

Track Summary – Emissions Monitoring

Training Classes – February 19 – 21, 2020

Continuous Emissions Monitoring Systems (CEMS)
Mass Spec Gas Analyzers: Operation and Maintenance
Continuous Emissions Monitoring Systems (CEMS) For Experts
Fenceline Monitoring Training

Fenceline Monitoring Breakout Presentations – Thursday February 20, 2020

Fenceline Monitoring with OP-FTIR
New Applications in Fenceline Monitoring
Avoiding Under-Reporting and Over-Reporting of Fenceline Plant Emissions
TCEQ Fenceline Monitoring: Past, Present, & Future.
New and Emerging Fenceline Monitoring Technologies
SPOD: Continuous VOC Monitoring for Targeted Grab Sample Acquisition
Portable GC for Fenceline Monitoring
Calibration Gas for Fenceline Monitoring

CEMS Breakout Presentations – Thursday February 20, 2020

Live Demo: Improving Sample Probe, Chiller and Filter Performance
Common CEMS RATA Failures and Risks
CEMS Lessons Learned
Reporting of Component and System IDs During Missing Data Periods
Common CEMS Program Audit Findings
Simplifying CEM Reporting: The Revolution in Data Acquisition & Handling
Measuring Low Level Particulate and Eliminating Positive Bias with OTM-37
Comprehensive CEMS Stack 102: Process Optimization

Oil and Gas Breakout Presentations – Friday February 21, 2020

Methane Detection using Satellites
MethaneSAT 2021 Satellite Methane Detection Coming Soon
Satellite-based Hyperspectral Analysis for Emissions Detection, Integrity Monitoring and Compliance
Large Area Fugitive Monitoring with Laser Dispersion Spectroscopy

Detailed Agenda Continues on Next Page

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Track Agenda – Fenceline Monitoring

Fenceline Monitoring Breakout Room 415B Thursday February 20, 2020

- **10:30 AM – 11:00 AM**
 - **Fenceline Monitoring with OP–FTIR – Troy Boley – Spectrum Environmental Services**
 - Spectrum's WaveRunIR–OP transmits a safe infrared beam through the air along a clear path. Gas–phase compounds are detected as they drift across the path. Systematic data validation, periodic onsite instrument challenges, and quality assurance audits ensure optimum performance and data quality. WaveRunIR–OP is a versatile and highly efficient means of air monitoring.
- **11:00 AM – 11:30 AM**
 - **New Applications in Fenceline Monitoring – Jesse Miller – CAMSCO**
 - Fenceline Monitoring via passive samplers is a robust, highly sensitive and accurate monitoring technique. While Fenceline Monitoring is best known for Method 325 (Refinery Fenceline Monitoring), this technology is now used in a wide variety of new monitoring applications. We will discuss the history, equipment used (Thermal Desorption, Sampling or Sorbent Tubes) as well as current real–world scenarios, other than refineries, utilizing Fenceline Monitoring.
- **11:30 AM – 12:00 PM**
 - **Avoiding Under–Reporting and Over–Reporting of Fenceline Plant Emissions – James Shinkle – Optical Scientific**
 - Using a point measurement wind sensor for fenceline applications will result in under or over–estimating large body wind movement from your plant. OSI's Long–baseline Optical Anemometer provides path–averaged wind data to give you an honest and accurate picture of plant emissions and can be a valuable tool in the case of an accidental release.
- **12:00 PM – 1:00 PM Lunch Break in the Exhibit Hall**
- **1:00 PM – 1:30 PM**
 - **TCEQ Fenceline Monitoring: Past, Present, & Future. – Sabine Lange – TCEQ**
 - Content Coming Soon
- **1:30 PM – 2:00 PM**
 - **A Sampling of New and Emerging Technologies – Peter Zemek – Montrose**
 - Abstract Coming Soon.
- **2:00 PM – 2:30 PM**
 - **SPOD: Continuous VOC Monitoring for Targeted Grab Sample Acquisition**
 - The SENSIT® SPOD is solar–powered fenceline monitoring system for VOCs. This low–powered, easily deployable system combines wind and VOC measurements to identify and locate emission sources in real–time. When combined with the highly configurable sample acquisition system, the SENSIT SPOD can enable targeted grab sampling using evacuated canisters or sorption tubes for later laboratory VOC analysis.
- **2:30 PM – 3:00 PM Break to Enjoy Exhibit Hall Refreshments**

Track Agenda – Fenceline Monitoring

- **3:00 PM – 3:30 PM**
 - **Portable GC for Fenceline Monitoring – Chris Schepcoff – SGS**
 - Abstract Coming Soon.
- **3:30 PM – 4:00 PM**
 - **Calibration Gas for Fenceline Monitoring – Phil Midgett – Airgas**
 - The presentation will review the latest updates to the benzene fenceline monitoring refinery sector rule, as stated in the Approved Test Method (ATM-122), as well as practical lessons learned for refineries and consultants engaged in compliance.
- **4:00 PM – 5:00 PM**
 - **CEMS Panel**

CEMS Detailed Track Agenda Begins Next Page

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Track Agenda – CEMS

CEMS Breakout Room 404 – Thursday February 20, 2020

- **10:30 AM – 11:00 AM**
 - **Live Demo: Improving Sample Probe, Chiller and Filter Performance – Donny Klotz – M&C TechGroup North America, Inc.**
 - Live demonstration to teach the audience about the many ways in which various Continuous Emissions Monitoring System components can be improved, optimized and properly specified for various applications. We'll discuss sample transport and conditioning considerations associated with extractive probe configurations, gas chiller options, filtration materials and temperature controls, and help end-users identify and overcome common CEMS challenges.
- **11:00 AM – 11:30 AM**
 - **Common CEMS RATA Failures and Risks – Paula Metz – Alliance Source Testing**
 - This presentation will focus on things that may cause a CEMS RATA to fail and what can be done on the facility side and by the stack tester to reduce the potential for failures.
- **11:30 AM – 12:00 PM**
 - **CEMS Lessons Learned – Ty Smith – Cemtek Environmental**
 - CEMTEK KVB–Enertec is a System Integrator and full service organization that builds & supports continuous emissions monitoring systems (CEMS) to meet EPA 40 CFR Part 60, 64, & 75 regulatory requirements and process control monitoring systems on a variety of applications and sources including chemical, cement, glass, refinery, power, biomass, paper, and many others. In this paper we will discuss lessons learned when testing, purchasing and deploying new monitoring technologies to measure NO_x, SO₂, CO, HCl, NH₃, H₂S, HF, HCN using lasers & DOAS compared to conventional technologies ranging from Dry Extractive, Dilution, Hot Wet, and In-situ for compliance and process monitoring.
- **12:00 PM – 1:00 PM Lunch Break in the Exhibit Hall**
- **1:00 PM – 1:30 PM**
 - **Reporting of Component and System IDs During Missing Data Periods – Brian Fowler – ESC**
 - As part of EPA's ongoing efforts to improve both the quality of reported emissions data and streamline the reporting process itself, EPA has identified several issues with respect to the tracking of unit/stack operating hours and required QA. To correct these issues, the 2019 Q3 ECMPS release will include several updates to improve the accuracy of emissions evaluations, reduce the number of incorrect errors and/or messages, and result in an overall more efficient reporting process with better data quality. All new related check results will be informational messages. EPA will monitor these results and change the severity of the error messages to Critical Level 1 in the future.
- **1:30 PM – 2:00 PM**
 - **Common CEMS Program Audit Findings – VIM Technologies – Eric Wiley**

Track Agenda – CEMS

- The main focus of the course will be to highlight issues of non-compliance and poor system performance that are frequently discovered during CEMS program audits. The presentation will also focus on best practice implementation that can assist facilities in ensuring that their CEMS programs are compliant with applicable regulatory requirements and help utilize limited resources as efficiently as possible. Real world examples of CEMS audit findings will be outlined and ways to avoid such issues will be discussed.
- **2:00 PM – 2:30 PM**
 - **Simplifying CEM Reporting: The Revolution in Data Acquisition & Handling – Brian Fowler – ESC**
 - This session will provide a quick overview of current pressures that are requiring earlier and more accurate data validation, compliance averaging and recordkeeping. Then we'll look at how a Data Acquisition and Handling Systems (DAS or DAHS) makes validated averages available immediately after acquisition for CEMS, COMS and CPMS. How does this change the flow and use of compliance data? Finally we'll dig into passages from the RSR changes to MACT CC to examine the details of how different the recordkeeping and reporting for this rule will be as we enter the first year of compliance. Whatever solution you are planning to use, this session should provide helpful insight.
- **2:30 PM – 3:00 PM Break to Enjoy Exhibit Hall Refreshments**
- **3:00 PM – 3:30 PM**
 - **Measuring Low Level Particulate and Eliminating Positive Bias with OTM-37 – Justin Sullivan – Alliance Source Testing**
 - Certain sources emit particulate matter (PM) at rates which render traditional particulate testing methods (EPA Methods 5, 201A, & 202) inadequate. Another class of sources finds positive bias in EPA method 202 measurements for condensable particulate matter (CPM) as a result of compounds present in process streams. Recently promulgated OTM-37 makes accurate measurement of particulate from these previously problematic source types possible. Larger particles are collected in PM cyclones, and smaller and condensable particulate matter are collected on a 47-mm filter. The sample gas is diluted with cool, dry air to avoid artifact formation while still allowing the measurement of CPM. OTM-37 measurement sensitivity is in micrograms, as opposed to milligram sensitivity in EPA Method 5, 201A, & 202.
- **3:30 PM – 4:00 PM**
 - **Comprehensive CEMS Stack 102: Process Optimization – Dean Kotecki – Envea**
 - Continuous monitoring instruments for bag-house filter performance control, bag leak detectors, flue gas & solid flow moisture monitoring, level detection, reagent injection control, etc. allowing the optimization of your processes: raw material & energy savings, reduction of environmental impacts.
- **4:00 PM – 5:00 PM**
 - **CEMS Panel**

Track Agenda – Emissions Monitoring

Oil & Gas Fugitive Emission Monitoring, Inspection and Detection Technologies – Room 616A – Friday February 21, 2020

- **8:00 AM – 8:30 AM**
 - David Furry, Leaks Surveys, Inc, Quadcopter Drones, Fixed Wing Drone, Helicopters, or Fixed Wing Plane?
- **8:30 AM – 9:00 AM**
 - Methane Detection using Satellites – Stephane Germain – GHGSat
- **09:00 AM – 09:30 AM**
 - MethaneSAT 2021 Satellite Methane Detection Coming Soon – Tom Ingersol – EDF
- **09:30 AM – 10:00 AM Break to Enjoy the Exhibit Hall Refreshments**
- **10:00 AM – 10:30 AM**
 - Space-based Infrastructure of Hyperspectral Sensors to provide Monitoring Services via our Spectral Intelligence Platform. – Tushar Prabhakar – Orbital Sidekick
- **10:30 AM – 11:00 AM**
 - Airborne LIDAR Pipeline Inspection Systems (Helicopter) – Tim Goolsby – Lasen
- **11:00 AM – 11:30 AM**
 - Autonomous Mobile Methane Monitoring – Brendan Smith – SeekOps
- **11:30 AM – 12:00 AM**
 - Mirage HC OGI / TDLAS Multi-Sensor Aerial OOOOa Inspections – Roy Massengale – Enrud

Room 616B – Oil & Gas Methane Detection, Quantification and Monitoring Technologies

- **09:00 am – 09:30 am**
 - Jon Morris, Providence Photonics, Applications and Field Results for Quantitative Optical Gas Imaging
- **09:30 am – 10:00 am**
 - Chris Rella & Aaron Van Pelt, Picarro, Methane Data Collection, Gas Infrastructure, Transformational Analytics, & Actionable Results
- **10:00 am – 10:30 am**
 - Handheld TDLAS for Quick, Safe Methane Leak Detection in Difficult to reach Areas – Sensit Technologies
- **10:30 am – 11:00 am Break to Enjoy the Exhibit Hall Refreshments**
- **11:00 am – 11:30 am**
 - Mohammed Belal, Mirico, Laser Dispersion Spectroscopy – Large Area Fugitive Monitoring
- **11:30 am – 12:00 pm**
 - Peter Roos, Bridger Photonics, Gas Mapping LiDAR (GML) Methane Emission Quantification & Operational Efficiency

Track Agenda – Emissions Monitoring Training Classes

Training Classes – Wednesday February 19, 2020

- **Room 404 1:00 PM – 5:00 PM**
 - **Continuous Emissions Monitoring Systems (CEMS) Fundamentals – Tim Kuiken, M&C TechGroup, Brian Fowler, ESC, Paula Metz, Alliance Source Testing**
 - The training session will cover the fundamentals of continuous emissions monitoring systems (CEMS) from the regulatory drivers requiring CEMS, to CEMS equipment, design, control, and reporting software. The class will discuss the various types of CEMS including fully extractive cold/dry, hot/wet, dilution extractive, and in-situ as well as hardware including probes, sample line, coolers, filters, analyzers, controllers, and data acquisition and handling systems (DAHS).
- **Room 410 1:00 PM – 5:00 PM**
 - **Mass Spec Gas Analyzers: Operation and Maintenance – Extrel**
 - Industrial mass spectrometers are fast, full-composition gas analyzers used for flare gas compliance, trace contaminants in air, and fenceline monitoring. They continuously quantify hydrocarbons, sulfurs, air components, VOCs, and other chemicals in complex, dynamic samples. This course will cover all the basics of operation, maintenance and application. Come see the mass spec, learn how to calibrate and run an analysis, and perform a full PM.

Training Classes – Friday February 21, 2020

- **Room 404 8:00 AM – 12:00 PM**
 - **Continuous Emissions Monitoring Systems (CEMS) For Experts – M&C TechGroup, ESC, Alliance Source Testing**
 - Description Coming Soon.
- **Room 404 1:00 – 5:00 PM**
 - **Fenceline Monitoring Training – ESC**
 - Description Coming Soon.