

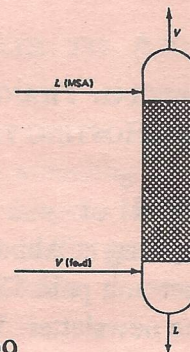


# Chicago Section

## Columns

Chicago Chapter - American Institute of Chemical Engineers - October 1999

[www.aiche-chicago.org](http://www.aiche-chicago.org)



### OCTOBER MEETING NOTICE

**Topic: Regulatory Update from the Illinois EPA**

**When:** Wednesday, October 13<sup>th</sup>, 1999

**Where:** Niko's Restaurant & Lounge  
7600 South Harlem Street  
Bridgeview, IL 60455

*(Directions on page 2)*

#### **Agenda:**

**Check-in & Cash Bar:** 5:30 – 6:30pm  
**Dinner:** 6:30 – 7:30pm  
**Section Announcements:** 7:15 – 7:30pm  
**Presentation:** 7:30 – 8:30pm  
**Departure:** 8:30pm

#### **Dinner Menu:**

- ▲ Cream of Chicken soup
- ▲ Chicken a la Niko's (with lemon butter, baked rice, sautéed vegetables), or
- ▲ Three slices of Beef (with mushrooms and wine sauce, baked potato, vegetables), or
- ▲ Vegetarian plate
- ▲ Chocolate or Strawberry Sundae
- ▲ Coffee, tea, or milk

**Cost:** \$22 for members  
\$24 for non-members  
Free for AICHE Student Chapter

#### **Registration Deadline:**

Please make your reservations by calling the American Chemical Society office at (847) 647-8405 by Friday, October 8<sup>th</sup> before 5:00 p.m.

#### **Background of Speaker:**

Mr. Henry "Hank" Naour is Manager, Toxics Unit, Bureau of Air for the Illinois Environmental Protection Agency (IEPA). Mr. Naour is also a Chemical Engineer with post-Graduate work in the Chemical Process Industries, more than 25 years in the Chemical Processing Industries; 5 years in Process Engineering and Technology and 20 years in Plant Management. He joined the Agency (IEPA) in 10/91 as Manager of the Technical Support/Air Toxics Unit of the Bureau of Air Permit Section. Mr. Naour provides the grease (and brains) that keeps the Illinois Air Toxics Control Programs at both the State and Federal level coordinated with the State and Federal Title V permit programs.

#### **Summary of Presentation:**

A lot is happening and changing in the State Air Programs. Mr. Naour will provide a regulatory update on Title 5 and 112r compliance as well as the status of the Chemical Safety and Site Security Act and new reporting requirements. This new law requires facilities filing a Risk Management Plan under 112r to hold a Public Hearing of providing details of their RMP. Send this invitation to your Environmental people. They will surely want to attend and ask questions.

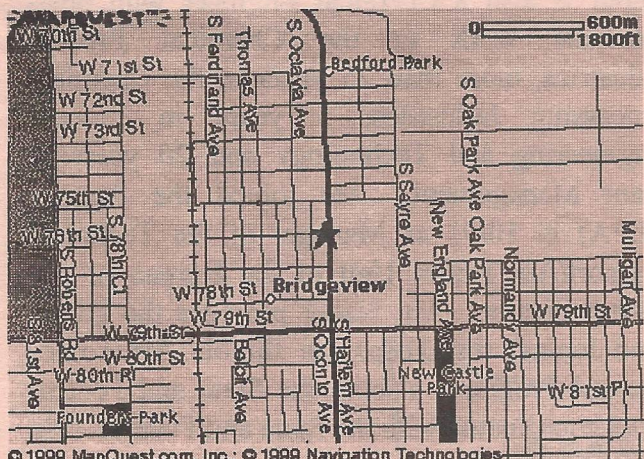


**SPECIAL THANKS TO ABBOTT LABORATORIES  
FOR HOSTING THE SEPTEMBER MEETING**

Those of you who attended the September meeting at Abbott Laboratories may have noticed that you paid \$2 less than the published price in the newsletter. We have Abbott to thank for this generosity. In addition to the snacks provided by Abbott at check-in, and their hospitality in providing the facility for us to tour, Abbott also agreed to offset the price of the dinners by \$2 to help the section recover some of our other costs. This was an especially generous gift because of the unexpectedly large turnout at the meeting.

**DIRECTIONS TO  
NIKO'S RESTAURANT:**

(phone: 708-458-4400)



Take the I-294 Toll Road. Just south of I-55, take the 95<sup>th</sup> Street exit, heading East (toward Oak Lawn). Proceed a short distance to the 2<sup>nd</sup> Harlem Avenue exit (Northbound) Route 43. After emerging from the cloverleaf, continue north for 2 miles. You will see a White Castle on your left at 79<sup>th</sup> Street. Continue north for 3 blocks and you'll see Nikos on your left.

**CHAIRMAN'S CORNER**



**Rebecca Abshire  
Chair 1999/2000,  
Chicago Section AIChE**

Hats off to Abbott for putting on a great tour of one of their pilot plants. I also want to thank Dr. Riley for sharing challenges Abbott experienced in developing its new protease inhibitors. I always find it fascinating to hear about people working together to overcome challenges.

The Chicago section faces challenges also in the up coming year. We have a job-posting program in place to advertise jobs in both our newsletter and on the web. However, we need your help in getting the postings. If your company has positions, please make sure that your human resource department know that they can post company direct jobs with us for no charge. We are trying to make it user friendly and efficient. We have forms on our web page, AIChE-Chicago.org, that they can be completed and returned. We are open for feedback from you on how we can improve our system. If you have a suggestion or comment, please don't hesitate to either contact Gerry Bard, Job Posting Chair, at [Gerald102@techheadnet.com](mailto:Gerald102@techheadnet.com) or 414-279-6394 or myself.

Do you have 10 hours that you can spare the next few weeks to share you technical knowledge and on-the- job experience with college students? Last spring the Chicago Section worked with IIT to develop a Waste Trading Exercise. This exercise requires volunteers work with college students and create a model that takes one industries waste and turns it into another's raw material. See the Waste Trading Exercise article in this newsletter for details.



## WASTE TRADING EXERCISE PLANNED FOR NOVEMBER

Waste Trading is the name for a market that promotes economic interaction between diverse industries with respect to how they handle waste. The products in this market are the waste byproducts generated by modern industry. Driving the market is fact that the byproducts of some industries are often good sources of raw materials for other industries, and are usually inexpensive and highly abundant. Waste Trading develops an interdependent global ecology that will minimize waste and maximize profits.

The development of a Waste Trading exercise is underway with students and professors from IIT. The rules of the trading game are derived from physical and chemical laws, and economics. Product and waste profiles are being written for ten diverse industries such as glass, petroleum, concrete, steel, plastics, aluminum, agriculture, municipal wastewater, plus others. The industry scenarios will be used in a Waste Trading Exercise to be played at the November meeting, to be held jointly with the Lake Michigan Section of the Air & Water Management Association.

TEN INDUSTRY VOLUNTEERS ARE NEEDED to work with the students to finalize and test the Waste Trading Exercise before November's AIChE/A&WMA meeting. The time commitment is minimal: approximately 14 hours will be required (four hours each in October, and November, plus two hours during the night of the meeting). This is a great opportunity to give something back to your profession. You will work directly with college students by providing your technical knowledge and on-the-job experience. The development of a working Waste Trading model could have long-range environmental benefit.

Please call Ann Dougherty at Portland Cement Associations at (847) 966-6200, extension 363, if you would like to be involved.

## AIChE's 50TH CAREER FAIR TO AID MEMBERS AND EMPLOYERS

Institute members and employers attending the Annual Meeting at the Wyndham Anatole Hotel in Dallas November 1 & 2 can benefit greatly from the fair planned by AIChE's Career Services Department.

AIChE's 50th Career Fair is a substantial benefit for any AIChE member who wants to explore career options. Members attending the fair are encouraged to submit their resume into our new on-line Career Fair Resume Database accessible to participating employers only. Early resume submission will allow employers to review member credentials prior to the fair. On-site interviews will be conducted with qualified candidates. Those unable to attend the fair may submit their resume for distribution to all participating employers. For details visit the AIChE Web site [www.aiche.org/employment](http://www.aiche.org/employment). For information, call (212) 591-7670; e-mail [herbs@aiiche.org](mailto:herbs@aiiche.org).

Also, employers with openings for chemical engineers may contact Herb Scheftel at (212) 591-7670 or e-mail [herbs@aiiche.org](mailto:herbs@aiiche.org) to learn more about this cost-effective and efficient method for identifying qualified AIChE members seeking employment opportunities.

## STUDENT OUTREACH OPPORTUNITIES

The Student Outreach Committee is looking for volunteers to make career presentations at an elementary or middle school. The presentations usually last an hour. We provide a Speaker's Kit to aid in putting the presentation together. Requests for these presentations come from the Chicago Public Schools and suburban schools.

Volunteers are also needed to set up and man a presentation table at student career events. The first one is Chemistry Day, sponsored by the American Chemical Society. It will be in early November at the Museum of Science and



Industry. We particularly need help with the display at this time. We are looking for a detailed P&ID of a process that makes food that children and teenagers eat. Along with that, any 3D visual aids are needed, such as a 3D piping drawing, or a model.

Furthermore, we are looking for help with building a model of the life support systems on the Space Shuttle, or for a model that matches the above mentioned drawing. Finally, we are looking for any company that would like to donate small goodies (pencils, candy, etc) for giveaways when we have a display.

Please contact Annette Johnston for details. Phone (847) 935-5120; Fax (847) 935-5932; E-mail [Annette.Johnston@abbott.com](mailto:Annette.Johnston@abbott.com).

## TEACHERS DISCOVER THE SECRETS OF CHEMICAL ENGINEERING

*By Alan Zagoria*

Did your teachers tell you about chemical engineering when you were in high school? Probably not, because most teachers have never been exposed to our profession. We thought it was time to remedy that situation.

On May 6, our Section hosted a very successful and unique event. We invited teachers to learn about the chemical engineering profession through a seminar and plant tour. We hosted about 30 teachers and some high school students.



*Alma DeLa Garza describing what it takes to get through chemical engineering school*

The program consisted of a plant tour (the Jardine water treatment plant near Navy Pier), a discussion of what chemical engineers learn in

school (lead by a very enthusiastic Alma DeLa Garza – UOP) and presentations of true-life chemical engineering experiences by Shannon Brown (Jacobs Engineering), Gloria Fountain (Unilever), Kimberly Harms-Worthington (City of Chicago) and Annette Johnston (Abbott Labs); moderated by yours truly.

The Chicago Water District was an excellent host – engineers, chemists, and managers explained and showed how huge quantities of high quality water are delivered to our homes. The teachers were particularly interested in the analytical labs and the huge scale of the operating equipment. Alma explained how much work it took to complete her chemical engineering degree and how wonderful it was to be able to do something she really wanted to do. Our other speakers demonstrated the diversity of chemical engineering opportunities. We covered E&C, pharmaceutical, plant operations, and public service. We talked about all the different kinds of problems chem engineers work on – in the lab, office, factory floor, or customer site. Each speaker had a different reason for wanting to be a chemical engineer.

Needless to say, the teachers were impressed, and took home materials so that they could let their students know what chem engineers do, before they go to college.

This program was a major undertaking and all those who helped put it together deserve the thanks of the whole Section. Thanks to Jill Bonucci (UOP) and Allen Fluharty, who managed all the arrangements, as well as our speakers who represented us so well.

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Chicago Section Columns is published eight times a year by the Chicago Section AIChE. Opinions expressed herein are those of the authors and are not necessarily those of the officers of the Chicago Section. Copy for inclusion in the next Chicago Section Columns must be received no later than October 29<sup>th</sup>, 1999.

The objectives of the AIChE are to advance chemical engineering in theory and practice, to maintain a high professional standard among its members and to serve society, particularly where chemical engineering can contribute to the public interest. If you have any questions or comments regarding the newsletter please contact Ralph Iovinelli at 1021 West Adams Street, Suite 200 Chicago, IL 60607; Voice: 312.491.4273; Fax: 312.491.4276; [riovinelli@landrum-brown.com](mailto:riovinelli@landrum-brown.com).



## DIAMOND JUBILEE (75TH ANNIVERSARY) CELEBRATION OF AICHE CHICAGO SECTION

In May of the year 2000, the Chicago Section of AIChE will be celebrating its 75th year of existence. To commemorate this special event, the section is planning to recognize 75 chemical engineers for their outstanding contributions to Chemical Engineering in the Chicagoland area. Historically, chemical engineers have played significant roles that have impacted our quality of life.

Many significant developments have been pioneered by chemical engineers in the Chicago area. We request you to nominate them, and send us information that we can use to put together the story of these developments. Many of these chemical engineers may have retired or moved to other regions of the country. Some may still have roots in this region. Please use the attached form to nominate them. A display with a photograph and write up on each of the 75 candidates is also being planned. Your help and cooperation is deeply appreciated.

Submission Deadline for the Diamond Jubilee Celebration Nomination Forms is December 31, 1999. Please contact Rebecca Abshire with questions. Phone (312) 795-6987 or E-mail [Rebecca\\_Abshire@doyen.com](mailto:Rebecca_Abshire@doyen.com).

**NOMINATION OF CANDIDATE FORM IS ENCLOSED**  
(on reverse side of heat transfer fax back form)

### AICHE - CHICAGO GOVERNMENT INTERACTION GROUP

*By Bill Palm*

Local, state, and federal legislators and regulators write and enforce laws that impact—directly and indirectly—your personal and professional lives. Examples include air and water quality, toxic waste cleanup, R&D funding, hazardous waste, energy use, and reform of tax, pension and liability laws. Clearly,

members have a vested interest in better public policy, and helping shape policy can be rewarding.

It is widely argued that many technology and environmental laws and regulations are weak on engineering and scientific fundamentals, and with good reason. Very few elected officials or their staff have technical backgrounds, and too few scientists and engineers make a sufficient effort to provide their knowledge and insight. Given that elected officials respond to their constituents more than anyone else, and that AIChE members are looked to for nonpartisan technical input, making a favorable impact is largely a matter of forming a coherent message and opening a dialogue with key legislators or regulators.

In an effort to ensure that chemical engineers' voices are heard in public policy debates, AIChE's Government Relations Committee established the Catalyst grassroots advocacy program, which encourages AIChE members nationwide to contact their Members of Congress or other federal officials on legislative and regulatory issues important to AIChE members. Catalysts receive action alerts periodically requesting that they contact (normally by e-mail) key federal officials in support of AIChE's position on a pending policy issue.

The Catalyst program encourages individual members nationwide to write their U.S. Representatives and Senators or key administration officials in support of AIChE policy positions that affect chemical engineers. AIChE Catalysts receive action alerts periodically from the Government Relations office prior to key congressional or administration actions. These alerts provide the background and status of the issue, how it affects chemical engineers, AIChE's position, contact information and a suggested draft letter.

The Chicago Section Government Interaction Group needs your support. There are two ways you can help: 1.) Sign-up to be a Catalyst member and write your legislature and 2.) Let



me know your interests and areas of concern so AIChE-Chicago can make an impact on the local, state and federal legislature.

You can sign up to be a Catalyst member via the AIChE web site ([www.aiche.org/docs/government/catalyst.htm](http://www.aiche.org/docs/government/catalyst.htm)) or you can contact me at the address below and I can enroll you.

As for your interests and concerns, please feel free to contact me to discuss ways we can address current issues. Some of the current topics of AIChE (National) interest include Federal Funding of Research & Development, Fully Portable Retirement Plans, Global Climate Change, Research and Experimentation Tax Credit, Right-to-Know and Superfund.

You can reach me by mail at Rich Products Manufacturing Corporation, 6200 Mulford Street, Niles, IL 60714; by phone (847) 581-1749 x-235; or via email at [wpalm@rich.com](mailto:wpalm@rich.com).

## ALL DAY HEAT TRANSFER SEMINAR

*Please indicate your interest in this seminar by completing and faxing back the enclosed form.*

**Venue:** UIC Campus, Chicago

**Date:** February 8, 2000

**Sponsors:** AIChE Chicago, AIChE (Student Section), UIC, Chicago, and ASME Chicago

### Topics:

- Fundamentals
- Design issues (selection, metallurgy, approach temperature etc.)
- Pinch Technology
- Numerical Methods
- Expert Systems
- Neural Networks
- Chip Fabrication
- Operations and Troubleshooting
- Unusual Exchangers
- Vendor Presentations

### Confirmed Speakers:

- Fernando Aguirre from HTRI on Heat Exchange Simulation
- Paul Anderson from UOP LLC. on Pinch Technology
- Bennat Drazner from Alfa Laval

- C. B. Panchal from Argonne National Labs on Fouling Mitigation

## JOBS BULLETIN

OCTOBER 1999

Thanks to Roger Masson, we now have the opportunity for companies to attract our super AIChE members. When our members submit their resumes to the Job Posting Committee, we will publish recaps on the web and in the Newsletter. We will try to monitor confidentiality; it would be embarrassing to apply for one's own job. Send in your resumes if you are looking to change jobs. Tell your companies of our service!

**S0004 Process Professional:** A highly motivated technical professional with an advanced Chemical Engineering degree and more than twenty years experience in the areas of Process Development, Applied Research, Design and Plant Process Engineering. Well organized and detail oriented Strong analytical skills provide the ability to generate creative and workable solutions to problem situations. Able to break problems down to their basics, analyzing them and devising innovative, workable solutions. Multi-industry experience; prefer Chicago area but willing to relocate.

Send job announcements to:

AIChE JOB POSTING COMMITTEE*	
Gerald Bard Matthew Benjamin & Bard W799 Myrtle Road Genoa City, WI 53128 (414) 279-6394 Fax (414) 279-7851 <a href="mailto:geraldb102@techheadnet.com">geraldb102@techheadnet.com</a>	Larry Feder P&I Consulting 1699 Wall Street Mt. Prospect, IL 60056 (847) 734-5400 Fax (847) 734-5406 <a href="mailto:lfeder@sprynet.com">lfeder@sprynet.com</a>
William Palm 6200 Mulford Niles, IL 60714 (847) 581-1749 Fax (847) 581-1764 <a href="mailto:wpalm@rich.com">wpalm@rich.com</a>	N. Sankaran UOP 25 East Algonquin Rd Des Plaines, IL 60017 (847) 375-7893 Fax (847) 391-2758 <a href="mailto:nsankara@uop.com">nsankara@uop.com</a>



<u>Position</u>	<u>Individual</u>	<u>Company</u>	<u>Phone</u>
Chair	Rebecca Abshire	Doyen & Associates	(312) 795-6978
Chair-Elect	Suzette Wick	Dedert Corporation	(708) 747-7000
Vice-Chair Program	Shel McGee	Duke Engineering & Services	(847) 940-2049
Treasurer	Allan Fluharty	CP Hall Company	(708) 594-5959
Secretary	Ganesh Venimadhavan	UOP	(847) 391-1322
Past Chair	Gloria Fountain	Unilever HPC USA	(773) 292-8044
Academic Liaison	Linda Broadbelt	Northwestern University	(847) 491-5351
	G.A. Mansoori	UIC	(312) 996 5592
	Fouad Teymour	IIT	(312) 567-8947
	Catherine Zimmerman	BP-Amoco	(630) 420-4390
Awards & Nomination	Shannon Brown		(630) 369-8145
Constitution & Bylaws	Victor Justes	Superior Engineering	vjustes@centurion.flash.net
Continuing Education	John Forgac	BP-Amoco	(630) 420-4960
Directors At Large	Dana Parker	IRI	(312) 454-4895
	Hemant Dandekar	UOP	(847) 391-3641
	Bill Palm	Rich Products	(847) 581-1749
Government Interaction	Shelby Miller	Argonne National Laboratory	(630) 252-7552
Government Liaison	George Jarvi	Clark Refining	(708) 385-5000
House	Bill Sandstrom (chair)	US EPA	(312) 886-6028
IL Engineering Council	Jeff Perl	Chicago Chem Consultants	(312) 226-2436
	Dan Reuben	Fluid Equipment	(847) 392-9082
Industrial Liaisons	Steve Geller	Environment	(630) 627-0200
Job Posting	Gerald Bard	Matthew, Benjamin, & Bard	(414) 279-6394
Meeting Programs	Suzette Wick	Dedert Corporation	(708) 747-7000
	Shel McGee	Duke Engineering & Services	(847) 940-2049
Membership	Kimberly Worthington	City of Chicago, Dept. of Env.	(312) 744-4034 kah@interaccess.com
Public Relations	Richard Cartwright	Handex	(630) 527-1666, ext 14
Publicity	Ralph Iovinelli (chair)	Landrum & Brown	(312) 491-4273 riovinelli@landrum-brown.com
	Mark Kuehne	NL Chemical Technology	(847) 824-2888
	Lisa Alexander		(815) 356-7543
Sponsorship	Phil Lindahl		(847) 296-2193
Student Outreach	Annette Johnston	Abbott Labs	(847) 935-5120
Special Projects	Alan Zagoria	UOP	(847) 375-7335
Thiele Award	James Simnick	Amoco Research	(630) 420-5936
Webmaster	Roger Masson	Chicago Chem Consultants	(312) 226-2436

### TEN SUREFIRE EXCUSES FOR MISSING WORK:

1. Interview for another job.
2. Busy stalking previous boss.
3. Trouble finding clean underwear.
4. Up all night thinking about work.
5. Spent inordinate amount of time looking in mirror.
6. My Father said I would never amount to anything and this morning I decided to finally believe him.
7. "That's a personal issue and if you pursue it any further I'll retain counsel and sue."
8. I'll never eat at "Discount Sushi Depot" again.
9. I seem to have contracted some attention-deficit disorder and, hey, how about them Cubbies?
10. I am stuck in the blood pressure machine down at the Osco Drug.

### ANSWER TO SEPTEMBER BRAIN TEASER

The Norwegian drinks water and the Japanese owns the zebra.

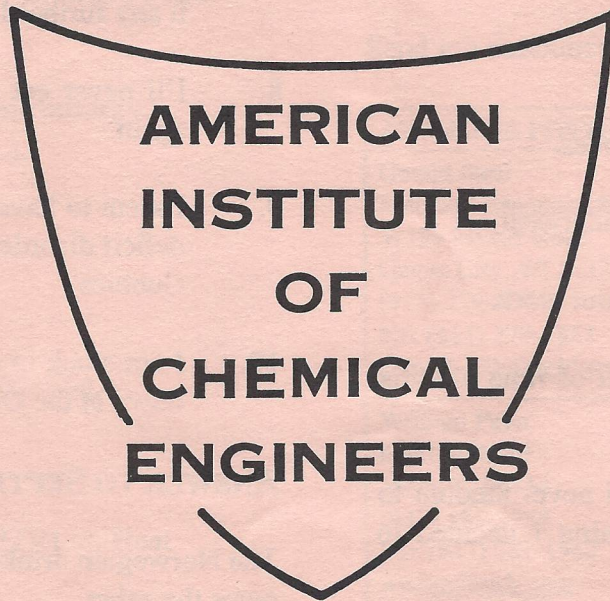


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**NOMINATION OF CANDIDATE TO BE HONORED AT  
THE DIAMOND JUBILEE CELEBRATIONS:  
STEPPING INTO THE 21<sup>ST</sup> CENTURY  
CHICAGO SECTION OF AIChE**

1. Name, Current Address and Phone number. Please check if unknown   
(If current address or phone number is unknown, can you suggest how the candidate can be contacted? Please include a photograph of the candidate, if available.)

2. Education of the Candidate

List all graduate and undergraduate degrees. If no degree, please check

College or University & Location	Degree	Major	Mo. & Yr. Degree Received

3. Was candidate a member of the Chicago section of AIChE? Yes  No

4. Was the candidate an active member of the local section? Yes  No

5. Candidate should have made a significant contribution as an

Educator  Researcher  Engineer in Industry  Engineer in Government

Provide a description of the candidate's contribution. Use a separate sheet and attach to form (Significant contributions should be based on process or product developments, project leadership, managerial achievement in bringing engineering efforts to fruition, the educating of engineers, technical publications, patents, or theoretical developments. Significant contributions may also include policy/research initiatives and development of engineering/environmental standards that had an impact on the quality of life.)

6. Please provide information on Candidate's

- ◆ Years of Chicago Area Activity
- ◆ AIChE Chicago Section Participation
- ◆ AIChE National Participation

7. Any other references or information that may help evaluate the proposed candidate.