

| Room                                                   | 10:30 AM                                                                                                                                                                                                                       | 11:00 AM                                                                                                                                | 11:30 AM                                                                                                                                                               | 12:00 PM                                                                                     | 12:30 PM                                                                       | 1:00 PM                                                                                                        | 1:30 PM                                                                                                         | 2:00 PM                                                                                                                                                                                     | 2:30 PM                                                                                           | 3:00 PM                                                                                                                                                                   | 3:30 PM                                                                                                                                           | 4:00 PM                                                                                                             | 5:00 PM                                                                   |                                                                             |
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| Room 412 - Air Permitting                              | Recent TCEQ Permitting and Modeling Changes - Lessons Learned and Future Strategies - Frank Dougherty, ALL4 LLC                                                                                                                | Serving Two Masters; Understanding Texas and EPA Permitting Programs - Johnny Vermillion, Spirit Environmental                          | A Modern Approach to Dispersion Modeling - Robert Opiela, Naviknow Solutions                                                                                           | Upstream O&G Air Permitting 101 - Adrienne Rosecrans, Ashworth Leininger Group               | <b>Lunch, Hosted by ESC</b>                                                    |                                                                                                                | Ditching Your Major Source MACT Requirements - Nicholas Petrich, Barr Engineering                               | Managing Major Source Aggregation Air Permitting Risks - Blake Soyars, Burns & McDonnell                                                                                                    | <b>Break, Hosted by Extrel</b>                                                                    | Intricacies of Permitting Fugitive Emissions - Inaas Darrat & Courtney Edge, Trinity Consultants                                                                          | EPA NSR Reforms: How to Capitalize Now and Later - Kristin Gordon, ALL4 LLC                                                                       | Panel Discussion                                                                                                    |                                                                           |                                                                             |
| Room 415A - Environmental Legal                        | The Regulation of Oil & Gas Activities Under the Trump Administration - John B. King, Breazeale, Sachse & Wilson LLP                                                                                                           | Pipeline Jurisdiction Analysis: A Look Inside Plant Facility Fencelines - Bruce Beighle, Integrity Solutions                            | Environmental Enforcement Developments in the Trump Administration - Matthew Thurlow, Baker & Hostetler LLP                                                            | Evolution of EPA Rules from Obama to Trump and Beyond - Suzanne Murray, Haynes and Boone LLP |                                                                                |                                                                                                                | Kosta Loukeris, EPA                                                                                             | Federal, State and Local Enforcement - James Smith, Crain, Caton & James                                                                                                                    |                                                                                                   | Environmental Enforcement Update - Carrick Brooke-Davidson, Vinson & Elkins                                                                                               | Preparing for the Storm? Next Year's Public Posting of Benzene Fenceline Data from Refineries - Byron Taylor & Heather Palmer, Sidley Austin, LLP | Regulatory Outlook Under the Remaining Term of the Trump Administration - Shannon Broome, Hunton Andrews Kurth, LLP | Natalie Topinka, EPA                                                      |                                                                             |
| Room 415B - PSM/RMP - Gensuite                         | EPA's Amendments to the RMP Rule - What Are Company Compliance Obligations Under the New Rules and the Old Ones? - Dan Gruza, Hunton Andrews Kurth LLP                                                                         | How to Digitally Power A Cross-Functional Process Safety Management Program - Doug Martin, Gensuite                                     | RMP Litigation and Enforcement Update - Will the Amendments Survive? - Justin Savage & Tim Webster, Sidley Austin, LLP                                                 | Contractor Management - Ric Hartung, Process & Safety Solutions LLC                          |                                                                                |                                                                                                                | Safety as a Customer Service: Effective Communication for the Safety Professional - Daniel Boreman, EMSI        | Emerging Trends in Owner Compliance - George Perrett, Industrial Safety Training Council (ISTC)                                                                                             |                                                                                                   | Introduction to AFPM/API Advancing Process Safety Programs - Ryan Wong, ExxonMobil representing AFPM                                                                      | DOT Control Room Management Risk-Based Alarm Management - Trish Thomason, Integrity Solutions                                                     | Who Are Your Keepers - Thomas Lane, The Miller Group                                                                | Panel Discussion                                                          |                                                                             |
| Room 416B - Wastewater Solutions for the O&G Industry  | Zero Water Discharge Water Management for Hydrofracturing Activities - Carl Adams, Advent Technology LLC                                                                                                                       | Industrial Gases for Wastewater and Other Environmental Applications in Today's Refinery - Vince Hartley, Airgas, an Airliquide Company | The Role of Science in Developing Enhanced Oil and Gas Resources, Being Environmentally Sound, and Protecting Water Use - Dr. Davis L. Ford, Davis L Ford & Associates | A Primer on PFAS, a Contaminant Emerged - Stephen Zemba, Sanborn, Head & Associates Inc.     |                                                                                |                                                                                                                | PFAS- Analysis and Data Quality - David Gratson, Environmental Standards                                        | Utilization of In Vitro Fish Cytotoxicity Assays for Use in Whole Effluent Toxicity Testing and Toxicity Identification and Reduction Evaluations - Justin Scott, Oklahoma State University |                                                                                                   | Efficacy of Moving Bed Biological Reactor (MBBR) for Water Reuse and Distributed Treatment Systems: Industrial and Municipal Applications - Paul Gallego, Headworks Intl. | Residual Assessment for Oil and Gas for Potential Reuse - Professor Reimers, Tulane University & Headworks Intl.                                  | Panel Discussion                                                                                                    |                                                                           |                                                                             |
| Room 402 - NSPS Panel/BWON                             | Potpourri - NSPS Refinery MACT Panel - Jay Christopher & Calvin Niss, Trihydro Corporation, Justin Savage, Sidley Austin, Troy Boley, Spectrum Environmental Solutions, Ken Garing, Ken Garing Associates, Brian Whitley, EMSI |                                                                                                                                         |                                                                                                                                                                        |                                                                                              |                                                                                |                                                                                                                | On-Going BWON Compliance Concerns - Ken Garing, Ken Garing & Associates                                         | Vapor Lock Scrubber Technology Reducing Carbon Usage for BWON Compliance and Temporary Tank Storage - Sean Kirkpatrick, Vapor Point, LLC                                                    |                                                                                                   | Downstream Confirmation of Benzene Loading - Bruce Douglas, Trinity Consultants                                                                                           | A Wastewater Solution for an Air Pollution Problem - Carl Adams, Advent Technology LLC                                                            | Panel Discussion                                                                                                    |                                                                           |                                                                             |
| Room 404 - Continuous Emissions Monitoring (CEMS)      | Simplifying CEM Reporting: The Revolution in Data Acquisition & Handling - Brian Fowler, ESC                                                                                                                                   | The Dirty Dozen: Our Worst CEM Field Stories of 2018 - Donny Klotz, M&C Tech Group                                                      | <b>Lunch, Hosted by Think Environmental</b>                                                                                                                            |                                                                                              |                                                                                |                                                                                                                | Heated Sample Lines...."Don't judge a sample line by it's jacket - it's much more!" - Otto Hirsch, Thermon Inc. | Mass Spectrometers for BTU in Flare Determination - Robert Paddison/Don Rodriguez, Thermo Fisher Scientific                                                                                 |                                                                                                   | Potential Impacts of Recent U.S. EPA Region 6 Guidance on CMS Downtime and Data Calculation - Eric Swisher, ALL4 LLC                                                      | CEMS Lessons Learned - Ty Smith, CEMTEK                                                                                                           | CEM Improvements For Refinery and Chemical Plants - Tim Kuiken, M&C Tech Group                                      | Common CEMS RATA Failures and Risks - Paula Metz, Alliance Source Testing | Real-Time Analysis of Stack Gases - Koji Ishikawa, HORIBA Instruments, Inc. |
| Room 406 - Flare Instrument Analyzers & Sensors - BHGE | Flare System Control and Optimization for MACT CC RSR 63.670 - Dan Johnson & Chong Tao, Baker Hughes, A GE Company                                                                                                             | Fast, Speciated Analysis of Flare Gas Composition to Improve Flare Control - Charles W. DeCarlo, Extrel                                 |                                                                                                                                                                        |                                                                                              | How to Control Flares to Comply with RSR-63.670 Rules - George Cheng, CyboSoft | Using Optical Flow Sensor Technology to Meet EPA J/Ja and RSR Requirements - Donn Williams, Optical Scientific | Results of Flare Remote Monitoring Test Sponsored by PERF - Yousheng Zeng, Providence Photonics                 | Measurement Technologies and Innovative Digital Solutions for Flare Management - Julie Valentine, Marcio Donnangelo & Marcelo Carugo, Emerson Automation Solutions                          | New EPA Flare Regulations - How Does Gas Measurement Help? - Arnold Rivas-Griswold^, Fluenta Inc. | On-line GC Solution to Comply with Flare Measurement Requirements - Ulrich Gokeler, Siemens Industry                                                                      | Room 408 - Panel Discussion - Troy Boley, Spectrum Environmental Solutions                                                                        |                                                                                                                     |                                                                           |                                                                             |

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| Room 408 - Flare for Regulatory Compliance - Spectrum        | Future of Flare Compliance and Flare Forecast - Troy Boley, Spectrum Environmental Solutions             | Reduce Turnaround Loading of H2S to the Flare and FGR Utilizing New Scrubber Technology - Jim Woodard & Jace Bigler, Vapor Point, LLC                                                                     | Lunch, Hosted by Think Environmental                                                                                             | Ground Flares, Air Quality Approvals and Requirements - Blake Soyars, Burns & McDonnell                                                                                                       | Refinery Sector Rule - Top 10 Lessons Learned - Andy Shurtleff, Airgas, An Airliquide Company                    | Refinery Flares Roundup - Lessons Learned doing Recent Flare Projects - Herman Holm, Spectrum Environmental Solutions         | A Case Study of Implementing a Data Acquisition and Handling System for Compliance with the Refinery Sector Rule - Brian Fowler, ESC & Eric Swisher, ALL4 LLC | Break, Hosted by Extrel                                                                                       | Plant Turnaround Unit Flare Minimization Vapor Control Strategies - Paul Anderson & Chris Longo, GEM Mobile Treatment Services Inc.                                                                                                | Ultra-Low Steam Consumption, High Capacity Smokeless Flare - Clayton Francis, Zeeco                                                                        |                                                                                    |                                                                                              |  |
| Room 410 - Fenceline Monitoring                              | Obtaining the Vertical Wind and Flux Profile with Optical Technology - James Shinkle, Optical Scientific | Nonparametric Trajectory Analysis (NTA) to Locate Local Emission Sources of Volatile Organic Compounds (VOCs) Potentially Affecting Fenceline Monitoring Programs - Robert Wallace, Source Location Group |                                                                                                                                  | Use of Open Path UV-DOAS as an Alternative Method to Meet Fenceline Monitoring Provisions for Federal Benzene Monitoring Rule - A Case Study - Donald S. Gamiles, PhD, Argos Scientific, Inc. | Fenceline Monitoring for Benzene: What Does a Year's Worth of Data Say? - Nicole Bryson, ALS Environmental       | Benzene Fenceline Monitoring: Laboratory Insights for a Successful Program - Shannon Hulbert, Enthalpy Analytical, LLC        | Benzene Fenceline Monitoring: Regulation Updates & Process Automation - Jesse Miller, Camsco                                                                  |                                                                                                               | Benzene Fenceline Monitoring Emission Source Investigation: Using OP-FTIR to Identify Source(s) of Fugitive Emissions - Jessica Little, Pasadena Refining System, Inc, David Berkowitz, Enthalpy Analytical/Montrose Environmental | Implementation of California's Refinery Fenceline Monitoring Law - George Lipinski, Spectrum Environmental Solutions                                       | Panel Discussion                                                                   |                                                                                              |  |
| Room 400 - LDAR/Fugitive Emission Prevention                 | Status/Updates on NSPS OOOOa - Karen Marsh, EPA                                                          | Enhanced LDAR Training; An Unconventional Approach to Training LDAR Technicians - Todd Morrison, Insight Environmental                                                                                    |                                                                                                                                  | The Future Technology of LDAR - Joshua Pinter, CNTRAL Inc.                                                                                                                                    | LDAR 2025 - What Does The Future Look Like and How Will The Industry Evolve? - Jerry Duke Jr., HydroChemPSC      | Is There A Better Way to Do LDAR - Brian Whitley & Andrew Gunn, EMSI                                                          | Automating Manual Data QA/QC - Robert Williams, TEAM                                                                                                          |                                                                                                               | Taking LDAR QA/QC to the Next Level Using Technology - Derrick Mauk, Bureau Veritas                                                                                                                                                | Evaluation of Innovative Methane Detection Technologies - Tim Taylor, Colorado Air Pollution Control Division                                              | LDAR - Real World Problems - Earl Hassel & Jeff O'Neal, Chevron Phillips Chemicals | How a Six Sigma Methodology Can Reduce Your Fugitive Emissions - Dale Rice, VSP Technologies |  |
| Room 615B - Upstream/Midstream Environmental Compliance      | Optimizing NG Compressor Station Permitting - Joel LeBlanc, Ashworth Leininger Group                     | Flare LESS Profit MORE - Michael J. McMahon, EcoVapors Recovery Systems                                                                                                                                   | Lunch, Hosted by Alliance Source Testing                                                                                         | Isn'T It Ironic? A Case Study On Dry Seal vs. Wet Seal Centrifugal Compressor Emissions - Brandon Mogan, Tora Consulting, LLC                                                                 | Design & Operation Guidelines for Low Heater Emissions - Erwin Platvoet, XRG Technologies                        | Process Burner Flames: The Good, the Bad, and The Ugly - Charles Baukal, John Zink Co. LLC                                    | Permian Basin Environmental Success Story: Revenue Sharing With Vent Gas - Jeff Voorhis, Hy-Bon Engineering                                                   | The LNG Bridge - Joan Fontaine, Sanborn, Head & Associates Inc.                                               | Waste Heat - A New Profit Center - Loy Sneary, GulfCoast Green Energy                                                                                                                                                              |                                                                                                                                                            |                                                                                    |                                                                                              |  |
| Room 417A - EHS Best Management Practices                    | Boiler and Process Heater Tuning as a Best Management Practice - John Bacon, TRC Consulting              | OOOOa LDAR Compressor Station Case Study Results - Terence Trefiak, Target Emission Services                                                                                                              |                                                                                                                                  | Utilizing Mobile Treatment Systems to Capture Lost Profits Resulting from Flared or Reprocessed Fuels - Sean Kirkpatrick & Jim Woodard, Vapor Point LLC                                       | Utilizing Savings, Safety, and Reliability With Energy Surveys - James Nipper, Petro Chemical Energy             | Eliminating H2S & SO2 Emissions at SRU, Coker and Sulfur Pits of Refineries - Jim Woodard, Vapor Point, LLC                   | BACT - Creating Latitude within Regulatory Boundaries - Mellitanya Stephenson, Anadarko Petroleum Corporation                                                 | Emissions Reduction Warehousing Analysis: Positioning Your Plant for Growth - Blake Soyars, Burns & McDonnell | Enabling Distributed Environmental Compliance Management - Brent Allred, Northrop Grumman Technology Services                                                                                                                      |                                                                                                                                                            |                                                                                    |                                                                                              |  |
| Room 417B - EHS Technology for O&G/Petrochemicals            | Visible Emissions Management Using Best Available Technology - Shawn Dolan, Virtual Technology LLC       | A Screening-Level Assessment Method for Tank Emissions at a Petrochemical Facility - Muqeeth Syed, HollyFrontier & Colin Welburn, Welburn Consulting                                                      |                                                                                                                                  | How Digital Transformation Can Impact Compliance for Environmental and Safety Regulation - Marcio Donnangelo & Julie Valentine, Emerson Automation Solutions                                  | "4G" Combustion Technology for Flares - Chris Ferguson, Honeywell UOP Callidus                                   | ClearSign Combustion's DuplexTM Technology Achieves 5ppm cNOx in a California Refinery - Venkatesh Iyer, ClearSign Combustion | Update on Fugitive Emission Standards for Valves, Packing and Gaskets - Matthew Wasielewski, Yarmouth Research and Technology, LLC                            | Improving Safety with Wireless Monitoring - Marcio Donnangelo, Emerson Automation Solutions                   | LDAR 2.0: LDAR for Environmental Compliance and LDAR for Operational Excellence - Steve Probst, 4C Marketplace & Conference & Dave Anderson, Score Valves                                                                          | 6th Floor Salon H - Panel Discussion - Natural Gas Supply Chain: 'Investments and Returns' in Methane Emissions Reductions - Matt Harrison, SLR Consulting |                                                                                    |                                                                                              |  |
| Room 414 - EHS Emerging Technologies - Insight Environmental | How IoT and Blockchain Technology Can Transform Environmental Monitoring - Philip Black, Wood            | Understanding Cooled vs Uncooled Optical Gas Imaging - Craig O'Neill & Ron Lucier, FLIR                                                                                                                   | Optical Gas Imaging: Examining Detection Limit and the Resulting Impact to Emission Inventory - Jon Morris, Providence Photonics | Aerial Infrared Thermography - Gary Strahan, Infrared Cameras Inc.                                                                                                                            | Large Area Fugitive Emission Monitoring In All Conditions - Mohammed Belal, MIRICO                               | Wireless OGI - Omer Yanai, Opgal                                                                                              | Measuring Low Level Particulate and Eliminating Positive Bias with OTM-37 - Justin Sullivan & Andrew Kendall, Alliance Source Testing                         |                                                                                                               |                                                                                                                                                                                                                                    |                                                                                                                                                            |                                                                                    |                                                                                              |  |
| Room 416A - UAV/Drones                                       | Industrial Use Cases for UAVs - Shailendra Singh, Honeywell Aerospace                                    | UAV's for Emergency Response; Being Prepared for the Unthinkable - Johnny Morrison, Insight Environmental                                                                                                 | How to Integrate Drones into Routine Operations - Steven Fargo, DataWing Global                                                  | Integrating sUAS with Traditional Methods of Critical Infrastructure Security and Counter Drone Technology - Kwasi Perry, UAV Survey Incorporated                                             | Conducting a Threat Assessment of Your Facility's Airspace - Uzi Ibrahim, Sage EHS International, 4C Marketplace | Development of a Wall-Sticking Drone for Non-Destructive Ultrasonic and Corrosion Testing - Rami Mattar, AMERAPEX CORPORATION |                                                                                                                                                               |                                                                                                               |                                                                                                                                                                                                                                    |                                                                                                                                                            |                                                                                    |                                                                                              |  |
| Room 615A - EPCRA/TRI Training                               | EPCRA/TRI Training - Bob LaRosa, Archer Institute of Environmental Training                              |                                                                                                                                                                                                           |                                                                                                                                  | EPCRA/TRI Training - Bob LaRosa, Archer Institute of Environmental Training                                                                                                                   |                                                                                                                  |                                                                                                                               |                                                                                                                                                               |                                                                                                               |                                                                                                                                                                                                                                    |                                                                                                                                                            |                                                                                    |                                                                                              |  |