Measurement Challenges and Metrology for Monitoring CO_2 Emissions from Smokestacks

April 20 – 21, 2015

April 20, 2015

8:45am	Registration	Front of 215/C103
9:00am	Welcome / Introductions	215/C103
9:15am	James Whetstone (NIST)	215/C103
	Overview of the NIST Greenhouse Gas and Climate Science Measurements Program	
	CEMS/RATA Measurements	
9:45am	Toralf Dietz (Sick Engineering Gmbh)	215/C103
	Improving the Accuracy of CEMS by Means of Multipath Ultrasonic Flowmeter	
10:15am	Break	Front of 215/C103
10:30am	Donald Giel (Teledyne)	215/C103
	Practical Experience with CEMS Measurements	
11:00am	David Elam Jr. (TRC Environmental Corp.)	215/C103
	Overview of ASTM D7036	
11:30am	Scott Swiggard (Golden Specialty Inc.)	215/C103
	Volumetric Flow Measurements of Stationary Sources: Common Mistakes,Corrective Measures	
12:00pm	*Discussions*	215/C103
12:30pm	Lunch	Cafeteria
	Pitot Probe Calibrations	
1:45pm	Woong Kang (KRISS)	215/C103
	Experimental and Numerical Investigation of the Factors Affecting the S-type Pitot Tube Coefficients in GHGs Monitoring	
2:15pm	Iosif Shinder (NIST)	215/C103
	Wind Speed Measurements of Pitot Tubes	
2:45pm	Break	Front of 215/C103
3:00pm	Eric Harman (CEESI)	215/C103
	Alternate Pitot-Tube Calibration Methodology Using NIST Traceable Mass Flow Standards	
3:30pm	Hsin-Hung (Kyle) Lee (Industrial Technology Research Institute)	215/C103
	3D Pitot Tube Measurements and Calibration in the Wind Tunnel	
4:00pm	Discussions	215/C103
5:00pm	Adjourn	215/C103

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CEMS/RATA Research Facilities and Programs

9:00am	Aaron Johnson (NIST)	215/C103
	Scale-Model Smokestack Simulator (SMSS) – A Facility to Study the Uncertainty of CEMS and RATA Flow Measurements	
9:30am	Liang Zhang (National Institute of Metrology China)	215/C103
	China's Research Facility for Studying CEMS and RATA Flow Measurements	
10:00am	Rodney Bryant (NIST)	215/C103
	Using the National Fire Research Laboratory (NFRL) as a Test Bed for Traceable CO_2 Measurements	
10:30am	Break	Front of 215/C103
10:45am	Mike Moldover (NIST)	215/C103
	Is a Long-Wavelength Acoustic Flow-meter Feasible?	
11:15am	Discussions	
12:00pm	Lunch	Cafeteria

Lab Tours

1:30 – 3:45pm	Lab Tours	Lobby 215
4:00pm	Break	Front of 215/C103
4:15pm	Discussions	215/C103
5:00pm	Adjourn	215/C103