

## Training Workshop on Best Practices and Handling of CEMS

28-29 November, 2022 | 0830 – 1830 IST  
Gulmohar Hall, India Habitat Centre, Lodhi Road, New Delhi 110003

Monday - 28 November 2022	
0830 - 0930	<b>Registration</b>
0930 - 0940	Inaugural Address   <b>Karthik Ganesan, Director and Fellow, Council on Energy, Environment and Water (CEEW)</b>
0940 - 0955	Opening Address   <b>Lesley Sloss, Principal Consultant, ICSC</b>
0955 - 1000	Welcome Address   <b>William Harford, Environment, Science, Technology, and Health Officer, Embassy of USA</b> <i>U.S. India Collaboration on Air Quality</i>
1000 - 1005	Special Address   <b>Soumitri Das, Project Management Specialist, USAID</b> <i>USAID engagement in Air Pollution</i>
1005 - 1020	Keynote Address   <b>H. E. Ashish Tiwari, Secretary - Department of Environment Forest and Climate Change, Government of Uttar Pradesh</b>
1020 - 1100	<b>Tea Break</b>
1100 - 1130	Overview of CEMS   <b>Sanjeev K Kanchan, Adviser, CEEW</b>
1130 - 1300	Panel Discussion   <b>CEMS implementation in India</b> <i>CEMS implementation experiences, expectations, technical and legal challenges, plan ahead and scope of collaboration and contribution for success</i>  <b>Lesley Sloss, ICSC</b> <b>J S Kamyotra, Expert</b> <b>Sanjay Upadhyaya, ELDF</b> <b>Roland Zepeck, IBD</b> <b>Stephen(Steve) Norfleet, Agora Environmental Consulting (Expert-USA)</b> <b>Hemant Mallya, CEEW</b>  Moderated by <b>Karthik Ganesan</b>
1300 - 1400	<b>Lunch</b>

1400 - 1500	Training on quality Assurance & Control for CEMS - USA System   <b>R Sean Warden, QSTI Trainer, USA</b> <i>Performance Test requirements, Tests procedures and Test for quality assurance, quality control - USA</i>
1500 - 1600	Training on quality Assurance & Control for CEMS - European System   <b>Roland Zepeck, International Business Development</b> <i>QAL system, AST, Lab and field tests, infrastructure</i>
1600 - 1630	Tea Break
1630 - 1730	Data Acquisition, Handling and Analysis   <b>Sudheesh Narayanan, Founder, Knowledge Lens</b> <i>DAS architecture, Regulatory requirement, Data Analysis</i>
1730 - 1745	<b>Thank you / Closing Remarks</b>

**Gala Dinner: 1930 onwards** at Silver Oak Lawn, Habitat World at India Habitat Centre, Lodhi Road. New Delhi – 110003  
(Entry from Gate 3 on Vardhaman Marg)

<b>Tuesday - 29 November 2022</b>	
0930 - 1015	Suitable CEMS Selection   <b>Sankar Kannan, Vice President, SICK</b> <i>Guidance for specification, tendering, selection, after sales support</i>
1015 - 1100	PM CEMS Fundamentals   <b>Roland Zepeck, IBD &amp; Stephen Norfleet, Expert - USA</b> <i>Suitability, limitations, Calibration</i> <i>Maintenance Experience- alignment, cleaning etc.</i>
1100 - 1130	<b>Tea Break</b>
1130 - 1215	Gaseous CEMS Fundamentals   <b>Stephen Norfleet, Agora Environmental Consulting (Expert-USA)</b> <i>Suitability and limitations- PM, SO<sub>2</sub>, NO<sub>x</sub>, O<sub>2</sub>, CO<sub>2</sub></i> <i>Maintenance- Span, drift, alignment, cleaning etc. &amp; solution</i>
1215 - 1300	CEMS Installation and Setting   <b>R Sean Warden, QSTI Trainer, USA</b> <i>Correct installations- PM, SO<sub>2</sub>, NO<sub>x</sub>, O<sub>2</sub>, CO<sub>2</sub>, Hg</i> <i>Correct setting, Data connectivity and standardization</i>
1300 - 1400	<b>Lunch Break</b>
1400 - 1530	PM CEMS Calibration   <b>Stephen Norfleet, Agora Environmental Consulting (Expert-USA)</b> <i>SRMs- BSEN 13284-1, IS: 11255 Part 1 or EPA method 17 or EPA method 5 or BS ISO 9096:2003, Calibration process</i>
1530 - 1600	Tea Break
1600 - 1645	Gaseous CEMS Calibration   <b>R Sean Warden, QSTI Trainer, USA</b>

	<i>Calibration system setup- tubing and cylinder set-up</i> <i>Calibration check, Remote calibration</i>
1645 - 1730	Mercury Monitoring   <b>Roland Zepeck, IBD, Germany and Steve Norfleet, Expert, USA</b> <i>Suitability, limitations, CEMS, Sorbent-trap</i> <i>Maintenance issues &amp; solution</i>
1730 - 1830	Assessment and Closing   <b>Sanjeev K Kanchan, CEEW &amp; Lesley Sloss, ICSC</b>