



# AIChE®

## Chicago Columns

Chicago Section e-newsletter

November 2007

<http://www.aiche-chicago.org/>

### Upcoming Events:

- > **November 14-**  
AIChE-Chicago  
Local Section  
Meeting
- > **November 16-**  
Abbott Tour

### November Meeting

## Getting More with Less: Alon Big Spring Refinery ULSD Project

**Larry Kraus**

*Team Leader – Clean Fuels, Projects, & Strategic Accounts  
Criterion Catalysts & Technologies, Houston, Texas*



**Date:** Wednesday, November 14, 2007

**Location:** Wellington of Arlington  
2121 S. Arlington Heights Road  
Arlington Heights, IL 60005

<b>Schedule:</b>	5:30-6:30 pm	<b>Social &amp; Registration</b>
	6:30-7:30 pm	<b>Dinner</b>
	7:30-7:45 pm	<b>AIChE Announcements</b>
	7:45-8:30 pm	<b>Presentation</b>

#### Dinner

Soup & Salad  
Petit Fillet  
Twice Baked Potatoes  
Chocolate Mousse

#### Cost

Members:	\$30.00
Unemployed Members:	\$15.00
Student AIChE Members:	\$ 5.00
Non-Members:	\$35.00

### Abstract

Cost-effective solutions are the mantra of the capital projects group at ALON Big Springs Refinery, and the ULSD revamp project proved no exception. The refinery explored many options and exhausted all technological alternatives in converting their only DHT to ULSD service. This was particularly challenging given that its low operating pressure and feed difficulty (25% LCO), but creative technical solutions and close collaboration between refinery and technology suppliers yielded a solution with a capital cost of ~\$850/B, much lower than the industry average cost. This paper will describe the trials and tribulations experienced along the road to the final solution, and the key decisions that lead to the successful startup in May 2005. The presentation also describes how they have moved on the next phase of ULSD; getting the most out of the unit in an ever-changing economic environment.

Further information at: <http://www.aiche-chicago.org/>

## CONGRATULATIONS JEFF PERL

Dr. Jeff Perl was recently elected to the rank of Fellow of the American Institute of Chemical Engineers. Here are a few highlights from his nomination:

### Honors

*“The Civil Engineer” of the USAF at HQ Air Force Center for Environmental Excellence*

- *Air Force Commendation Medal 13 March 1997 – 14 February 1999*

*“The Surgeon General” of the USAF (HQ AF Medical Operations Agency)*

- *Meritorious Service Medal 15 February 1999 – 15 May 2002*
- *Air Force Commendation Medal 16 May 2002 – 15 March 2004*

These honors were part of Major Perl’s military record. He was reactivated in September, 2001:

*Final assignment to the Air Staff, at HQ USAF, Washington DC.*

*Activated to AF HQ September 14, 2001 – 15 May 2002 to assist in coordination of Reservists and support Associate Chief, Environmental and Occupational Health Directorate of “The Surgeon General” See Chemical Engineering Progress May 2002 interview conducted by AIChE Staff. Activated for “Operation Noble Eagle” in response to attack on 11 September 2001.*

When he was not helping the Air Force he started his own company, co-founded the Academy of Certified Hazardous Materials Managers, Chicago Section, and written a number of articles for journals and trade journals.

For AIChE Jeff has been a very valuable member. (VVM?) He has held 6 elective offices in local section and national divisions. He has served as a liaison to the Military interaction committee of RANTC (see the AIChE.org web), Treasurer for the Environmental division and a member of the Executive Board Program Committee.

As many of you know he has been one of the primary drivers for the local section symposia that have been serving Chicago professional and students.

I was honored to nominate him for Fellow.

Dennis O’Brien



## Symposium 2007 Success

The Chicago section AIChE presented a symposium on "Recent Developments in Refining, Energy and Biotechnology" from September 25-26, 2007 at the University of Illinois at Chicago - College of Engineering.

Over 100 attended the two-day symposium featuring sessions covering recent developments in

-Refining

-Energy

-Biofuels

-Food

Presentations by industry, academic and government organizations revolved around recent technical advances in the respective session areas.

An exciting addition this year was the high school outreach program. Designed to address the shortage of engineers nationwide, some 225 Chicago area HS students and their counselors received a focused, fun look at engineering as a career choice. As part of this event over 300 HS students, counselors and engineer attendees lunched together to enhance the interaction.



Also new and well attended, was the Young Professionals Advisory Board (YPAB) of AIChE job fair for college students who will soon be seeking employment. Program Highlights by the numbers

1. Technical Program
  - Four Sessions over two days (20 papers)
  - Refining, Energy, Food and Bio Fuels Technology Developments
  - 100 Attendees
2. High School Engineering as a Career Outreach
  - Given during first day of program
  - 225 Chicago Area High School Students
  - Chicago Section Developed Program
  - University of Illinois College of Engineering Assistance
  - NASA Space Shuttle Astronaut as highlight
3. YPAB Job Fair
  - Presented on day 2 of program
  - Six Chicago Area Companies
  - Focus on University students
4. Dinner meetings both nights
5. Tour of landmark Jane Addams Hull House Settlement on Campus
6. UIC Chemical, Civil and Electrical Engineering participation and presentations
7. Over 35 Chicago Section Volunteers Staffed the event



Space Shuttle Astronaut Jim Reilly speaking to 225 HS Students about Engineering as a Career

Link to [www.Aiche-chicago.org/symposium](http://www.Aiche-chicago.org/symposium)

The above link will lead to the entire program on the web. Please note the list of 15 Chicago area companies who gave generously to sponsor the event as well as the 35 or so section volunteers who made it happen. An extremely strong assistance from the University of Illinois at Chicago College of Engineering pushed the success over the top as they helped during all phases of planning and execution.



# CORNER

## TOUR ANNOUNCEMENT

On November 16, Abbott Labs will host 10 people for a tour of its Global Pharmaceuticals Research and Development Division. The tour will last from 3 pm to 5 pm, and will cover the following topics: structural chemistry, high throughput synthesis, x-ray crystallography, and computer aided molecular design. The building is located in Abbott Park, about an hour north of Chicago. Please RSVP by November 3 to Noelle Patno at [noelle.patno@abbott.com](mailto:noelle.patno@abbott.com) if you would like to attend .



## PARTICIPATION

Thanks to everyone in the YPAB and supporters for making the YPAB Career fair During the 2007 Symposium a success.

The YPAB has some ambition plans next. Please make sure to let your interest be known and participate. Please e-mail AICHE communications [aichechicom@aiche-chicago.org](mailto:aichechicom@aiche-chicago.org) with your interest and recommendations.



## NOMINATIONS REQUESTED FOR THE ERNEST W. THIELE AWARD

The Ernest W. Thiele award is sponsored by BP and recognizes the outstanding contributions to our profession by a Midwest region chemical engineer. This award was established by the AIChE Chicago Section and is presented annually to a Midwest region AIChE member. This internationally recognized award consists of an engraved plaque and \$1000 honorarium presented at our sectional meeting.

Nomination forms and additional information can be obtained from the Thiele Committee Chair.

Thank You for your recent nominations and this years Thiele award recipient will be announced soon. One of the highest honors a distinguished chemical engineer can receive is our Chicago Section Thiele award. Please consider nominating a deserving engineer for this prestigious award.

Jim Simnick  
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Naperville, IL 60566

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Further information at: <http://www.aiche-chicago.org/>

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## **DETROIT AICHE, WSU-AICHE, S.E. MICHIGAN IEEE, WSU-IEEE PRESENTS:**

### **Global Warming & Greenhouse Gas and Mitigation Opportunities**

Dr. Saifur Rahman, Joseph Loring Professor at Virginia Technical University  
Director of the Advanced Research Institute at Virginia Tech.  
Directs the Center for Energy and the Global Environment at the University

RSVP w/ Kevin Taylor, k2356@aol.com, 586-573-0713

Wednesday Nov. 28th 1:30-3:00pm,  
Wayne State University (WSU), Engineering Building.  
5050 Anthony Wayne Drive, Detroit, 48202  
ENG 1200 (Hall of Fame)

Personal Website, <http://www.ari.vt.edu/People/rahman.htm>

Abstract Levels of greenhouse gas (GHG) emissions from major industrialized and developing countries are first discussed. This leads to a presentation on some of the signs of global warming as seen around the world today. This is followed by some data on agreements reached at Kyoto in December 1997 for curbing GHG emissions. Key constituencies in the United States that are affected due to curbs on carbon emission are highlighted including the impact of carbon tax on electricity costs. Various GHG mitigation opportunities including advanced technologies are then discussed. This is followed by some discussion on the US administration's and US Congress' position on Kyoto Protocol and developing country responsibilities for GHG mitigation.

#### Biography

Saifur Rahman (S'75, M'78, SM'83, F'98 - IEEE) is the director of the Advanced Research Institute at Virginia Tech where he is the Joseph Loring Professor of electrical and computer engineering. He also directs the Center for Energy and the Global Environment at the University. Professor Rahman has served as a program director in engineering at the US National Science Foundation between 1996 and 1999. He has served on the IEEE Power Engineering Society Governing Board as VP of industry relations, and VP of publications between 1999 and 2003. In 2006 he served as the vice president of the IEEE Publications Board, and a member of the IEEE Board of Governors. He is also a member-at-large of the IEEE-USA Energy Policy Committee. He has published over 300 papers on conventional and renewable energy systems, load forecasting, uncertainty evaluation and infrastructure planning.



**We want you for AIChE-Chicago!**

**We need your help!**

How many opportunities can you find to learn project management, delegation and leadership skills for free? Becoming an officer in the Chicago Section of AIChE is such an opportunity. While you're learning new skills, your local network grows. Just about all of us are either undergoing a career change, contemplating a career change, or are wondering if our career will be changed for us. Volunteering with AIChE is a way to add skills and accomplishments to your resume.

[aichechicom@aiche-chicago.org](mailto:aichechicom@aiche-chicago.org)

<http://www.aiche-chicago.org/volunteerrequest.htm>



**SUBMITTING ARTICLES TO AICHE COLUMNS**

We are now initiation a regular Newsletter and are welcoming people to e-mail any material they would like to appear on the newsletter. These can be job postings, advertisements for upcoming committee meetings, articles, general advertisements or anything else you may want to submit. To submit material e-mail your material to [aichechicom@aiche-chicago.org](mailto:aichechicom@aiche-chicago.org) with "newsletter article request" as a subject heading.



**AICHE Publicity Committee Fees**

	<b>Academic (non-AICHE)</b>		<b>Company</b>		<b>Recruiters</b>	
	Per Month	Per Year	Per Month	Per Year	Per Month	Per Year
<b>Advertisements (3X3)</b>	100	450	150	675	N/A	N/A
<b>Half-Page (~7"x 4.5")</b>	280	1260	420	1890	N/A	N/A
<b>Job Posting (Size?)</b>	50	225	100	450	250	N/A
<b>Special Sizing</b>	Contact Publicity Committee					

- For the purchase of a year ad, customers have the option of changing ads/jobs month to month.
- They are not stuck with the same ad/logo for the whole year.
- Student and AIChE Member Related Postings are Free

