

Reinhold Environmental Ltd.



***2007 APC Round Table & Expo
Presentation***

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**Particulate Matter
Continuous Emission Monitor
(PM CEM)**

WESTERN KENTUCKY ENERGY

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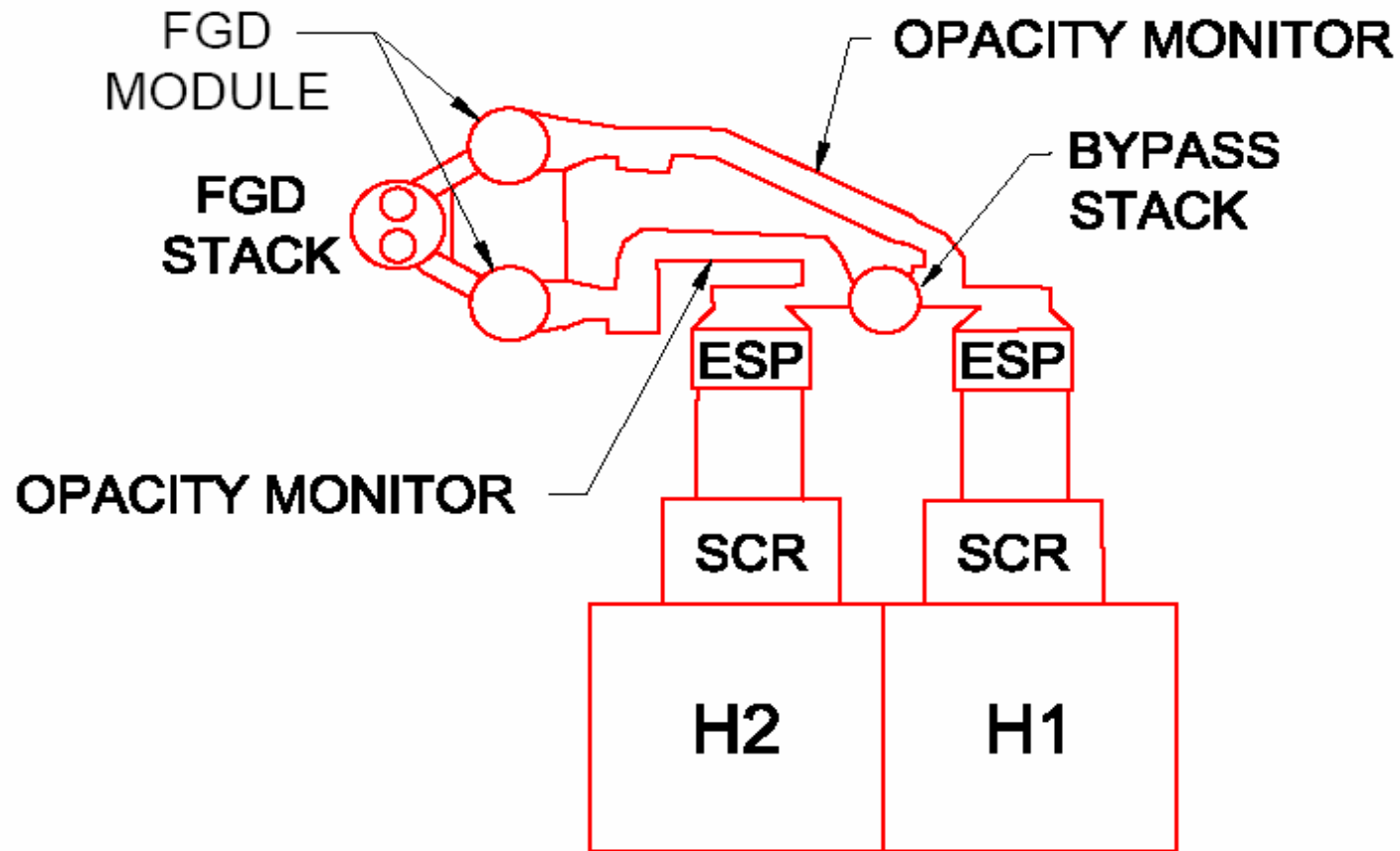
- EON-US
 - Regulated
 - LG&E
 - KU
 - Un-Regulated
 - WKE
 - ~ 1600 MWg
 - 9 Coal Fired Units

WKE PM CEM

- 2 MSI Beta Gauges
 - Installed, Certified, Permitted
 - Voluntary Application
- Operation / Final Permit
 - H2: 1 ½ years / May 2006
 - H1: 6 months / April 2007

Reid/Henderson Station Two

H1 and H2: Identical 170 MWg Units



GOAL

- Remove non-representative emission indication that was deterring unit operation
 - COM only monitoring operation of control equipment (ESP)
 - Credit for FGD particulate mass emissions removal

Title V Permit

- Voluntary Application of PM CEM
- Significant Title V Permit Revision
 - Particulate emission rate = “Compliance Assurance Monitoring” (CAM)
 - No COM for compliance
 - Opacity by Method 9 every 14 boiler operation days
 - Daily ESP primary and secondary voltages and currents and when COM out of service

Issues

- Plugged nozzle due to mist eliminator carry-over
- AC deterioration in acid mist atmosphere
- High particulate event activated testing to re-establishment the high point
- FGD has no “turn-down” to drive particulate up
 - Monitor is set to be accurate at very low emission rate compared to standard

Advantages

- No opacity monitor trigger level mumbo jumbo
- Indicator of Mist Eliminator Buildup
- Average maintenance
 - Probe pulled once per quarter.

Summary

- No unit operation restrictions due to non-representative continuous opacity monitor output
- Maintenance level is typical of other CEMs
- Space needed in stack grating for shelter
- Annual QA requirements result in more Method 5 testing