

**Q&A AND
TECHNOLOGY FORUM
ADVANCE PROGRAM**

REFOCUS, REIMAGINE, REASSURE
MARRIOTT WATERFRONT BALTIMORE
SEPTEMBER 26 – 28, 2016



2016

Sunday September 25, 2016

- 3:00 pm – 6:30 pm Registration – Badge Pick-up
- 5:00 pm – 5:30 pm Emerging Leaders Networking Event
- 5:30 pm – 6:30 pm Q&A Kickoff Networking Event

Monday September 26, 2016

- 7:00 am – 6:30 pm Registration
- 8:00 am – 8:55 am **General Session**
 - Presentation of the Lifetime Service Award
 - Keynote Address
- 9:00 am – 12:00 pm **Plant Automation: Alarm Management**
 - Developing Your Alarm Philosophy Document - Foundation for a Successful Alarm Rationalization and Management Program
 - Alarm Management - Seven Steps in 30 Minutes
 - Alarm Management and Cultural Change

Principles & Practices: Emerging Leaders Town Hall

Q&A: Gasoline Processes

Panelists: *Eddie Habibi*, Plant Automation Services, Inc. *Steve Philoon*, UOP LLC – A Honeywell Company
Matthew Hutchinson, Axens North America *Ken Rhodes*, Marathon Petroleum Corporation
James Kleiss, Valero Energy Corporation *Bruce Varley*, Total Petrochemicals & Refining USA

This session will be split into two sections. The first half will be the traditional Q&A session, and the second half will be a town hall-type discussion.

- 12:00 pm – 2:00 pm Lunch in Exhibit Hall
- 2:00 pm – 3:30 pm **Plant Automation: Supply Chain and Optimization**
 - Processing Opportunity Crudes - Processing Heavy Crude Oils
 - A Novel Approach to Intermediate Stream Pricing for Real-Time Optimization
 - Establishing the Resilient Supply Chain Optimization Process
- 2:00 pm – 5:15 pm **Principles & Practices: Gasoline Processes**
 - Solutions for Producing Higher Octane Gasoline
 - Discussion: What Is the Industry Doing to Get Ready for Tier III?
 - Gasoline Blending Strategies
 - Better Plants Program

Q&A: Hydroprocessing

Panelists: *Subhasis Bhattacharya*, Chevron Lumms Global *Jeffrey Mueller*, Marathon Petroleum Corporation
Patrick Gripka, Criterion Catalysts & Technologies *Chad Perrott*, ExxonMobil Chemical Co.
Andrew Layton, KBC Advanced Technologies, Inc. *Joseph Rydberg*, CITGO Petroleum Corporation

- 3:45 pm – 5:15 pm **Plant Automation: Software Applications**
 - Eliminating Difficult to Control Processes with Procedural Automation
 - The Cloud Is Here for Smart Manufacturing
 - Big Data Analytics Applied to Real-World Control Systems - From Instruments to Advanced Controls
- 5:15 pm – 6:30 pm Reception in Exhibit Hall

Tuesday September 27, 2016

- 7:00 am – 5:00 pm Registration
- 8:00 am – 12:00 pm **Principles & Practices: Hydroprocessing**
- Q&A: Crude/Vacuum Distillation & Coking**
- Panelists: *Ranier Bass*, HollyFrontier Corporation *Maji Shyama*, Essar Oil Limited
Ram Mallik, Fluor Corporation *Jay Steiner*, MERRICK & Company
Pete Sharpe, Emerson Process Management *Bruce Wright*, Baker Hughes Incorporated
- This session will be split into two sections. The first half will be the traditional Q&A session, and the second half will be a town hall-type discussion.
- 8:00 am – 10:00 am **Cybersecurity Day: General Session**
- Keynote: *Eric Cornelius*, Director of Critical Infrastructure and Industrial Control Systems, Cylance, Inc.
 - Panel on Information Sharing
- 10:15 am – 12:00 pm **Cybersecurity Day: General Session**
- Legal Risks from Cyber-Threats in the Energy and Transportation Sectors
 - NSA's Role in Cybersecurity, ICS, and the Significance to the Petrochemical Sector
- 12:00 pm – 2:00 pm Lunch in Exhibit Hall
- 2:00 pm – 3:30 pm **Cybersecurity Day: General Session**
- The Anatomy of Industrial Cyber Attacks
 - How to Know if Your Control Systems Are Secure
 - ICS Cybersecurity: You Cannot Secure What You Cannot See
- 2:00 pm – 5:15 pm **Principles & Practices: Crude/Vacuum Distillation & Coking**
- Q&A: FCC**
- Panelists: *Zach Bezon*, United Refining Company *Eric Thraen*, Flint Hills Resources, LP
Luis Bougrat, UOP LLC – A Honeywell Company *W. Lee Wells*, Houston Refining, LP
Phillip Niccum, KP Engineering, LP *George Yaluris*, Albemarle Corporation
- 3:45 pm – 5:15 pm **Cybersecurity Day: General Session**
- Integrating Process Safety with Cybersecurity
- 5:30 pm – 6:30 pm Women in Refining Reception
Reception open to registered women only.

Wednesday September 28, 2016

- 7:30 am – 10:00 am Registration
- 8:00 am – 11:15 am **Principles & Practices: FCC**
- Principles & Practices: Fostering Profitability**
- Catalyst Selection
 - No and Low Capital Project Triage through Implementation Process
 - Refinery Optimization in a Low Crude Price and Tightening Margin Environment Mini Panel
 - Crude Selection and Crude Margins
 - Inside Refinery Optimization
 - Lessons Learned from the Past
- 8:00 am – 11:30 am **Cybersecurity: Cyber Attack! All Hands on Deck!**
- A hands-on cybersecurity “Capture the Flag” team training exercise.
Sponsored by Booz Allen Hamilton, Inc. / Attendance to this function is limited

In a constantly changing environment what can you do to remain **relevant**? How can you and your company be **profitable** and **sustainable**? These are the questions being asked as depressed crude prices continue to challenge the industry. Flexibility, value, reliability, and improvement are key factors to ensure success in this market.

The theme for the 2016 Q&A Technology forum is **“Refocus, Reimagine, Reassure.”**

- Refocus – Listen to the market, adapt accordingly, manage costs, and capture opportunities to drive profitability
- Reimagine – Use flexibility and creativity to continuously improve and provide stability in a changing market
- Reassure – Foster a positive culture and establish and sustain best practices.

If you are looking for answers to these fundamental issues, then the 2016 Forum can help. Program includes:

- Four open Q & A and discussion sessions
- Six Principles and Practices sessions
- A full day of Plant Automation presentations
- A full day of Cybersecurity topics
- A hands-on Cybersecurity exercise
- Over five hours of unopposed time to explore goods and services in the Table Top Exhibition

It is the perfect environment for an open exchange and to share ideas.

The primary goal of the Q&A and Technology Forum is to develop and support the next generation of technical leaders within the industry in addition to the outstanding technical information exchange that occurs at the meeting. We hope that attendees will learn and engage in the Forum and in turn provide benefit to their organizations through

the knowledge exchange and the development of professional networks. Interaction with presenters and panelists, supplier organizations, industry experts, and peers directly fuels the growth and abilities of attendees.

Today's dynamic and competitive refining environment requires attention to optimization, efficiencies in operations and production, and world class technology and innovation to drive profitability. The shared knowledge and experience of the refiners, petrochemical producers, catalyst and chemical suppliers, plant automation specialists, cybersecurity subject matter experts, process licensors, engineering firms, and other industry experts at the 2016 Q&A and Technology Forum can help guide you toward safely and profitably optimizing the assets and resources you are employing today and developing the next generation of technical leaders.

Q&A Sessions

Industry experts from refining companies and other technology specialists will respond to the selected questions and then engage the attendees in a discussion of the relevant issues. The questions for the Q&A panel are organized into four Operations & Technology sessions:

- Gasoline processes (alkylation, isom, NHT, reforming; Tier III and open town hall discussion following question and answer session), Discussion Session subjects” TOPIC 1: Are there new drivers for reformer catalyst selection and determination of changeout timing? TOPIC 2: What are the strategies for maximizing CCR unit turnaround cycle length? Is a ten-year cycle possible? TOPIC 3: How are refiners managing naphtha oversupply, Tier III gasoline requirements, and increased octane demand?);
- Hydroprocessing (safety, operations, profitability, resid hydrocracking, mid hydrocracking, hydrocrackingII);
- Crude/vacuum distillation and coking (safety, crude, coker; town hall discussion following the question and answer session: Discussion Session TBD);
- Fluid catalytic cracking (FCC) (conversion, lab, emissions, inspection, rotating equipment, catalyst Rg-Rx, maintenance, inspection, corrosion, exchangers).

In the course of responding, the panelists will cover:

- Success – Fostering leadership to drive profitability in this changing market.
- Safety and Reliability – Protecting our co-workers, neighbors, and facilities is our first priority.
- Operations – Common (and uncommon) operational problems and how to solve them.
- Technology – Identifying the best technology and applying it appropriately to improve the bottom line.

The Questions

(Click [here](#) to view the questions)

Each of these topics is important to the industry and the panel-led discussion will provide valuable guidance in driving profitability, operating safely, solving technical and operational challenges, improving the bottom line, and attaining excellence.

Others in the industry have confronted and solved the problems that you face right now. The AFPM Q&A and Technology Forum is the best place to find those people, whether panelists, technology vendors, or other attendees.

Principles & Practices Sessions

The Principles & Practices (P&P) sessions are discussion-oriented sessions, primarily designed for those whose overall operating experience is less than 15 years. The P&P sessions will complement the information exchange that occurs in the Q&A sessions. Each of the sessions will address the fundamentals of good operation, profitability, and the foundational principles for the technologies that are commonly employed. These sessions will usually have short presentations followed by a time where attendees can ask further questions or present their own particular problems and benefit from the collective experience of the other attendees. The six P&P sessions address:

- Crude/Vacuum Distillation and Coking Topics
- Fluid Catalytic Cracking (FCC) topics
- Gasoline Processes topics
- Hydroprocessing topics
- Fostering Profitability
- Emerging Leaders Town Hall

Plant Automation and Decision Support

The Plant Automation and Decision Support sessions are for attendees whose responsibilities overlap between process engineering, unit operations, process control, and planning. This "conference within a conference" will have its own program and will provide a comprehensive array of topics for plant automation professionals. Paper topics are listed in the schedule of events.

Cybersecurity Day

The Cybersecurity Day sessions are for those who work in information technology and/or industrial control/SCADA systems. The day starts with a featured speaker presentation on cybersecurity and the industry followed by a panel on CISA. Presentation titles are listed in the schedule of events.

Unlike other cybersecurity conferences and workshops, Cybersecurity Day is designed so that those in the refining and petrochemical industries who work in cybersecurity and those who are affected by cybersecurity can hear presentations from cybersecurity subject matter experts from the refining and petrochemical industries.

Conference registrants will be able to attend any session of their choosing in the Cybersecurity Day, Plant Automation or Q&A sessions.

Table Top Exhibition

The Table Top Exhibition will showcase catalyst, chemical, and technology providers, engineering companies, licensors, and other industry suppliers in one convenient location. These companies are valuable resources in solving plant problems and improving performance. Attendees will have over 5 hours of exhibit hall time with lunch both Monday and Tuesday being served in the exhibit hall, as well as the reception on Monday evening. This time will offer an excellent opportunity to network with others and focus on your plant's particular needs.

The Answer Book

All attendees are encouraged to respond to the selected questions. The Q&A Answer Book allows you to incorporate visual aids and lengthy or highly technical comments into a response. The Answer Book will complement the session discussion and provide more depth on certain topics. Prior to the conference, a digital version of the Answer Book will be available to conference attendees on the Q&A Meeting App and My Meetings link

of the AFPM website (use your registration ID and password to access conference publications).

To have your answers included, submit them no later than August 29, 2016. This will allow time for AFPM to prepare the answers for distribution.

Please use the following format:

- Identify yourself, your company, and the session and question number to which you are responding;
- Provide a contact name, phone number, and/or email address in case there are questions about your response.

You may submit your responses via e-mail to Answerbook@AFPM.org

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Clariant Corporation

Technical Session AV-Hydroprocessing
Haldor Topsoe, Inc.

Conference Bags
Sabin Sheet Metal

Monday Morning Networking Break
SNC-Lavalin

1. Conference Registration

Log on to www.afpm.org and click "Register Now" or complete the enclosed registration form. Full registration includes admission to the general and breakout sessions, the luncheons on Monday and Tuesday in the exhibit hall, and the Monday evening reception in the exhibit hall. You'll save \$100 off full conference registration if you register by August 26!

2. Hotel Reservations

Save an additional \$200 off full conference registration by reserving your room through AFPM. Reserve your hotel on-line when you register at www.afpm.org and receive an immediate acknowledgement of your reservation. Or, fill in the appropriate space on the enclosed registration form. Hotel reservation requests will be processed in the order received by AFPM. Get immediate acknowledgement on-line but allow 1 week if submitted to AFPM. If a reservation is subsequently cancelled, you will be invoiced for the discount that had been applied.

Hotel Cancellation Policy – Cancellations must be made 24 hours prior to your arrival date to avoid a cancellation charge. Cancellations made within the 24 hour window will be charged fees equal to one (1) night's stay plus tax.

3. Spouse Registration

For just \$100, your spouse may join you at the Monday evening reception as well as the included sessions.

4. Payment

Pay by credit card. AFPM accepts American Express, MasterCard, and Visa.

5. Table Tops or Meeting Space

Contact Katharine Nessler at 202.457.0480 or email at knessler@afpm.org.

6. Confirmation

Your registration will be confirmed via e-mail if you provided us your email address.

7. Sponsorships

Show your support for the industry. Contact Colleen Van Gieson for sponsorship opportunities at 202.457.0480 or sponsorships@afpm.org.

8. Attire

Business Casual (No tie; jacket optional)

Cancellation Policy:

Registration cancellations must be submitted in writing and faxed to 202.835.0467 or e-mailed to QA@afpm.org. Substitute conference registrations may be made in advance or on arrival with no penalty, and may be submitted in writing to QA@afpm.org or processed on-line by the individual who input the original registration.

Cancellations may be made by August 26, 2016 with no penalty. Written cancellations postmarked, faxed, or emailed between August 27 and September 9, 2016 will receive a refund of fees, less a \$50 processing fee. No refunds after September 9, 2016. No telephone cancellations.

Fee Policy / Eligibility for rates:

Member Fee – The member rates is based on membership information currently on file with AFPM. If your company is not currently a member, the non-member fees will be charged to your credit card.

Local Fee – Eligibility for the local fee is limited to those who will be commuting from home to the conference each day.

Fee Structure

In order to encourage AFPM attendees to use the contracted hotel block at the Baltimore Marriott Waterfront, a tiered registration fee structure will be in effect. Registrants occupying a hotel room in the AFPM block will pay a discounted registration fee \$200 less than those registrants who choose to stay outside the block or at an alternate hotel. Registrations received after the hotel cut-off date will not be eligible for the registration discount. Local commuter registrants, of course, will receive the discounted registration fee.

Registration Policy

Those who are present at the site of an AFPM meeting and/or occupy a hotel room in the AFPM room block to conduct business with industry personnel gathered for that meeting are expected to register for that meeting and pay the registration fee, whether or not they attend a specific function.

Spouse/Guest Policy

A guest is a spouse/significant other, friend or an adult child (18 years old or older) who is not in an industry-related occupation. A co-worker, an associate or spouse who works within the industry may not use the Spouse/Guest Registration category. Guests are not permitted to work the table top exhibit. Children under 18 are not permitted in the exhibit hall.

No Suit-casing Please

Please note that while all meeting registrants are invited to the exhibition, any non-exhibitor registrant who is observed to be soliciting business in the aisles or other public spaces, in another company's booth, or in violation of any portion of the AFPM Exhibition Policy will be asked to leave the show floor. Please report any violations you may observe to show management.

Photo Release

By registering for this conference, I hereby grant AFPM, its licensees and assigns, the right to use my name, biographic material, as well as, photos, or videos taken of me during the conference in news media, websites, publications, programs, articles, and/or marketing materials.

Ethical Responsibility and Professional and Personal Conduct Code

The American Fuel & Petrochemical Manufacturers (“AFPM”) has adopted the following “Ethical Responsibility and Professional and Personal Conduct Code” (hereinafter, “the Code”). Every member of AFPM, their designated representatives, and non-member attendees at all AFPM meetings and forums agree to abide by the Code as a condition of membership in AFPM and attendance and participation at AFPM meetings and forums.

The Code requires the following of all individuals attending AFPM meetings and forums:

- Adherence to the AFPM bylaws and the AFPM policies and procedures, as adopted by AFPM’s Board of Directors.
- Strict compliance with federal antitrust laws.
- Adherence to all applicable federal and state laws.
- Maintenance of the highest level of professional and personal ethical behavior while attending AFPM meetings and forums.
- Prevention of certain behaviors, including harassment, violence, intimidation and discrimination of any kind involving race, color, religion, national origin, gender, sexual orientation, age, disability or, where applicable, veteran or marital status.
- Assurance that conduct at all times and in all professional and personal dealings with each other and other attendees is with the highest level of integrity and courtesy.

- Sharing of knowledge and expertise as speakers at AFPM educational events and sessions whenever practicable, without soliciting or explicitly promoting their own organization’s products or services.
- Working to instill public and consumer confidence in the petrochemical and refining industries, its member companies, and its professionals, avoiding any action conducive to discrediting members of AFPM.
- Refraining from scheduling general attendance meetings, receptions or other events at times that conflict with substantive programming or social events at AFPM meetings without express written permission of AFPM.

Failure to abide by the Code may result, for the first offense, in informal censure of a company or individual by the AFPM Executive Committee. If violations of the Code continue after such an informal censure, a company may be subject to expulsion from AFPM, or an individual to exclusion from participation in AFPM activities, by the Board of Directors.

Entertainment Policy

We ask your cooperation in observing Association policy on activities held in conjunction with any AFPM meeting:

- Meetings or social activities should not be scheduled that take registrants away from AFPM programs and AFPM-sponsored activities;
- Any company sponsoring a function to which 25 or more people are invited should outline its plans for advance approval by AFPM. In general, such functions will be approved if they do not unduly take registrants away from AFPM-sponsored activities;
- All representatives of companies sponsoring hospitality activities are expected to register for the meeting;
- Hospitality suites are expected to close by 1:00 a.m.;
- Food, beverage and service personnel (bartenders, hostesses, etc.) must be obtained through the hotel catering department;
- Suite promotional activities are to avoid the use of elaborate entertainment, expensive door prizes, suite attendance solicitation by individuals who are not full-time employees of the sponsoring company, or other similar activities.

REGISTRATION FORM: QA16

REGISTER ON-LINE AT WWW.AFPM.ORG

Register by August 26th – Save \$100.

Save \$200 by reserving a room in the AFPM room block.

Step 1: Attendee Profile

Please fill out completely. Badges will be printed from this information.

Name _____
Title _____
Company _____
Address _____
City _____ State _____ Zip _____ Country _____
Phone (Area/Country/City Code) _____ Fax (Area/Country/City Code) _____
E-mail _____

This is not a permanent address change.

Spouse/Guest Name (if attending) _____

Check here if you require any special services.
Please attach a description of your needs.

Step 2: Meeting Registration

SAVE \$200 OFF CONFERENCE REGISTRATION FEES BY BOOKING A HOTEL ROOM THROUGH AFPM

Full Registration

		By Aug 26	After Aug 26
<input type="checkbox"/> Member	\$ 900	_____	\$1000 _____
<input type="checkbox"/> Non-Member	\$1500	_____	\$1600 _____
<input type="checkbox"/> Spouse/Guest	\$ 100	_____	\$ 100 _____

Please check this box if you qualify for the [local fee](#).

One-day Passes

		By Aug 26	After Aug 26
<input type="checkbox"/> Member Monday	\$ 550	_____	\$ 600 _____
<input type="checkbox"/> Member Tuesday	\$ 550	_____	\$ 600 _____
<input type="checkbox"/> Member Wednesday	\$ 375	_____	\$ 400 _____
<input type="checkbox"/> Non-Member Monday	\$ 850	_____	\$ 900 _____
<input type="checkbox"/> Non-Member Tuesday	\$ 850	_____	\$ 900 _____
<input type="checkbox"/> Non-Member Weds.	\$ 500	_____	\$ 525 _____

Wednesday, Sept. 28

Cybersecurity Exercise* \$ 0 _____ \$ 0 _____

Total Amount Due

Name of Member Company _____
Not sure if your company is a member? Go to www.afpm.org

*Attendance for Cyber Exercise is limited. Registration forms will be processed in the order received.

Step 3: Payment Information

Payments to AFPM are not deductible as charitable contributions for federal income tax purposes. However, they may be deductible under other provisions of the Internal Revenue Code.

VISA MasterCard American Express

Credit Card Number _____ Exp. Date _____
Name on card (please print) _____
Billing Address _____
City _____ State _____ Zip _____ Country _____

Signature (Required, authorizing charge & acknowledging cancellation/refund, fee, registration, spouse, & other policies.) Click [here](#) to review AFPM policies.

Step 4: Hotel Reservation

Hotel Reservation requests must be accompanied by paid conference registration to be processed. Room Rate is \$218 Single/Double occupancy at the Baltimore Marriott Waterfront Hotel, 700 Aliceanna Street, Baltimore, MD 21202.

Arrival Date _____ Departure Date _____

If no dates are indicated, we will assign arrival Sunday, September 25 and departure Wednesday, September 28.

Room Type: One Bed Two Beds
Number of People in Room: _____
Special Requests: Disability Other
Room Guarantee: AMEX VISA
 MasterCard Discover Diners

Credit Card Number _____ Exp. Date _____
Signature _____
Name on Card _____
Frequent Guest Number _____

Register on-line to receive immediate acknowledgement of hotel. August 26 is the final cut-off date to reserve a room. Contact the hotel directly with changes or cancellations beginning September 5, 2016.

Register by Fax:

Register by fax with credit card information to 202.835.0467.

Register by Mail:

AFPM
1667 K Street, NW
Suite 700
Washington, DC 20006