



THE OHIO LUMEX PHILOSOPHY

We base our business values on trust, accuracy, and reliability. We have more than 15 years of experience in the field of mercury testing at a wide variety of plants. Take advantage of our capabilities.

Real-Time Mercury Measurements & Control Evaluations

*your partner for mercury
control technology success*

Our Mercury Technology Group can come on-site and conduct real-time mercury measurements that will determine how much mercury is in your exhaust gas, how it varies as a function of your fuel source and operating parameters, how much mercury is being captured by your control technologies, and which sorbents work best for your stack conditions. We are the most cost effective way to make sure you get what you paid for and can save you hundreds of thousands of dollars by optimizing your sorbent injection rates.

The Ohio Lumex IRM-915 is PS 12A method compliant and Method 30A capable to provide Reference numbers.

- In excellent agreement with OHM and Sorbent Traps.
- Easy to transport and assemble.
- Can be used to evaluate in stack stratification.
- Successful "inlet/outlet" installations at high temperature, particulate, and vacuum sites. Used at many "Dry & Wet" stacks, cement kilns, steel recycling plants, incinerators, etc.
- AND we can determine if your CEMMs are working properly.



9263 Ravenna Rd., Unit A-3, Twinsburg, OH 44087 Tel 330.405.0837 Fax 330.405.0847

WWW.OHIOLUMEX.COM

MAIL@OHIOLUMEX.COM



IRM-915 Real Time Mercury CEMM

A NEWLY DESIGNED PROBE AND SAMPLING SYSTEM

We Can Provide Real-Time Mercury Measurements with High Levels of Accuracy.
Proven, Precise, and Widely Used RA-915+ Technology.
Modular Portable Design.

FEATURES

- ABLE TO PROVIDE SPECIATED OR TOTAL HG RESULTS
- COMPLIANT WITH EPA PS 12A FOR ACCURACY, DRIFT, & STABILITY
- ACCURATE FROM 0.1 – 5000 $\mu\text{g}/\text{m}^3$
- COMPACT, MOBILE, AND RUGGED PROBE & SAMPLING SYSTEM
- LOW POWER, AIR, AND SPACE REQUIREMENTS

The IRM-915 Mobile CEMM provides Reference Level Measurements which comply with all EPA mandated requirements. This fully mobile system, which is light weight and can be set up in a few hours, offers real-time measurements with response times as low as 5 seconds. It is able to sample in harsh environments with high temperatures, particulate loading, vacuum, and moisture levels. It can be installed indoors or out, with short sample lines or lines as long as 300 feet. The IRM-915 can run continuously for months at a time while completing all daily drift tests, audits, and RATA requirements.

real-time testing solutions for your control technology needs

MERCURY CONTROL TECHNOLOGY PERFORMANCE VERIFICATION

This is the perfect tool for on-site performance evaluations of Mercury Removal Systems. It can be easily set up at the outlet to show you mercury reduction in real-time. Or, two systems can be set up simultaneously to show pre and post control technology mercury emissions. This RATA proven Mobile CEMM was developed for temporary at-stack installation and flue gas testing with the ability to speciate.

MERCURY CONTROL TECHNOLOGY TUNING FOR OPTIMIZATION

Have you ever asked yourself if you are minimizing your costs? Verify the operation of your PAC system according to your specifications (feed rate changes, etc.) Discover the optimal injection location, prevent overfeeding, and establish the most cost effective sorbents for your stack. Let us help you determine the prime performance specs of your PAC system to gain the required mercury reduction at the least possible cost.



COST EFFECTIVE MERCURY MEASUREMENTS

Knowing the mercury emission levels at your facility will help you decide on the most cost-effective means of control. We provide true and accurate mercury measurements that answer your mercury questions.



CONTROL STRATEGIES

Before committing to a permanent PAC system we can help you to evaluate the various options; including but not limited to: Calcium Bromide & Calcium Chloride injection, as well as alternative sorbents. If you have a system, we can economically provide and operate our CEMM to help you assess your control strategies.



SOLUTIONS

To reduce operational uncertainties, compliance risks, and costs, now is the time to answer questions about your mercury control technology.



MINIMIZE YOUR COSTS FOR MERCURY REDUCTION. ASK US HOW WE CAN HELP!

Make sure you got what you paid for and obtain a thorough evaluation of your installed PAC system.

IRM-915 Real Time Mercury CEMM

A FIELD TRANSPORTABLE PROBE AND SAMPLING SYSTEM

Test Your Mercury Emissions and Evaluate the Efficiency of your Installed PAC System.
 Make Sure Your Sorbent Effectiveness has not Changed.
 Optimize your Sorbent Injection Rate.

“With U.S. mercury regulations pending and control technologies in the full-scale demonstration stage, accurate and reliable measurement of mercury in flue gas is becoming more important than ever.”

(Power Magazine August 2007)

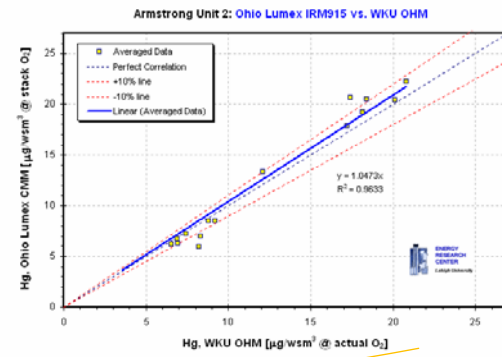
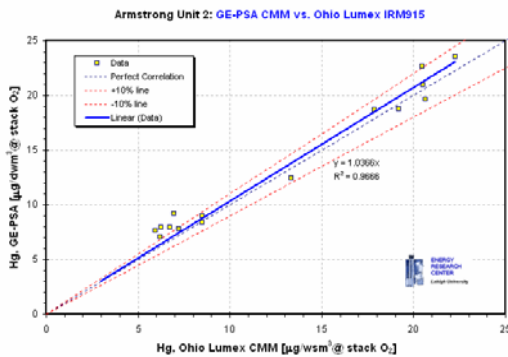
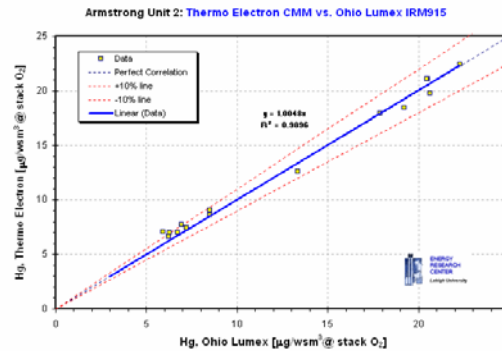
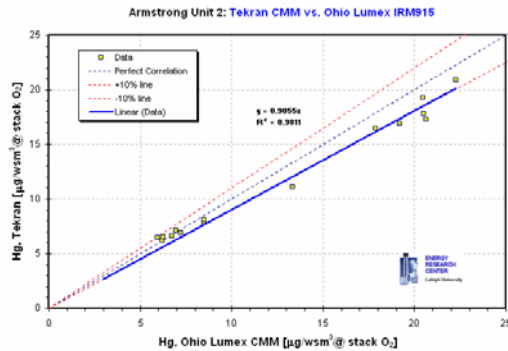
STUDY RESULTS

Dr. Nenad Sarunac (Lehigh University), Jeffrey Ryan & John Schakenbach (U.S. EPA) performed a study at Allegheny Energy's Armstrong Power Station in Adrian, PA. (Results published in Power Magazine 08/07)

The study represented one of the most comprehensive examinations of Hg field measurement by comparing with the Ontario Hydro Method (OHM) and Sorbent Traps (ST), 4 vendors of mercury monitors including our Atomic Absorption with Zeeman background correction IRM-915. The analyzer was installed at the stack platform connected with a short heated umbilical line. Field testing of the CEMs was then performed at the Armstrong Power Plant on Unit 2 in July 2006 by a team of U.S. and EU researchers.

Pennsylvania and Virginia bituminous coals with high, low, and variable Hg content was fired during testing. As you can see by the results, the IRM-915 was in excellent agreement with the OHM and Sorbent Traps and performed equal to or better than the competition.

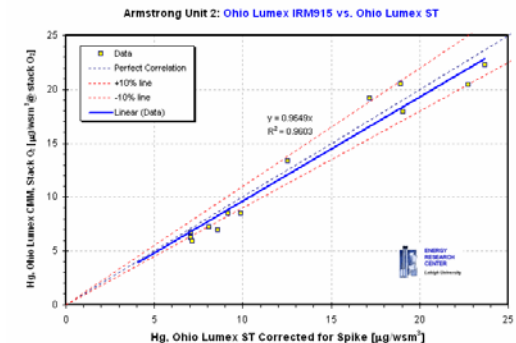
Graphs Courtesy of Lehigh University



TECHNOLOGY

RATA-proven Ohio Lumex IRM-915 CEMM was developed for permanent or temporary at stack installation and Flue Gas testing for Total and Elemental mercury. It is compliant with PS 12A & Method 30A capable, and was designed as an Instrumental Replacement for Ontario Hydro Method. This is a great tool for testing certification of permanent CEMM's and on-site performance evaluations of Mercury Control Technologies.

- Real-Time continuous mercury monitor based on the analytical approach of Thermo Catalytic Conversion and Atomic Absorption for detection of mercury with Zeeman background correction. This approach requires no pre-concentration on gold eliminating the associated problems.
- The use of a multipath cell combined with “dry” converter provides the highest sensitivity with no interferences from the combustion gas matrix.
- High converter temperature (700°C), short residence time and up to 1:100 dilution prevents Mercury atoms from recombining with any “active” species generated due to high temperature decomposition of flue gas.
- Heated Probe, Heated Self Cleaning Filter with Dilution/Conversion assembly used for “High” or “Low” particulate loading. Results reported onsite on “wet” basis. This has saved our clients hundreds of thousands of dollars in testing and emission fees.



MINIMIZE YOUR COSTS FOR MERCURY REDUCTION. ASK US HOW WE CAN WE HELP!

Make sure you got what you paid for and obtain a thorough evaluation of your installed PAC system.

IRM-915 Real Time Mercury CEMM

A RELIABLE & ACCURATE ON-SITE Hg TESTING SOLUTION

US EPA Reference Method 30A Capable.

PS 12A Compliant.

Proven.

For More Information,
Please Call or Email Ohio Lumex at:
888-876-2611 or 330-405-0837
mail@ohiolumex.com

TECHNICAL SPECIFICATIONS

Detection Limit for Flue Gas: 0.1 – 5000 $\mu\text{g}/\text{m}^3$, "Total/Elemental" mercury on "wet" basis.

Calibration: Mercury Calibration gas, NIST traceable SRM's with Hovacal generator. NIST traceable Generator.

Utilities: 220/110v/60Hz, 20amp.
Compressed air, 15-20 liters at 80 psig.

Dimensions and Weight: One Rolling Pelican Case, 90 lbs., One Probe/ Filter/ Converter, up to 100 lbs.

Data Processing: MS Windows operating software. Laptop Computer.

Data Output: 1 sample per 5 – 30 seconds.

Maintenance: Particulate cartridge filter. Blowback. Scrubbers replaced as required.

Analyzer is detachable and replaced in 48 hours.

real-time testing solutions for
your control technology needs



MINIMIZE YOUR COSTS FOR MERCURY REDUCTION. ASK US HOW WE CAN WE HELP!

Make sure you got what you paid for and obtain a thorough evaluation of your installed PAC system.

