

Tekran News – For Immediate Release

Title: Tekran Mercury CEM Passes Certification tests at two EPA test sites

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Savannah, GA – EPRI CEM User Group Meeting & Exhibit, May 05, 2005

The EPA announced today that the Tekran Series 3300 Speciating Mercury Continuous Emissions Monitor (CEM) system had passed all certification tests and relative accuracy tests (RATA's) at both of their long term test sites.

On March 15, the US EPA promulgated regulations limiting the emissions of mercury from coal fired power plants. The goal of the legislation is to reduce mercury emissions from 48 tons per year to 15 tons. The regulations require that plants monitor their mercury emissions on a continuous basis.

In the fall of 2004, the EPA invited all instrumentation manufacturers with commercially available mercury continuous emissions monitoring systems to supply instruments for long term trials at two test sites. The purpose of the trials is to determine whether any of the existing systems were capable of meeting the EPA's stringent performance requirements and if these systems were capable of reliable, long term operation. The first site, in North Carolina is a typical "dry" stack. The second site in Kentucky has a wet scrubber. Four vendors responded to the EPA challenge.

During presentations at the EPRI User Group meeting, Robin Segall of the EPA Office of Air Quality Planning and Standards, revealed that one vendor's system had passed all Part 60 and Part 75 certification tests at both sites. The regulations require a suite of pre-qualification tests. The final and most difficult trial is a set of relative accuracy (RATA) assessments. A series of twelve two hour runs of the CEM's against the EPA reference method were conducted. The current EPA reference standard, the "Ontario Hydro method" is a complex analysis involving a series of wet impingers that absorb mercury from the flue gas stream. Subsequent wet chemical analysis determines the amount of mercury captured in each impinger.

The Tekran Series 3300 CEM was the only system of the four vendors that passed all tests at both sites. The most crucial test, relative accuracy (RATA) is scored as a percentage deviation from the accepted reference method value. In order to pass, a system must have a RATA score of less than 20%. For low mercury values, an absolute deviation of $\pm 1 \text{ ug/m}^3$ is also allowed.

The Series 3300 scored a relative accuracy of 10.5% at the dry stack test site in North Carolina. The only other vendor with an operating system at this site did not pass the RATA. The Series 3300 scored a relative accuracy value of 18.9% at the second, wet scrubber site. The second best system had a relative accuracy of 38.1% and averaged 0.96 ug/m³ lower than the reference method readings. The remaining system scored 51% and failed the RATA. The Tekran systems have demonstrated high reliability and data availability at both locations.

In other developments, EPA scientists described a draft protocol for validation of an instrumental reference method (IRM) to replace the time consuming and complex Ontario Hydro method. The IRM relies heavily on the dynamic spiking of the stack gas matrix with a series of test gases. The Tekran Series 3300 was the instrument used for validating the protocol and the system has this dynamic spiking capability built in. ***The Tekran system passed a full battery of rigorous interference tests as part of the method validation.*** Several other presentations at the conference described favourable field experience with the Tekran CEM.

The Series 3300 is available now and units have been in continuous operation at actual coal fired facilities since November 2003. The systems have demonstrated high reliability, ***total immunity to all interferences*** (including SO₂), very low cost of operation and excellent accuracy.

For further information visit <http://www.tekran.com/> or call 416-449-3084.

Photograph: 300 DPI, CMYK.

File: http://www.tekran.com/news/Series_3300_rack.jpg

Caption: Tekran Series 3300 Speciating Mercury CEM

