



# QuickSEM™ Mercury Emissions Screening and Monitoring Service – *Commercialization Status*

*A service of EPRIsolutions*

Scott A. Drennan, P.E.  
Manager, Engineering Services  
[sdrennan@eprisolutions.com](mailto:sdrennan@eprisolutions.com)  
650-855-2473



# QuickSEM™ Monitoring Service Options

- Mercury Emissions Screening Service
  - Turnkey, fixed price service
  - EPRI solutions provides equipment, training, manages laboratory testing of traps
    - Short duration tests (1 week of dual 24 hour samples)
  - Engineering analysis of results
  - Addition of Hg speciation with QSEM™ using FAMS traps
  - Substantially lower cost than Ontario Hydro, especially for multiple unit applications
- Mercury Emissions Monitoring Service
  - Turn key service to meet EPA mercury monitoring regulations

# EPRI Solutions QSEM™ Operations Status

- EPRI Solutions Roles
  - Marketing
  - Applications Engineering
  - Project Management
  - Field Service
- Client Engagement Status:
  - Contracted currently for 24 stacks (6 clients)
  - Esol QSEM Service has logged over 2,000 operating hours to date
  - Expected to test over 60 stacks this summer (over 15 clients)



# QSEM™ Service Value

- Highly qualified and integrated team providing reliable total mercury emissions measurements to guide future control & monitoring decisions
- Leasing of the QSEM™ unit
- Engineering analysis of mercury emissions results
- Integration of the FAMS Hg speciation tests using QSEM™
- Simplicity of system design
  - Operation by plant personnel
  - Non-hazardous mercury trap material
- Gaining QSEM™ experience for future monitoring needs
- Technical guidance by EPRI R&D

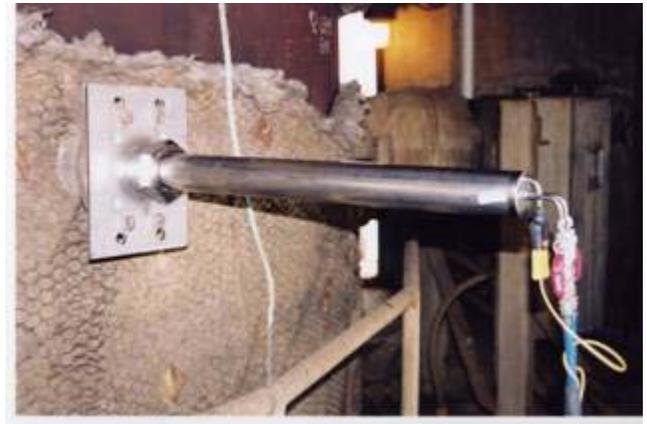
# What QSEM™ Measurements are Clients Taking?

- Mercury emissions screening at the stack
  - Total mercury emissions (QSEM)
  - Speciated mercury emissions (FAMS)
- Shootout with Ontario Hydro
- Variations in LOI
- SCR in and out of operation
- Upstream and downstream of FGD
- Calibration (RATA) of mercury CEM's



# Insights from Service and Clients

- QSEM™ Developmental Areas ...
  - R&D system to commercial transition
  - Wet stacks and particulate laden environments
  - Probe design and longevity
  - Maximum temperature of trap
  - Computer required for data logger
- QSEM™ Strengths ...
  - System simple to operate, training takes about an hour
  - Robust sample quality
  - High quality plant technicians
  - 30 minute trap swapout time



# Plant Staff Easily Operate QSEM™



# Action Plan

- Improve system design
  - Monitor
  - Probe
  - Traps and holders
  - Shorten analysis turnaround  
**GOAL: 24 hour turnaround**
- Adjust service offering to meet EPA and local regulations
- Remote operation capability
- QSEM™ as a RATA
- Continue to help generators apply QSEM™ technology



# Summary

- Provides a turn key mercury monitoring service available today
- Significantly lower cost than continuous mercury monitoring systems
- Use existing plant staff, EPRI solutions equipment, get quality data
- Highly experienced, qualified team to provide reliable data and analysis helping guide decisions with critical capital and operating cost impacts

Contact: **Scott A. Drennan**  
Manager, Emissions Engineering Services  
sdrennan@eprisolutions.com  
650-855-2473 phone

