

Blue Bell, PA  
October 2, 2013

Linde Engineering  
North America Inc.

Linde Engineering North America (LENA) is pleased to host a one day seminar on thermal waste oxidation technologies and the impact of the current regulatory environment on process industries. Presentations by industry experts will provide 'real world' information, and demonstrations of waste destruction at our EPA-permitted Technology Center with hands-on calculations will enhance your knowledge of waste combustion and air pollution.

### Attendees will benefit by:

- Understanding the latest regulatory environment
- Gaining an in depth perspective on recent advances in combustion technology and air pollution control
- Getting hands-on experience with state of the art equipment and design methodologies
- Seminar may qualify for 6 Professional Development Hours (PDH); certificates will be issued

### Who should attend?

Engineers, R&D professionals, operators and managers responsible for designing, specifying, operating, and maintaining chemical process units.

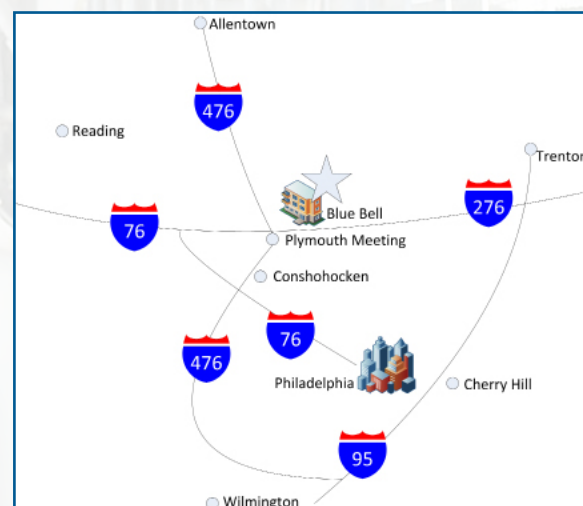
### Space is limited - register today!

- Cost: \$50
- Payment: via check, payable to Linde Engineering North America Inc.; company purchase orders will be accepted
- Breakfast, lunch and transportation to and from our Technology Center in Conshohocken, PA are included.

Please contact Pam Earle for more information: [pam.earle@linde-le.com](mailto:pam.earle@linde-le.com) or (610) 832-8757.

### Schedule

8:00	Registration & Breakfast	
8:30	Welcome	Goutam Shahani
8:45	Introductions	Bruce Hensinger Carl Rentschler
9:00	Permitting & the Regulatory Environment	Sachin Shankar
10:00	Thermal Oxidation – Flameless – Submerged Combustion	Gene Irrgang
11:30	Oxygen Enrichment	Dr. Andy Richardson
12:00	Travel to Technology Center in Conshohocken	
12:15	Lunch	
1:00	Air Pollution	Doug Kriebel
1:30	NOx Abatement Scrubbing Particulate Removal	Dr. Naresh Suchak Ken Zarzycki Matthew Lee
2:30	DuPont case study	Ray Mendelsohn
3:00	Pilot plant demonstration – Emission calculation exercises	Al Zdziera
4:00	End	



Linde Engineering North America Inc.  
Five Sentry Pkwy. East, Suite 300  
Blue Bell, PA 19422

## Speakers



Goutam Shahani

*Business Development Manager, LENA*

Mr. Shahani has over 25 years' industry experience specializing in industrial gases for the energy, refining and chemical industries. He holds a BSChE and MSChE in chemical engineering and an MBA from Lehigh University.



Bruce Hensinger

*President & CEO, LENA*

Mr. Hensinger leads LENA's operations in Blue Bell, Houston, and Holly Springs, GA. Prior to his current role, he was with The Linde Group, parent company of LENA, as Head of Project Execution, Asia/South Pacific and Americas. He previously held positions at Raytheon Engineering and Air Products. Mr. Hensinger holds a B.S. in Mechanical Engineering from Lafayette College.



Carl Rentschler, P.E.

*Sr. Vice President, Fired Capital Equipment, LENA*

Mr. Rentschler oversees include process engineering, estimating, sales and project execution for fired heaters and oxidation technologies, and previously served as Director of Projects at LENA. He has held senior project management and engineering positions with Air Products and Worley Parsons. Mr. Rentschler earned a BSCE from Penn State and an MSCE from Cornell University.

Sachin Shankar, P.E.

*Assistant Regional Director, PA Department of Environmental Protection, Southeast Region*

Mr. Shankar is the Assistant Regional Director of the Southeast Regional Office of the Department of Environmental Protection. He holds two BS degrees – one in Chemistry and the other in Mining Engineering, as well as an MS degree in Mining Engineering. Sachin worked for 6 years towards a PhD degree and for one year as a research technologist at Penn State University. He joined the Pennsylvania DEP in 1993 and served as the New Source Review Chief in the Air Quality program until recently, when he was promoted to his current position.



Gene Irrgang

*Global Product Manager, Oxidation Technologies, LENA*

Gene has developed waste management/destruction systems and equipment for continuous production of chrome oxides and treatment of landfill leachates, and was integral to the development of the first commercial system for recovery of solvents using activated carbon adsorption and vacuum regeneration. Mr. Irrgang holds a BSChE from The Pennsylvania State University, and is the author of numerous technical papers focusing on waste incineration and byproduct recovery.



Dr. Andy Richardson

*Sr. Project Manager, Glass & Fibers, Linde Gas*

Dr. Richardson has over 25 years experience in combustion applications, with a strong background in experimental techniques and computational modeling. In addition to being part of Linde's global metallurgy and glass team, he is expanding Linde's oxy-fuel combustion capabilities. Dr. Richardson holds both an M.Eng and a PhD in turbulent combustion from Leeds University.



Doug Kriebel

*President, Kriebel Engineered Equipment*

Doug has provided solutions to the chemical process, hydrocarbon process, power generation and other industries for over 20 years. He has launched programs to educate operating facilities on equipment selection to reduce energy consumption, greenhouse gases, and carbon footprint. Starting in operations and applications engineering, Doug held a number of positions at PECO, Schutte & Koerting, and Ingersoll Rand. He earned a BSChE at Michigan Technological University.



Dr. Naresh Suchak, PhD, P.E.

*Sr. Project Manager, Chemistry & Energy, Linde Gas*

Dr. Suchak has been responsible for development and commercialization of numerous chemical and environmental processes. During his tenure at Linde Gas (formerly BOC), he has worked on applications development for LoTox™, a technology utilizing ozone to selectively oxidize insoluble NOx for removal via wet scrubbing. Naresh holds a PhD in chemical engineering from The University of Mumbai.



Ken Zarzycki

*EST™ Scrubber Products Manager, Severn Trent Services*

As president of Environmental Systems Technology Corp. (EST), Mr. Zarzycki developed specialty wet and dry emergency scrubbers. Ken currently provide operators training on process hazards. He has authored several booklets relating to chlorine scrubbing systems. Ken graduated from Villanova University with a BSChE.

Matthew Lee

*General Manager, CECO Filters*

Mr. Lee is the General Manager of CECO Filters, a global supplier of fiber bed filters, a specialized coalescing liquid gas separation technology. Matt received a BSChE from Widener University and an MSChE from Villanova University. Matt has worked within the air pollution control industry during his 20 year professional career. He started with CECO Filter in 1995 as a project engineer, was promoted to engineering manager in 1999, and promoted to general manager in 2011.

Ray Mendelsohn

*Consultant, DuPont*

In his position at DuPont, Mr. Mendelsohn provides expertise on combustion, steam, compressed air, and DuPont's DP heat transfer systems. He has served on the Process Vent & Emission Control Systems subcommittee of the CCPS. Ray graduated from Lehigh University with a BSChE.