

MEC 13

Ohio Lumex Co. Inc.

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Abstract prepared by Joseph Siperstein & Andrew Mertz

Innovations and User Experiences with Mercury Monitoring for Mercury Control

Mercury emissions from coal-fired utilities have been regulated in the U.S. by a set of rules set forth in the Mercury and Air Toxics Standards (MATS). These rules are anticipated to significantly reduce emissions and consequently lower the concentration of HAPS in the flue gas effluent from these facilities. This presentation will discuss mercury measurement options for Plant Operators to guide mercury control.

Accumulated field experience on continuous monitoring of mercury using sorbent trap technology will be presented. As sorbent traps pre-concentrate the sample prior to analysis, they have the ability to accurately measure a very wide range of mercury levels from extremely low to exceptionally high. Sorbent traps systems require very little maintenance. In fact, sorbent trap-based mercury monitors (STMM) might be the easiest approach that can accurately measure at the levels mandated by mercury regulations.

In addition, the Ohio Lumex 915 J Process Monitor provides plants the ability to see their mercury data in real-time without all of the maintenance and hassle that generally comes with a CEMS. Paired with sorbent traps for compliance, a process monitor can monitor real-time trends as well as save significant amounts of money on control technologies by optimizing the injection rates. Experience and data on mercury process monitoring at numerous plants will be presented. Further, recent testings have led to the development of the 915 JRG Process Monitor for unscrubbed gas locations. This is a monitor used specifically for long term or short term permanent monitoring upstream of the FGD or other control technologies. User experiences and recent developments will be discussed.

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Joseph Siperstein is the founder and President of Ohio Lumex. He has over 30 years of experience in applications related to industrial scale chemical processes and analytical instrumentation. For the past 15 years, Joseph has focused his attention on the power generation industry. In addition to working closely with the EPA to develop some of the flue gas measurement methods and techniques used today, his innovations in analytical instrumentation have provided much-needed solutions to the challenges facing coal-burning sources. Throughout Joseph's career and wide array of experiences in the field of chemical engineering, his philosophy has always remained to take the most practical approach to the

task at hand. This common-sense strategy continues to produce real-world results for customers and industry partners.