U.S. Environmental Protection Agency
Methane Detection Technology Virtual Workshop

August 23-24, 2021

All times are in Eastern Daylight Time

Day 1 – August 23, 2021

12:00 Welcome and Introduction – *U.S. Environmental Protection Agency (EPA)*

12:15 Opening remarks – *Tomás Carbonell, Deputy Assistant Administrator for Stationary Sources, Office of Air and Radiation, U.S. Environmental Protection Agency*

Session 1 – Aerial Measurements

12:25 Perspectives from an Aerial Emissions Campaign – *Erin Tullos, Ph.D., University of Texas*

12:45 PermianMAP: EDF's Campaign Using Multiple Technologies to Measure Oil and Gas Methane Emissions and Facilitate Mitigation in the Permian Basin – *David Lyon, Ph.D., Environmental Defense Fund*

1:05 Airborne Methane Sensing: From Single-Blind Testing to Basin-Wide Quantification – *Evan Sherwin, Ph.D., Stanford University*

1:25 Evaluation of Aerial Technology to Detect and Quantify Upstream Oil and Gas Sector Methane Emissions – *Matt Johnson, Ph.D., Carleton University*

1:45 **Audience Questions for Panel 1, moderated by EPA**

2:05 Break and opportunity to view the virtual vendor hall

Session 2 – Industry Experiences I

2:20 Airborne Methane Surveys Pay for Themselves: An Economic Case Study of Increased Revenue from Emissions Control – *Forrest Johnson and Andrew Wlazlo, Triple Crown Resources*

2:40 Key Takeaways from Deploying Four Novel Methane Detection Technologies – *Joey Bernica, P.E., TRP Energy*

3:00 Oxy's Continuous Air Monitoring Project – *Chad Schlictemeier, Occidental*

3:20 Methane Detection Technology as Part of a Pathway to Measurement – *Howard R. Dieter, P.E., Jonah Energy*

3:40 **Audience Questions for Panel 2, moderated by EPA**

4:00 Break and opportunity to view the virtual vendor hall

Session 3 – Sensors

4:15 Optimizing Single Site Fixed Monitoring Solutions to Quickly Find and Fix Methane Emissions from Production Facilities – *Stephen Conley, Ph.D., Project Falcon*

4:35 Improved Low-Cost Sensor Normalization Techniques for Quantifying Methane from Oil and Gas Operations – *Kristen Okorn, Ph.D., University of Colorado*

4:55 Work Practice Development, Evaluation, and Lessons from Deployment of Vehicle-Based Technology for Emissions Measurement – *Thomas Barchyn, Ph.D., University of Calgary*

5:15 Designing Fixed Sensor Methane Monitoring Networks: Case Study of Project Astra – *David Allen, Ph.D., University of Texas*

5:35 **Audience Questions for Panel 3, moderated by EPA**

5:55 Day 1 Closing Remarks – David Cozzie, Deputy Director, Sector Policies and Programs Division, Office of Air Quality Planning and Standards and *U.S. Environmental Protection Agency*

Day 2 – August 24, 2021

12:00 Welcome – *U.S. Environmental Protection Agency (EPA)*

12:15 Opening Remarks – *Tomás Carbonell, Deputy Assistant Administrator for Stationary Sources, Office of Air and Radiation, U.S. Environmental Protection Agency*

Session 4 – Equivalency

12:25 Colorado AIMM Program – *Jennifer Mattox and Tim Taylor, Colorado Department of Public Health and Environment*

12:45 Using the Leak Detection and Repair Simulator (LDAR-Sim) to Demonstrate Equivalence of Emerging Methane Measurement Technologies – *Thomas Fox, Ph.D., Highwood Emissions Management*

1:05 Recent Observations on Testing Current and Next-Generation Leak Detection Solutions – *Dan Zimmerle, Colorado State University*

1:25 FEAST-Based Evaluation of Methane Leak Detection and Repair Programs Using New Technologies – *Arvind Ravikumar, Ph.D., Harrisburg University*

1:45 **Audience Questions for Panel 4, moderated by EPA**

2:05 Break and opportunity to view the virtual vendor hall

Session 5 – Industry Experiences II

2:20 BPX, Methane Measurements – *Faye Gerard, Ph.D., bp America*

2:40 Perspectives on Methane Detection Technologies – *Adam Pacsi, Ph.D., Chevron*

3:00 Insights of Trialing and Operationalizing Aerial Technologies – *Matthew Kolesar, ExxonMobil*

3:20 Technology Toolkit for Methane Emissions Detection – *Milind Bhatte, Ph.D., ConocoPhillips*

3:40 **Audience Questions for Panel 5, moderated by EPA**

4:00 Break and opportunity to view the virtual vendor hall

Session 6 – Satellites

4:15 Detection and Quantification of Methane Super-Emitters by Combining Multiple Satellite Instruments – *Joannes Maasakkers and Ilse Aben, SRON Netherlands Institute for Space Research*

4:35 Using Imaging Spectroscopy to Detect and Mitigate Methane Plumes in California – *Jorn Herner, Ph.D., California Air Resource Board*

4:55 Towards a Multi-Scale Methane Monitoring System of Systems – *Riley Duren, University of Arizona*

5:15 Case Study: Incorporating Satellite Technology into Your Gas Operations Emission Reduction Strategy– *Michelle Mendoza and Lauren Crowe, Duke Energy*

5:35 **Audience Questions for Panel 6, moderated by EPA**

5:55 Closing Remarks – David Cozzie, Deputy Director, Sector Policies and Programs Division, Office of Air Quality Planning and Standards and *U.S. Environmental Protection Agency*