Advanced Aromatics, LP Afton Chemicals Corporation Air Products and Chemicals, Inc. Albemarle Corporation Alon USA, LP American Re aroup, Inc. Arkema Ashland, Inc. Baker Petrolite Corporation Basell North America BASF Corporation BAYER BOC GROUP Border Refinit bany BP Chemicals BP p.I.c. Cabot Corporation Calcasieu Refining Company Calumet Lubricants Celanese Ltd. Chevron Corporation Che Phillips Chemical Company LP CHS Inc. CITGO Petroleum Corporation Coffeyville Resources LLC ConncoPhillips Countrymark Co-op Ast Criterion Catalysts & Technologies Cross Oil Refining & Marketing, Inc. Cytec Industries Delek Ir **San Diego, CA** on The Dow Chemical bany E.I. DuPont de Nemours & Co. Eastman Chemical Company Enterprise Products Ergon, Inc. Exxon Mobil Corporation ExxonMobil C Co. Flying J Inc. Formosa Plastics Corporation, USA Frontier Oil Corporation Gary-Williams Energy Corporation GE Plastics GE Water & P Fechnologies Georgia Gulf Giant Industries, Inc. Grace Davison Hess Corporation Holly Corporation Honeywell Inc. HOVENSA LLC Hunt F Company Huntsman Company LLC INEOS Kinder Morgan Koch Industries Lion Oil Company Lubrizol Corporation Lyondell Chemical Com-YONDELL-CITGO Refining, LP Marathon Petroleum Company LLC Merichem Company Montana Refining Company Motiva Enterprises Murphy Oil USA, Inc. Nalco Company National Cooperative Refinery Assoc. NOVA Chemicals Corporation Occidental Chemical Corporation Chlor Alkali Products Pasadena Refining System, Inc. Placid Refining Company PPG Industries, Inc. Rohm and Haas Company Safety-Kle Corporation Sasol North America Shell Chemical Company Sinclair Oil Corporation Solutia Inc. Sonneborn, Inc. South Hampton Resources Chemicals Suncor Energy Inc. Suncoo Inc. Tesoro Corporation Texas Petrochemicals LP TOTAL Trigeant, Ltd. U.S. Oil & Refining Co. UOI //alero Energy **106th NPRA** Annual **Meeting** ng Company Westlake Chemical Corporation Williams Energy Servic

ing Refining Company ASAHI KASEI AMERICA, INC. Bharat Petroleum Corporation Limited Borealis Polymers b., Ltd. China Petrochemical Technology Co. Consumers' Co-operative Refineries Ltd Cosmo Oil Company, Ltd. NI S.p.A. EQUATE Petrochemical Company Grupo Idesa Idemitsu Chemicals U.S.A. Corp. Indian Oil Corporation uimica S/A Iraq Ministry of Oil Irving Oil Limited Itochu Chemicals America Inc. Japan Energy Corporation Kochi nerica Corporation Methanex Corporation Mitsubishi International Corp. Mitsui & Co., Ltd. Neste Oil Corporatio Marketing GmbH Petkim Petrochemical Holding A.S. Petro-Canada Petroiam Limited Petroleo Brasileiro S.A. P

Polimeri Europa Americas, Inc. Reliance Industries Limited Rhodia, Inc. SA RELENIS Industria de Polimeros, SA SK Corporation Sumitomo Corporation Chejiang Yisheng Petrochemicals Co. A.T. Kearney, Inc. ABB Lummus Mar Corporation Aker Kvaerner Inc. Akzo Nobel Polymer Chemicals Alfa La San and, Inc. Ambitech Engineering Corporation Aramco Services Compar Mar LC Aspen Technology Inc. Atlantic Industrial, Inc. Atlantic Methanol Produc ble Energy Axens North America BAKER & O'BRIEN Barnes and Click, In Becht Engineering Bechtel Corporation Belco Technologies Corporation Be Bouchard Transportation Co., Inc. Brand Services Brenntag North America,

Manchester Grand Hyatt San Diego, California March 9 – 11, 2008

ries, Inc. OHYXE Energy International OSIsoft Pall Corporation Parpinelli Techon PCI Consulting Group PCS Sales Pennwell Corporation mance Contractors, Inc. Perstorp Specialty Chemicals Peter Kiewit Sons, Inc. PetroLogistics LLC Pilko & Associates, Inc. Pioneer America Plant Automation Services, Inc. Platts Porous Media Pratt & Whitney Rocketdyne, Inc. Praxair Inc. Primavera Systems, Inc. Process Consu Services Inc. Process Dynamics, Inc. Procter and Gamble Chemicals Protherm Services Group, L.L.C PRTM Management Consultants PS & Gertz, Inc. Recochem Inc. Recon Refractory Engineering & Const. R. E. Davis Chemical Corporation Reichhold Chemicals, Inc. Reliabilit agement Group Reliability Solutions (RSI) RENTECH Boiler Syster & Services, Inc Repcon, Inc. RETEC RMT Roddey Engineering Servi RSC Equipment Rental S&B Engineers and Constructors Ltd. Services, Inc Repcon, Inc. RETEC RMT Roddey Engineering Servi Corporation Schlumberger SCS Energy LLC Seadrift Coke LP Security Services USA Inc. Severn Trent Laboratories, Inc. SGS S Petroleum Service Corporation Shaw/Stone & Webster SI Group, Inc. Semens Applied Automation, Inc. SmartSignal Corporation Smithco ng, Inc, Snamprogetti S.p.A. SNC-Lavalin GDS, Inc. Sojitz Corporation NPRA a Solomon Associates, Inc. Southern Chemical Corporatio Specialty Polymers, Inc. Spiral Software Limited SPX Cooling Technologies SRI Consulting Stancil & Co. STARCON International Inc. Stolt Fransportation Group STRATCO GLOBAL Structural Preservation Systems, Inc. SUD-CHEMIE INC. Sulzer Chemtech USA, Inc. Summit P Schemical Trading Inc. Supresta U.S. LLC Syntex Management Systems, Inc. Systech Environmental Corporation TapcoEnpro

Your Clean Fuels Solutions

When it comes to commercially proven technology to meet increasingly stringent Clean Fuels regulations, make Grace Davison and Advanced Refining Technologies your one-stop shop for FCC catalysts, additives and hydroprocessing catalysts.

For gasoline sulfur reduction, today's refiners are challenged more than ever before to blend various refinery streams to meet stringent product specifications and government regulations for clean air. Proven in over 80 commercial units, Grace Davison's portfolio of FCC gasoline sulfur reduction technologies includes the **D-PriSM**[®] and **GSR®-5** additives and the **SuRCA**[®], **SATURN**[®] and **GSR®-7** catalyst families.

>Recently commercialized, **GSR-7** catalyst further expands our sulfur reduction technologies to continuously improve both performance and cost effectiveness. This next generation technology is a step out improvement over earlier technologies, providing 45-50% full range gasoline sulfur reduction commercially with full catalyst formulation flexibility.

>For refiners with FCC pretreaters, the **ApART Catalyst System**[™] utilizing combinations of ART AT575, AT775 and AT792 offers the opportunity to significantly increase sulfur removal in the hydrotreater while at the same time maximizing FCC feed quality. The improved performance of the pretreater results in higher gasoline potential in addition to decreasing FCC gasoline sulfur.

>For ULSD processing, the **SmART Catalyst System™** utilizes state-of-the-art catalyst technology which is staged in the proper proportions to provide the best performance, while at the same time meeting individual refiner requirements. The catalyst staging is designed to selectively take advantage of the different reaction mechanisms for sulfur removal with efficient hydrogen usage. ART CDXi, our newest generation of high activity CoMo catalyst, efficiently removes the unhindered, easy sulfur via the direct abstraction route, while ART NDXi, our high activity NiMo catalyst, then attacks the remaining sterically hindered, hard sulfur. The SmART system provides higher activity than either the traditional CoMo or NiMo catalyst alone while effectively helping the refiner manage hydrogen utilization.

> Have questions about our clean fuels technology? Contact us at **www.e-catalysts.com** or call us at (410) 531-8226. Let Grace Davison and Advanced Refining Technologies give you the custom catalytic solution to your clean fuels challenges.



106th NPRA Annual Meeting

National Petrochemical & Refiners Association

106th Annual Meeting March 9 - 11, 2008 Manchester Grand Hyatt San Diego, CA

Registration

Worthington's Foyer Sunday: 9:00 am – 8:00 pm Monday: 7:00 am – 5:00 pm Tuesday: 7:00 am – 12:00 pm

Table of Contents

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- 57 Sessions At A Glance



All events at the Manchester Grand Hyatt unless noted.

Sunday, March 9

Monday, March 10

Tuesday, March 11

12:00 pm - 4:00 pm Meet in lobby at 11:30 am

Optional Tour: Ultimate America's Cup Experience* San Diego Bay

You are one of an incredible few to have the "Ultimate America's Cup Experience." This "America's Cup" race is a safe, funfilled afternoon of yacht racing around beautiful San Diego bay in what are unquestionably the greatest racing yachts on the planet. Authentic America's Cup yachts, the "Stars and Stripes" and "Abracadabra", are the only two IACC (International America's Cup Class) yachts in the USA. One of them is the most modern "cup" yacht available to the public anywhere in the world. At 80 ft each, we give you these powerful yachts, a 'once in a lifetime' opportunity to race upon them, and ultimately very powerful bragging rights.

And that's not all. The third vessel is the legendary 139 ft schooner "America", the incredible yacht after which the America's Cup is named. In mid-bay, you'll experience three "match races", America's Cup style. San Diego is the only place in the World to conduct this event. This will likely be the highlight of your San Diego visit, and we have no doubt you'll find yourself swapping stories about your new-found skills, and the best fun you've had in a long time.

Attire: Comfortable boating attire. Wear jacket or windbreaker and rubber sole shoes. Bring sunscreen, sunglasses, and hat or visor for your comfort. Beverages provided.

1:00 pm – 3:00 pm

Issues Committee Meeting Americas Cup

3:00 pm – 5:00 pm Manufacturing Committee Meeting Americas Cup

6:00 pm - 8:00 pm

Opening Reception Pool Deck, Weather Backup – Elizabeth ABCDE

Cover photo © Shutterstock

7:30 am – 9:00 am Government Relations Breakfast* *Elizabeth F*

7:30 am – 9:00 am **Crude and Refined Products Breakfast*** *Elizabeth G*

7:30 am – 9:00 am

Lubricants and Waxes Statistics Subcommittee Meeting Gregory A

8:00 am – 9:30 am Coffee and Rolls *Elizabeth Ballroom Prefunction*

9:00 am – 1:00 pm

Spouse Tour: Coronado Mini Trek* Transportation departs from the Manchester Grand Hyatt lobby at 9:00 am

10:30 am - 3:30 pm

Spouse Tour: Zoo Keeper for a Day* Transportation departs from the Manchester Grand Hyatt lobby at 10:30 am

9:30 am – 11:30 am General Session Elizabeth Ballroom ABCDE

12:00 pm - 2:00 pm

Lubricants and Waxes Committee Meeting Gregory A

2:00 pm - 3:00 pm

Lubricants and Waxes Program Committee Gregory A

12:00 pm - 3:00 pm

Executive Committee Meeting Gregory B

2:00 pm – 5:00 pm

Issues and Technical Sessions

- Issues Elizabeth F
- Hydroprocessing Elizabeth G
- Gasoline Elizabeth H
- Synthetic Crude Oil Challenges -Manchester A
- FCC Technology Manchester B
- Process Safety Manchester C

3:30 pm – 4:30 pm

Wax Subcommittee Meeting Gregory A

7:30 am – 9:15 am

CEO Breakfast* Featuring William R. Klesse Chairman and CEO Valero Energy Corporation *Elizabeth ABCDE*

9:30 am - 11:00 am

Board of Directors Meeting Americas Cup

9:30 am - 12:00 pm

- **Issues and Technical Sessions**
- Issues Elizabeth F
- Developing CO₂ Strategies Elizabeth G
- Crude Evaluation and Distillation -Elizabeth H
- Operations Manchester A
- FCC Technology Manchester B
- Profit Improvement Manchester C

12:00 pm - 2:00 pm

Annual Luncheon* Featuring Tony Snow Former White House Press Secretary and FOX News Channel personality *Elizabeth ABCDE*

2:00 pm – 4:30 pm

Management and Technical Sessions

- Renewable Fuels Elizabeth F
- Management Elizabeth G
- Workforce Elizabeth H
- Hydrogen & Refinery Off-gas Systems -Manchester A
- Energy Economics Manchester B
- Reliability Manchester C

6:30 pm – 9:30 pm

Closing Event* Experience the USS Midway, North Harbor Drive, San Diego, CA Guests may either walk or take the shuttle bus which departs from the Manchester Grand Hyatt lobby entrance beginning at 6:15 pm

* Ticketed Function

Welcome to San Diego and the 106th Annual Meeting of NPRA, the National Petrochemical & Refiners Association! We hope you will enjoy the city's enormous beauty and experience its unique blend of cultures.

California, like the rest of the nation, believes itself to be at a crossroads when it comes to determining its energy future. In Washington, D.C., some policymakers would seemingly prefer to see the demise of the hydrocarbon, where others feel strongly that oil and gas are and will continue to be integral components of a dynamic American economy. In a rising cost environment with ever-growing demand, our nation should seek out and utilize the widest variety of fuels possible, not restrain itself by mandating a reliance on unproven technologies that are years, if not decades, away from commercial viability. The answer to enhancing energy security is not energy isolation. While security is a worthy objective, isolation is a grave economic error. For the strength of our national economy and the benefit of American consumers, our businesses must be able to compete globally.

2008, with its heated political environment, will likely prove to be equally as challenging as 2007. In the midst of these debates, we must continue to recognize and applaud the efforts of our companies' employees who have always risen to the task at hand, whether in responding to emergencies or installing new, state-of the-art equipment to increase operating efficiency and lessen a facility's environmental footprint. Regardless of the political climate and whoever is serving in elected office, our employees will continue to safely, cleanly and reliably supply fuels and petrochemical products to American consumers to meet their daily needs.

This year's Annual Meeting is worthy of NPRA's heritage in providing distinguished speakers who are proven leaders in both business and government service. Our outstanding line-up includes former White House Press Secretary and FOX News personality Tony Snow, 20/20 co-anchor John Stossel, and Stuart Rothenberg, editor and publisher of the Rothenberg Political Report.

NPRA's comprehensive technical program includes more than 80 presentations and discussions on a broad range of topics important to our industry, with a strong focus on safety, reliability, management and the workforce, and technology. New this year are sessions focusing on synthetic crude oil challenges, carbon dioxide strategies, energy economics, and process safety.

As always, our issue-oriented sessions will focus on the current political climate and major public policy decisions that impact our businesses and customers. This year's sessions will encompass discussion of RFS2 implementation, OSHA's National Emphasis Program (NEP), demographics, and grassroots advocacy.

We encourage you to take full advantage of what the sessions have to offer, but also be sure to experience San Diego's wealth of culture and activities. Thank you for your continuing support of NPRA and your participation in this year's Annual Meeting!

Message from the Chairman



James Mahoney Chairman of the Board NPRA

Executive Vice President, Operations Excellence and Compliance Koch Industries, Inc. Wichita, KS

Monday March 10, 2008

Government Relations Breakfast

7:30 am – 9:00 am Elizabeth F

Spouse Tours

9:00 am – 1:00 pm or 10:30 am – 3:30 pm

9:00 am – 1:00 pm

Spouse Tour: Coronado Mini Trek*

Coronado began in 1886 as one of the great playgrounds of the world, drawing Presidents and princes, moguls and movie stars to its shores. Coronado's past, full of fabulous homes and famous memories, is still very much a part of San Diego's life today. On a leisurely, guided stroll through quaint Coronado, guests see the stately mansion of John D. Spreckels, the cottage of the Duchess of Windsor, the home that inspired the Wizard of Oz , and the magnificent Hotel del Coronado. Guests enjoy the tales of a hundred years of remarkable history ... on Coronado Island!

Transportation included. Buses depart the Manchester Grand Hyatt lobby entrance at 9:00 am. Lunch is not included.

10:30 am - 3:30 pm

Spouse Tour: Zoo Keeper for a Day*

There are some "Beastly Wonders" going on at the world famous San Diego Zoo and you will be a part of it. Your private Behind-the-Scenes tour includes a 35 minute bus tour and a visit to two specialty areas of the Zoo with a Behindthe-Scenes Zoo guide. The specialty areas include the Elephant Barn, Rhino Barn, Giraffe Barn and the Camel Yard. Two of the above areas will be visited depending upon the animals' health and behavior on the day of our tour. You will also have time to ride the skyfari aerial tram or explore recent additions and renovations to the Zoo such as the Giant Panda Research Station, Gorilla Tropics, Hippo Beach, Polar Bear Plunge, Scripps Aviary, Tiger River, and Sun Bear Forest.

Transportation included. Buses depart the Manchester Grand Hyatt lobby entrance at 10:30 am. Lunch is not included.

General Session

9:30 am - 11:30 am Elizabeth ABCDE Ballroom



Charles T. Drevna President NPRA



John Stossel News Correspondent and Co-anchor, 20/20 ABC News

Award-winning journalist John Stossel joined the highly acclaimed newsmagazine, ABC News 20/20, in 1981, and began doing one-hour primetime specials in 1994. Stossel is featured in a weekly segment entitled "Give Me a Break." These short commentaries take a skeptical look at a wide array of issues, from pop culture controversies to censorship and government regulations. Stossel often debunks myths, like "record high" gas prices, the evils of "sweatshops" and price "gouging." Stossel's specials tackle issues that face Americans today. They consistently rate among the top news programs and have earned him uncommon praise. Stossel's first special, "Are We Scaring Ourselves to Death," examined exaggerated fears of things like chemicals and crime.



James Mahoney Chairman of the Board NPRA



Stuart Rothenberg Editor and Publisher, The Rothenberg Political Report Columnist, Roll Call

Stuart Rothenberg has his finger on Washington's political pulse. As the editor and publisher of The Rothenberg Political Report, Rothenberg is the go-to authority on the U.S. House, Senate, gubernatorial, and presidential elections. His penchant for presenting droll and unbiased observations, paired with his exceptional knowledge of American politics, captivates audiences with insightful, often humorous discussions about election results, the issues facing decision makers on Capitol Hill, and the nature of politics itself. He has become a true authority on handicapping elections and finding the rhythms of modern politics. His lectures are as up-to-date as today's newspaper, and will keep people well-informed and wholly amused.

Issues Session

2:00 pm – 5:00 pm Elizabeth F

2:00 pm - 3:30 pm

Implementation of the New Renewable Fuel Standard

Moderator: *Don Clay* Managing Director, Environmental and Regulatory Affairs Koch Industries, Inc. Washington, DC

Panelists: Joanne Shore Senior Analyst Energy Information Administration (EIA) Washington, DC

Paul Machiele Fuel Program Center Director U.S. EPA Ann Arbor, MI

Mike Leister Manager, Fuels Technology Marathon Petroleum Company LLC Findlay, OH

Don Endres CEO VeraSun Energy Corporation Brookings, SD

3:30 pm – 5:00 pm

Grassroots Advocacy

One of the most effective ways to deliver a message to legislators is by engaging citizens and enabling them to voice their views. The hydrocarbon process industries must understand how to utilize their strengths and resources to ensure that our nation's lawmakers are aware of the issues that impact their constituents. This session discusses this process.

Technical Session: Hydroprocessing

2:00 pm – 5:00 pm Elizabeth G

Presider: Gary Fuller Senior VP, Refining Operations Holly Corporation Dallas, TX

2:00 pm

AM-08-28 Improving the Operation of Desulphurization Units Using Advanced Process Control Technology Andrew McIntosh Principal Advisor Aspen Technology Calgary, AB

2:30 pm AM-08-30

Increased FCC Pretreatment Capability – How Best to Utilize in a Clean Fuel Facility Elizabeth Roellig Process Engineer Houston Refining, LP Houston, TX

3:00 pm

AM-08-27 Fixed Bed Reactor Optimization Through Novel Bed Support Design Daniel Sherman

Research and Development Manager Saint-Gobain NorPro Stow, OH

3:30 pm

AM-08-29

Combining New and Old Technologies: Inlet Diffuser and Random Packing Dramatically Improve Reactor Performance *Gerry Jacobs* Technical Director, Process Engineering Fluor Corporation Aliso Viejo, CA

4:00 pm

AM-08-26 **IsoTherming Hydroprocessing Technology** *Carmo Pereria* DuPont Fellow DuPont STRATCO® Leawood, KS

4:30 pm

AM-08-95

Optimal Pressure for Hydrocracking: Case study for Assessing Trade-offs Ron Meeker Manager of Process Technologies Chevron Richmond, CA



Technical Session: Gasoline

2:00 pm – 5:00 pm Elizabeth H

Presider:

Paul Fritz Refinery Manager Sinclair Oil Corporation Sinclair, WY

2:00 pm

AM-08-82 **It is Not Your Grandfather's Gasoline** *Cal Hodge* President A 2nd Opinion, Inc. The Woodlands, TX

2:30 pm

AM-08-10 **Options for Reducing Benzene in the Refinery Gasoline Pool** *R.E. Palmer* Manager, Downstream Process Design Mustang Engineering, Inc. Houston, TX

3:00 pm

AM-08-12 Utility and Infrastructure Requirements for Gasoline Benzene Reduction Processes Dominic Varraveto Refinery Process Manager Burns & McDonnell Kansas City, MO

3:30 pm

AM-08-11 Benzene Management in a MSAT 2 Environment Jean-Luc Nocca VP, Technology Sales & Marketing Axens North America Houston, TX

4:00 pm

AM-08-15

Benzene Recovery

Ron Cormier Director, Business Development GTC Technology Corp. Houston, TX

4:30 pm

AM-08-14 **Benzene Reduction at Lowest Capital Cost** *Kerry Rock* Director, Technology Commercialization CDTECH Houston, TX

Monday afternoon sessions continue on next page.

2:00 pm – 5:00 pm Manchester A

Presider:

Larry Cunningham Technical Manager Afton Chemical Corporation Richmond, VA

2:00 pm

AM-08-35 **Canadian Synthetic Crude Oil: Markets in Transition** *Stephen Fekete* Senior Principal Purvin & Gertz Inc. Calgary, AB

2:30 pm

AM-08-34

Processing Oil Sands-derived Crudes in Conventional Refineries Dino Chakraborty Director, Project Development Colt Engineering Corporation Edmonton, AB

3:00 pm

AM-08-31 **New Oil Sands Upgrading Technologies Winnowing Promises** *Jon Moretta* Director Jacobs Consultancy Inc. Chicago, IL

3:30 pm

AM-08-32 Upgrading Bitumens from Western Canada Larry Wisdom Marketing Executive Axens North America, Inc. Princeton, NJ

4:00 pm

AM-08-33 LC-FINING Options for Heavy Oil Upgrading David Wadsworth

Americas Director Chevron Lummus Global Richmond, CA

4:30 pm

AM-08-36 Strategies for Desalting Heavy Western Canadian Feedstocks Lawrence Kremer

Technology Fellow Baker Petrolite Sugar Land, TX



Technical Session: FCC Technology

2:00 pm – 5:00 pm Manchester B

Presider:

Joe Coco Executive VP, Operations Flint Hills Resources Wichita, KS

2:00 pm

AM-08-53 **Maximizing Flexibility for FCC's Designed to Maximize Propylene** *Alan Claude* FCC Senior Technology Manager KBR Houston, TX

2:30 pm

AM-08-51

The Effect of Hydrocarbon Partial Pressure on Propylene Production in the FCC *Ruizhong Hu* Senior Principal Scientist Grace Davison Columbia, MD

3:00 pm

AM-08-54 **MILOS – Shell's Ultimate Flexible FCC Technology in Delivering Diesel / Propylene** *Mart Nieskens* Global Manager Catalytic Cracking

Global Manager Catalytic Cracking Shell Global Solutions, US Houston, TX

3:30 pm

AM-08-52 **Pilot Plant Evaluation of FCCU Catalyst Technology and Use of Data for Commercial Catalyst Applications** *Cheryl Joyal* FCCU Technical Consultant BP Naperville, IL

4:00 pm

AM-08-50 FCC Catalyst Optimization: A Dynamic Approach for Today's Changing Feedstocks & Refinery Economics Darren Varrenkamp Manager, Business Development INTERCAT Sea Girt, NJ

4:30 pm

AM-08-18 FCC Regenerator Design to Minimize Catalyst Deactivation and Emissions Chris Santner

Manager, Catalytic Cracking Technology Shaw Stone & Webster Houston, TX

Monday afternoon sessions continue on next page.

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continued

Technical Session: Process Safety

2:00 pm – 5:00 pm Manchester C

Presider: David Foster VP of Refining Alon USA, LP Big Spring, TX

2:00 pm

AM-08-24 **Delivering Process Safety Performance Indicators** *Garvin Thomas* Principal Consultant SAIC, Inc. Houston, TX

2:30 pm

AM-08-13

Implementing Overtime Guidelines Paul Spicer Shell Oil Products US Houston, TX

3:00 pm

AM-08-22 US Chemical Safety Board: Lessons Learned from Recent Investigations William Wark US Chemical Safety Board Washington, DC

3:30 pm

AM-08-23 **Effective Design of Overview Displays to Support Operator Situation Awareness** *Paul Bullemer* Senior Partner Human Centered Solutions LLP Independence, MN Notes

4:00 pm

AM-08-96 **Understanding and Implementing API RP753** *Paul Tobia* General Manager A Box 4 U Wichita, KS

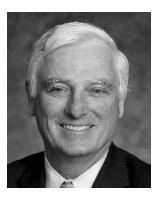
4:30 pm

AM-08-25 **Reliability and Availability: Lifecycle Lessons from Functional Safety** *Iwan van Beurden* Director, Engineering Exida Sellersville, PA

Tuesday Morning

CEO Breakfast:

7:30 am – 9:15 am Elizabeth ABCDE Ballroom



William R. Klesse Chairman and CEO Valero Energy Corporation

Prior to his appointment in January, 2006 as CEO and more recently in January, 2007 to Chairman of the Board, Klesse served as Executive Vice President and Chief Operating Officer, responsible for all operations, including refining and marketing for Valero Energy Corporation. He has served in numerous managerial capacities in engineering, petrochemical feedstocks, planning and development and marketing since joining Diamond Shamrock, now Valero, in 1969. Klesse has served on the NPRA Board of Directors since 1998 and as NPRA Chairman of the Board from 2004 - 2006.

Valero Energy Corporation is a Fortune 500 company based in San Antonio, Texas with approximately 21,000 employees and assets valued at \$38 billion. The largest refiner in North America, Valero has an extensive refining system with a throughput capacity of approximately 3.1 million barrels per day. The company's geographically diverse refining network stretches from Canada to the U.S. Gulf Coast and West Coast to the Caribbean. Valero also has a mid-stream logistics system that supports Valero's refining and marketing operations. A marketing leader, Valero has approximately 5,800 retail and wholesale stores in the United States, Canada and the Caribbean.

Issues Session

9:30 am – 12:00 pm Elizabeth F

9:30 am - 10:45 am NEP Panel

Moderator: *Rick Leicht* VP, Refining National Cooperative Refinery Association McPherson, KS

Panelists: Jeff Bonnette Manager, Integrated Management Systems CITGO Petroleum Corporation Lake Charles, LA

Bobby Fischer PSM Advisor TOTAL Petrochemicals USA, Inc. Houston, TX

Tina Drumheller Process Safety Manager Frontier Refining El Dorado, KS

10:45 am - 12:00 pm

Demographics and Engineering Resources

Joe Fowler Chairman, Texas A&M Engineering Council President, Stress Engineering Services, Inc. Houston, TX

Tuesday March 11, 2008

Technical Session: Developing Carbon Dioxide Strategies

9:30 am – 12:00 pm Elizabeth G

Presider: Jim Gillingham Senior VP, Alternative Fuels & Project Development Valero Energy Corporation San Antonio, TX

9:30 am

AM-08-40 Economics, CO2 Balance and Energy Efficiency of Biofuels Production Stephen McGovern, Consultant Petrotech Consultants, LLC Mantua, NJ

10:00 am

AM-08-39

Carbon Dioxide and Refining – Trends and Challenges John Jenkins, Director Jacobs Consultancy Inc. Houston, TX

10:30 am

AM-08-38 **GHG Emissions Performance Measurement and Management – The Missing Ruler** *Bill Trout,* Project Manager

Solomon Associates Dallas, TX

11:00 am

AM-08-37 Carbon & Energy Management: Innovative Approaches for a Responsible Energy Future Marc Tice, Americas Region Leader Shell Global Solutions (US) Inc.

11:30 am

AM-08-41

Monitoring and Reducing a Refinery's Carbon Footprint

Diego Polanco, Senior Consultant KBC Advanced Technologies, Inc. Houston, TX

Technical Session: Crude Evaluation and Distillation

9:30 am – 12:00 pm Elizabeth H

Presider: Steve Jackson VP, Refining and Transportation Hunt Refining Company Tuscaloosa, AL

9:30 am

AM-08-42 Improve Crude Selection By Better Understanding Crude Oil Quality Pat Swafford Solutions Consultant Spiral Software Shawnee, OK

10:00 am

AM-08-68 **Managing High Acid Crudes** *Craig Winslow* Senior Technology Consultant GE Water & Process Technologies

10:30 am

AM-08-43 **Cheyenne Yield Improvement Project - Recovering Maximum Diesel from Crude Oil Fractionation Process at Frontier Oil's Cheyenne Refinery** *Tony Freeman* VP, Process Engineering Koch Partners LP Tyler, TX

11:00 am

AM-08-44

Diesel Recovery Options in Crude Unit Product Upgrade and Capacity Revamps Andrew Sloley Principal Engineer CH2M Hill Bellingham, WA

11:30 am

AM-08-85 **Rerun and Off-Spec Product Recovery: New Opportunities with Industry Wide Benefits** *Monica Mills* CEO Intersource LLC Dickinson, TX



Technical Session: Operations

9:30 am – 12:00 pm Manchester A

Presider:

Steve Cousins VP, Refining Lion Oil Company El Dorado, AR

9:30 am

AM-08-87

The Journey to Operational Excellence

Kevin Smith Operations Manager KBC Advanced Technologies, Inc. Aurora, CO

10:00 am

AM-08-49

Managing Marine Logistics: What You Don't Know CAN Hurt You

Gerry Bemberg Manager, Crude Supply, Heavy Fuels, & Marine Logistics TOTAL Petrochemicals USA, Inc. Houston, TX

10:30 am

AM-08-46 **Tank Farm and Terminal Automation: Developing a Business Case** *Patrick Truesdale* Senior Consultant Emerson Process Management Houston, TX

11:00 am

AM-08-86 The Dawn of a New Age in Gasoline

Blend Scheduling

Dean Trierwiler Technical Manager Haverly Systems, Inc. Houston, TX

Orange County, CA

11:30 am

AM-08-48 **Stoichiometric Combustion Control** *Andy Wheeler* Engineering/Technical Support Manager Bambeck Systems Inc.

Tuesday morning sessions continue on next page.

9:30 am – 12:00 pm Manchester B

Presider: Joel Elstein Refinery Manager Flying J Inc. North Salt Lake, UT

9:30 am

AM-08-19

FCC Revamp Patrick LeRoy TOTAL Refining Harfleur, France

10:00 am

AM-08-17 **Tesoro FCC Regenerator Upgrade Project, Salt Lake City** *Reza Sadeghbeigi* President RMS Engineering, Inc. Houston, TX

10:30 am

AM-08-16 **A New Technology for Reducing NOx Emissions from FCC Regenerators** *Ye-Mon Chen* Regional Manager, Cat Cracking Shell Global Solutions, US Houston, TX

11:00 am

AM-08-21

Capturing Value Through Optimization of FCC Catalyst Technology for Processing Opportunity Feedstocks Derived from Canadian Oil Sands Joseph McLean Commercial Manager, Refining BASF Catalysts, LLC

11:30 am

AM-08-20 Impact of Bitumen Derived Feeds on the FCC Keith Couch Senior Manager, FCC and Treating Refining Conversion Development UOP LLC Des Plaines, IL



Technical Session: Profit Improvement

9:30 am – 12:00 pm Manchester C

Presider:

Robert Kent VP & GM, Lemont Refinery CITGO Petroleum Corporation Lemont, IL

9:30 am

AM-08-45 **Gasification Technology: Generating Profit from the Bottom of the Barrel** *Joachim Wolff* Shell Global Solutions US Chester, England

10:00 am

AM-08-58 **Maximizing Value for Refinery "Orphan" Products** *Randy Velarde* President The Plaza Group Houston, TX

10:30 am AM-08-92

A Bold Move in Hydrocracking Catalyst Selection Resulted in a Record Run Length and Significant Boost in Hydrocracker Margins *Tina Swangphol* Hydrocracking Technical Service Engineer Criterion Catalyst & Technologies Zeolyst International Houston, TX

11:00 am

AM-08-88

A New Process Approach to Hydrotreating Coker Naphtha

Raj Patel Principal Hydroprocessing Engineer Haldor Topsoe, Inc. Orange County, CA

11:30 am

AM-08-93 **Results of Antifoulant in Delayed Coker Furnace** *Jeff Williams* Manager, Engineering Delek Refining Ltd. Tyler, TX

Annual Luncheon

12:00 pm – 2:00 pm Elizabeth ABCDE Ballroom



Tony Snow Former White House Press Secretary and FOX News Channel personality

As White House Press Secretary, Tony Snow faced an intrepid and aggressive White House Press Corps with characteristic grace, wit and aplomb-even while battling cancer.

Tony Snow discusses the most important developments in the world today: the explosion of economic competition around the globe; the rise of radical terror movements amidst the weakening of older autocratic governments in the Middle East and Asia; the advent of asymmetrical warfare; the rise of instant communication and the fall of the traditional media; the challenge of immigration in advanced industrial nations; declining populations in Europe; rising populations in the Muslim world; and the inability of venerable international institutions (including the United Nations and the World Bank) to keep pace.

Snow draws these and other themes together in describing international challenges to America's foreign policy too large to overlook and too important not to address effectively. He will describe how America remains the world's vital superpower – and what the country will need to do in order to maintain not only its edge, but fulfill its international responsibilities.

Technical Session: Renewable Fuels

2:00 pm – 4:30 pm Elizabeth F

Presider: Nina Thornton Refining, Supply, Trading and Optimization TOTAL Petrochemicals USA, Inc. Houston, TX

2:00 pm

AM-08-77 **Ethanol – Absorbing the Deluge** *Kevin Waguespack* Vice President Baker & O'Brien, Inc. Houston, TX

2:30 pm

AM-08-78 **How Will Biofuels Challenge Petroleum Refining?** *Ronald Cascone* Manager, Biofuels Development and *Bruce Burke* VP, Energy Resources Global Business Unit Nexant Inc. White Plains, NY

3:00 pm

AM-08-80 Biofuels: New Opportunities for Co-Processing Renewable Feeds in Refinery Process Equipment Brian Watkins

Team Leader, Performance Testing Advanced Refining Technologies Columbia, MD

3:30 pm

AM-08-81 Converting Pyrolysis Oils to Renewable Transport Fuels: Processing Challenges & Opportunities Jennifer Holmgren Director, Renewable Energy & Chemicals UOP LLC Des Plaines, IL

4:00 pm

AM-08-79

Renewable Raw Materials for Fuels and Petrochemicals Production Andrea Pinho Senior R&D Researcher PETROBRAS - Petroleo Brasileiro S.A. Rio de Janeiro, Brazil

Management Session

2:00 pm – 4:30 pm Elizabeth G

Presider: *Ernie Cagle* VP, Manufacturing Murphy Oil USA, Inc. El Dorado, AR

2:00 pm

AM-08-59

Gasoline or Diesel? Joseph Jacobs Senior Staff Consultant KBC Advanced Technologies, Inc. Houston, TX

2:30 pm

AM-08-56 **The Potential Contribution of Coal-to-Liquids Technology to the US and Global Energy Pool** *Iraj Isaac Rahmin* President E-Meta Venture, Inc. Houston, TX

3:00 pm

AM-08-89 **Capital Projects Survey** *Vance Scott* Vice President and Partner A.T. Kearney Chicago, IL

3:30 pm

AM-08-57 **A Fresh Look at Project Evaluation & Execution** *James Jones* Senior VP Turner, Mason & Co. Dallas, TX

4:00 pm

AM-08-55 Value Engineering in an Escalating Business Environment David Nash Principal Process Engineer Chicago Bridge & Iron Tyler, TX

Technical Session: Workforce

2:00 pm – 4:30 pm Elizabeth H

Presider: Jay Churchill Refinery Manager ConocoPhillips Wilmington, CA

2:00 pm

AM-08-72 **Where Have All the Workers Gone?** *Paul Weissgarber* VP & Partner A.T. Kearney Dallas, TX

2:30 pm

AM-08-69 **Managing the Challenges of Complex Operations and Work Force Changes: Are You Ready?** *Tom Ratajczak* Sr. Manager, Asset UOP LLC Des Plaines, IL AM-08-70 **The Challenges and Rewards of Hiring Hourly Employees** *Clarence Trowbridge* Training Manager BP Carson, CA

3:30 pm

3:00 pm

AM-08-71 Enhancing Operator Effectiveness with Tools, Training and Processes David Holden Business Consulting Director Invensys Process System Houston, TX

4:00 pm

AM-08-90 Evolving Best Practices Through Simulation-based Training Dennis Nash President & CEO Control Station, Inc. Tolland, CT and Ron Smith Training Coordinator Chevron Products Company El Segundo, CA

Tuesday afternoon sessions continue on next page.

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Technical Session: Hydrogen & Refinery Off-gas Systems

2:00 pm – 4:30 pm Manchester A

Presider:

Pat Lavergne Refinery Technical Manager Houston Refining, LP Houston, TX

2:00 pm

AM-08-74 **Hydrogen Costs and Issues – Gasification vs. SMR** *Dale Simbeck* Vice President SFA Pacific, Inc. Mountain View, CA

2:30 pm

AM-08-73

Commercialization of New Low-cost Hydrogen Recovery Process: Rapid-cycle Pressure Swing Adsorption Bal Kaul Sr. Engineering Associate ExxonMobil Research and Engineering Co. Fairfax, VA

3:00 pm

AM-08-76

Economic LPG Recovery from Stranded Low Pressure Gas *Kevin Currence* Principal Process Engineer Black & Veatch Overland Park, KS

3:30 pm

AM-08-75 **Refinery Off Gas Treatment and Recovery – Challenges of Designing ROG Units** *Sheng-Yi Chuang* Staff Technologist Technip USA, Inc. Houston, TX

4:00 pm

AM-08-91 **Problem-Free Sulfur Plant Startups with Pre-Activated Tail Gas Catalyst** *Mike Schmidt* Director, Sales and Marketing Axens North America Inc. Houston, TX

Technical Session: Energy Economics

2:00 pm – 4:30 pm Manchester B

Presider: *J. Fred Hill, Jr.* Manager, Refining Technologies and RAD Marathon Petroleum Company LLC Findlay, OH

2:00 pm

AM-08-62 Economics of Refinery Energy Saving Projects in a Changing Market Douglas White VP, APC Services Emerson Process Management Houston, TX

2:30 pm

AM-08-61 **Rapid Excel Modeling for the Optimization of Refinery Energy Systems** *Charles Der* Business Development Manager Praxair Inc. Houston, TX

3:00 pm

AM-08-60 Sustaining Refinery Energy Improvement Using Solomon's NCM3 Methodology Chris Bustamante Senior Energy Consultant HSB Solomon Associates LLC Dallas, TX

3:30 pm

AM-08-63

Energy Management System Nick Spates Vice President Modular Process Control, LLC Atlanta, GA

4:00 pm

AM-08-94 **Exponential Gains Through Incremental Change** *Jim Brigman* Executive VP Ingenero Houston, TX



Technical Session: Reliability

2:00 pm – 4:30 pm Manchester C

Presider:

Roger Lyle VP, Northeast Refining Sunoco Inc. Philadelphia, PA

2:00 pm

AM-08-64 How Marathon Petroleum's Reliability Initiative Changed MPC

Lance Holmer

Technical Specialist, Refining Engineering Marathon Petroleum Company LLC Robinson, IL and *Marty Moran* Senior Consultant Meridium Inc. Houston, TX

2:30 pm

AM-08-67

Gray Matter(s) in Human Reliability *Jim Stephanou* VP, POSM Global Assets Bayer Corporation Pittsburgh, PA

3:00 pm

AM-08-47 Enhancing Plant Asset Management in Process Industries with Wireless Retrofits David Siegel Senior VP, Product Development AirSprite Technologies Marlborough, MA

3:30 pm

AM-08-66 Risk-Informed Inspection: Developing Plans to Load into Asset Management Systems

J.K. August COO, VP Operations CORE, Inc. Boulder, CO

4:00 pm

AM-08-65

Inspection and Monitoring of Coke Drums for Life Extension and Safety *Tej Chadda* Chief, Design Technologies

Foster Wheeler USA Corporation Houston, TX

Closing Event: Experience the USS Midway

6:30 pm - 9:30 pm

USS Midway Museum, North Harbor Drive, San Diego, CA

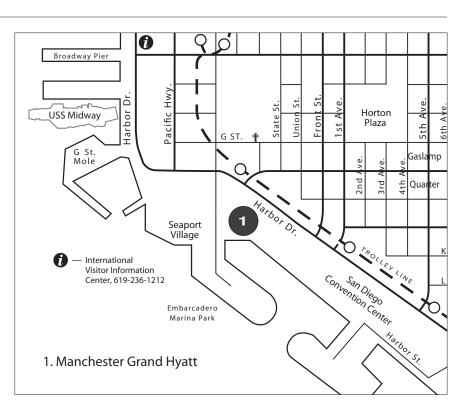
This evening, we'll "experience the USS Midway," a naval museum permanently docked in San Diego Bay. Explore restored aircraft on the flight deck, climb aboard a simulator to experience the exhilaration of naval aviators who flew off Midway, and see what life was like for over 225,000 Americans who served from WWII to Desert Storm during a back of the house tour.

When you're ready to take a break, head back to the hangar bay where food, drink, and entertainment will be available all evening long.

The USO show presented by "Flamingo Express" will also take place in the hangar bay. This high-spirited and talented group of musicians is sure to entertain one and all. These crowd-pleasers have made appearances at previous NPRA functions and received rave reviews across the board! And this time, there will be surprise special appearances and a truly unusual treat. Hint: Pay attention to the stage.

Attire: Business Casual. Comfortable flat walking shoes suggested due to open stairs and cement floors.

Continuous shuttle transportation provided beginning at 6:15 pm or guests may take a short leisurely stroll down Harbor Avenue to the ship. See map at right.





NPRA thanks the following companies for sponsoring events at this year's meeting.

Aspen Technology Inc. Monday Networking Activities

Baker Petrolite Audio Visual – Monday Afternoon "Synthetic Crude Oil Challenges" Technical Session

BASF Catalysts LLC Hospitality Brochure

CB&I Audio Visual – Tuesday Afternoon "Management" Session

Dresser-Rand Company Email Stations

GE Infrastructure *Conference Bags*

Grace Davison Refining Technologies and Advanced Refining Technologies *Final Program*

Hart Energy Closing Reception Beverage Service

Hydrocarbon Processing Magazine Show Daily

Pavilion Technologies Audio Visual – Monday Afternoon "Hydroprocessing" Technical Session

SAIC *Tuesday Networking Activities*

Press Wall Sponsors Fuel, A Hart Energy Publication Hydrocarbon Engineering Hydrocarbon Processing Oil & Gas Journal

2008

March 4 - 5 **Security Conference** The Woodlands Waterway Marriott The Woodlands, TX

March 9 - 11 **106th Annual Meeting** Manchester Grand Hyatt San Diego, CA

March 30 - April 1

33rd International Petrochemical Conference Henry B. Gonzalez Convention Center San Antonio, TX

April 15 NPRA/API Operating Practices Symposium New Orleans, LA

April 17 - 18 **Labor Relations / Human Resources Conference** Renaissance Harborplace Hotel Baltimore, MD

May 7 - 8 **National Safety Conference** The Woodlands Waterway Marriott The Woodlands, TX

May 20 - 23 **Reliability & Maintenance Conference and Exhibition** Henry B. Gonzalez Convention Center San Antonio, TX August 19 - 20 **Cat Cracker Seminar** Intercontinental Hotel Houston, TX

September 7 - 9 **Board of Directors Meeting** Hyatt Regency Lake Tahoe Resort Incline Village, NV

September 15 - 16 Environmental Conference The Westin Riverwalk San Antonio, TX

October 5 - 8 **Q&A and Technology Forum** *Includes the Process Automation Conference* Omni Orlando Resort at Champions Gate Orlando, FL

November 11 NPRA/API Operating Practices Symposium Los Angeles, CA

November 13 - 14 International Lubricants & Waxes Meeting Marriott Westchase Houston, TX

2009

March 22 - 24 **107th Annual Meeting** Marriott Rivercenter Hotel San Antonio, TX

March 29 - 31 **34th International Petrochemical Conference** Henry B. Gonzalez Convention Center San Antonio, TX Members of the NPRA are dedicated to continuing improvement of the environmental quality of our processing facilities and products. We recognize that environmental progress and protection can be achieved only through strong commitment and constant vigilance. The members believe that environmental and economic progress is linked and that the failure to achieve either would be damaging to society.

NPRA members pledge to inform, consult, and work with their employees, the general public and government leaders in addressing concerns regarding health, safety, security, and environmental matters associated with process activities and facility operations. NPRA members support research and other advancements in science and technology which enhance environmental protection and security through efficient practices. The National Petrochemical & Refiners Association is a nonprofit, tax-exempt membership association organized to foster cooperation and the exchange of technical information among its members. These worthwhile activities are sanctioned by custom and law. It is important, however, to recognize that these activities are subject to the legal limits of federal and state antitrust laws. NPRA is committed to complying with the antitrust laws in all respects and has adopted the following guidelines in order to facilitate compliance with the antitrust laws at its meetings:

As a general matter, the antitrust laws prohibit competitors from agreeing on the prices they will charge, the products they will offer, the customers they will serve, or the markets in which they will compete. Therefore, there should be no discussion or disclosure of information with respect to (a) expected profits, premiums, prices, surcharges, or discounts; (b) specific customers or classes of customers, or whether you will or will not do business with them; (c) proposed product offerings; (d) allocation of geographic or product markets; (e) any refusal to deal with a customer or supplier: (f) how to deal with the market behavior of a competitor; or (g) any other topic involving a potentially anticompetitive practice.

Some subjects of discussion may lead to agreements that are not unlawful on their face but that may have an unlawful anticompetitive effect or may give rise to the inference of an anticompetitive act, depending upon their scope and how they are implemented. Other subjects may appear to be prohibited by the antitrust laws but in fact may be permitted because of the context or ultimate purpose of the communication. Whether discussing a subject is permissible may vary depending on factors such as the nature of the subject matter, its relationship to competition among NPRA members, the purpose of the communication, and the degree of restraint that NPRA members can be expected to exercise.

We cannot make a statement that will take the place of advice from your own company or that will cover every situation. We do suggest that those attending our meetings may avoid difficulties for themselves and for the Association by observing these principles and calling to NPRA's attention any violations you may observe at any of our meetings.







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