

Brominated Sorbents:
Effects on Emissions of Halogenated Air Toxics

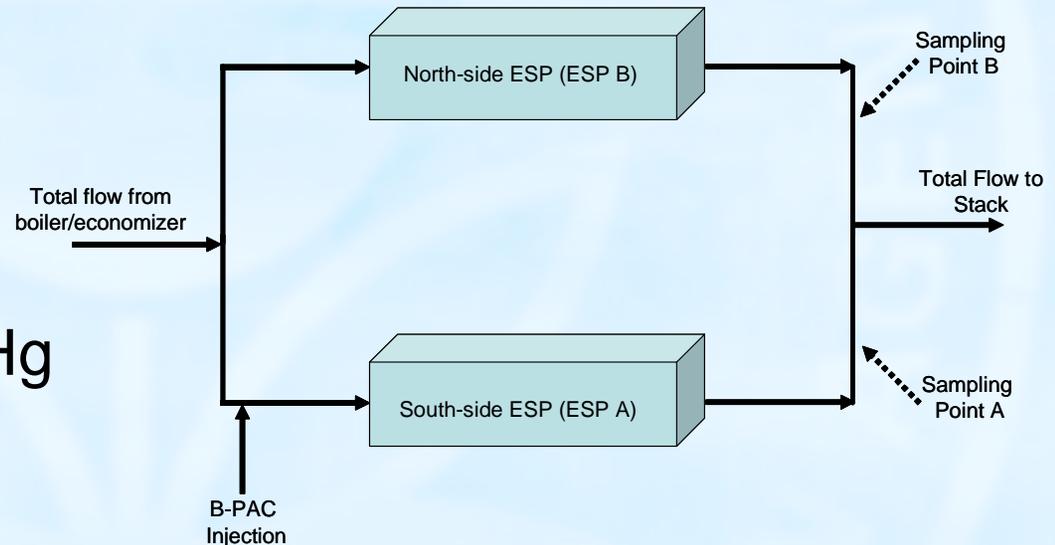
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U.S. Environmental Protection Agency
Research Triangle Park, NC

DOE Hg R&D Program Review
July 2005
Pittsburgh, PA

Test Conditions

St. Clair Power Plant (DTE)

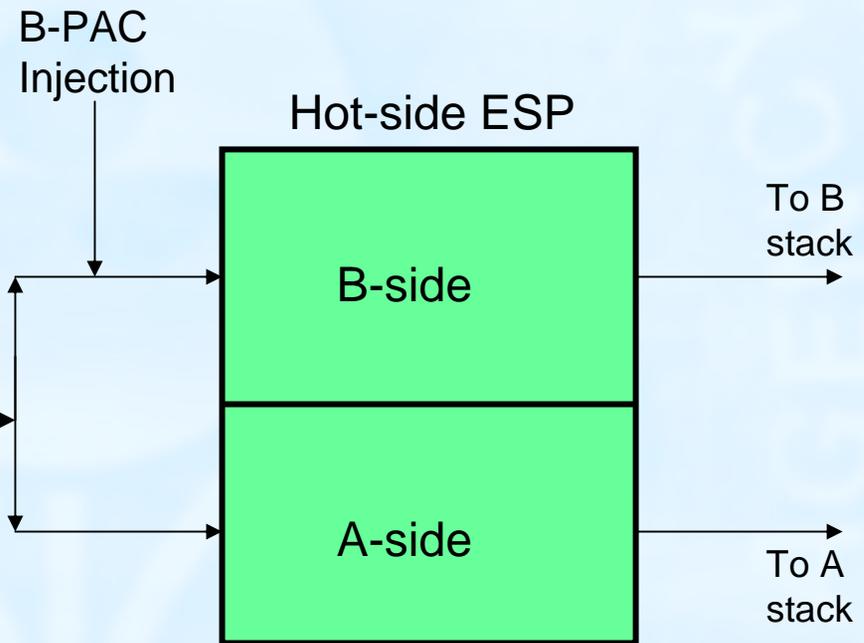
- Unit #1
- 85:15 blend of PRB:E.bituminous coal
- Cold-side ESP
- Injecting B-PAC™ for Hg control
- Sampled in the duct immediately following ESP
- 4 hr sampling period



Test Conditions

Buck Steam Station (Duke Power)

- Unit #6
- E. Bituminous coal
- Hot-side ESP
- Injecting B-PAC™ for Hg control
- Sampled at stack
- 8 hr sampling period for tests 1 and 2
- 4 hr sampling period for test 3



PCDD/F Measurements

PCDD/F Total (ng/dscm)	Average	Std Dev	Test #1	Test #2	Test #3
St. Clair, Untreated	0.9475	0.7317	0.5310	0.5193	1.7924
St. Clair, Treated	0.5105	0.5131	1.0609	0.4254	0.0453
Buck, Untreated	0.8623	0.8172	0.3908	1.8059	0.3903
Buck, Treated	1.0284	0.7031	1.6149	1.2213	0.2489

ND = DL

	Field Blank	Field Blank	Analytical Blank
St. Clair	1.0247		0.0789
Buck	0.0048	0.0045	0.0045

**Preliminary Results –
Do Not Quote or Cite**



PBrDD/F Measurements

PBrDD/F Total (ng/dscm)	Average	Std Dev	Test #1	Test #2	Test #3
St. Clair, Untreated	0.5664	0.3782	0.8507	0.7112	0.1372
St. Clair, Treated	2.1750	3.4703	6.1815	0.2299	0.1135
Buck, Untreated	0.4301	0.5625	0.0732	0.1386	1.0785
Buck, Treated	0.5186	0.6676	0.1145	0.1521	1.2892

	Field Blank	Field Blank	Analytical Blank
St. Clair	0.2104		0.3968
Buck	0.0563	0.0501	0.0559

ND = DL

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Comparison to MWC Limits

(ng/dscm)	Average PCDD/F Total	Average PBrDD/F Total
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ND = DL

MWC	Limit PCDD/F Total
small facilities	13
large units without ESP	30
large units with ESP	60

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