Industrial Emissions Control Technology XVI Conference 2018

Durham, North Carolina, USA 30 July - 2 August 2018

ISBN: 978-1-5108-6943-1

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© (2018) by Council of Industrial Boiler Owners All rights reserved.

Printed by Curran Associates, Inc. (2018)

For permission requests, please contact Council of Industrial Boiler Owners at the address below.

Council of Industrial Boiler Owners 6801 Kennedy Road Suite 102 Warrenton, VA 20187 USA

Phone: 540-349-9043 Fax: 540-349-9850

cibo@cibo.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: 845-758-2633

Email: curran@proceedings.com Web: www.proceedings.com

INDUSTRIAL EMISSIONS CONTROL TECHNOLOGY XVI CONFERENCE

July 30 – August 2, 2018

TECHNICAL SEMINAR – SELECTED PAPERS

TABLE OF CONTENTS

- 1. Table of Contents
- 2. Conference Summary Carl Bozzuto, Consultant
- A. Short Course
 - A.1. Air Quality 1011

 Joe Sullivan, AECOM
- B. FORUMS
 - **B.1.** Informal Owners' Only Forum See Summary
 - **B.2.** Informal Equipment Suppliers, Engineering and Environmental Service Consultants' Only Forum See Summary
 - **B.3.** Review of Concurrent Forum Discussions See Summary
- C. Environmental Rules, Regulations and Implementation in the Industrial Sector
 - C.1. Overview of North Carolina Air Quality Improvements and Priorities21
 Mike Abraczinskas, North Carolina Dept of Environmental Quality
 - **C.2.** Overview of EPA's Air Quality Regulatory Priorities43 **Mike Koerber**, EPA OAQPS
 - **C.3.** Trade Association Environmental Regulatory Activities51 **David Friedman**, AFPM
 - C.4. Industry Perspective and Air Quality Regulatory Concerns60
 Preston Howard, NCMA
 - C.5 Interstate Air Transport66Skipp Kropp, Steptoe & Johnson PLLC

D.	Gas 1	Gas Turbine Technologies			
	D.1	Primer on Gas Turbine Technologies and CHP97 Ben Mathews, Solar Turbines Incorporated			
	D.2	Turbine MACT Update108 Melanie King, EPA-OAQPS			
	D.3	Gas Turbine Emissions Control Technologies and Capabilities113 Rinol Pereira and Vernon Smith, ABB, Inc.			
	D.4	IA Fleet in Transition91 Mark McIntire, Duke Energy			
	D.5	Low Level Formaldehyde Testing Options for Potential Turbine MACT Emission Limits122 Thomas Dunder, TRC Companies			
E.	Boiler Technologies				
	E.1	Low Emissions Industrial Boilers129 Catie VanWormer, Cleaver Brooks			
	E.2	California Boiler and NOx Control Requirement Ammonia Free: SCR System145 William (Bill) Testa, Nationwide Boiler Inc.			
F.	Short	hort Course – Combustion 101157 Carl Bozzuto, Consultant			
G.	Emissions Monitoring Technologies				
	G.1	Update on EPA Office of Research and Development Activities174 Allen Vette , EPA-ORD			
	G.2	Status of EPA Citizen Science and Air Quality Sensors Programs184 Kristen Benedict, EPA-OAQPS			
	G.3	Emerging Technologies for Emissions Monitoring192 Peter Zemek, Montrose Environmental Group			
	G.4	Using Data to Drive Operational Consistency as a Compliance Tool206 Steve Ostanek, Neundorfer, Inc.			

H.	Emissions	Control 7	Technolo	aies
		COLLLO		JUICS

- H.1 Industrial Boiler MACT HCI Compliance Now What?212Gerald (Jerry) Hunt, Lhoist North America
- H.2 Improving Performance in Sorbent Injection Systems221Mitch Lund, Nol-Tec Systems, Inc.
- H.3 Technology Update 3
 Impact of Emerging Sensor Technologies on Fenceline Monitoring
 of CIBO Members246
 James (Jim) Powell, Mostardi Platt
- H.4 Environmental Activism: Citizens' Petitions, Lawsuits & Litigation238Charles (Charlie) Carter, Burns, Day & Presnell, P.A.

I. Air Permitting and Modeling

- I.1 Air Quality Modeling Update263
 George Bridgers, EPA-OAQPS
- **I.2** AERMOD and Air Dispersion Modeling Updates269 **Tony Schroeder,** Trinity Consultants Inc.
- I.3 Case Study Boiler MACT Compliance Approaches for Biomass Boilers283Dale Overcash, Trinity Consultants Inc.
- I.4 Ditching Your Major Source MACT Requirements Case Study OnceIn Always In Guidance Reversal299Kim Alfonsi, Barr Engineering

J. Energy and Sustainability

- J.1 Dollars and Sense:Boiler Tuning as a Best Management Practice312

 John Bacon, TRC Environmental Corporation
- J.2 BIG Manufacturing can have a BIG Impact on Sustainability330 **Heidi Holmes,** The Dow Chemical Company

.