Joel Trinkle</i>	
Author Index	