DRAFT
Attorney-Client Privileged Communication

Costs For Air Pollution Control Equipment For Oil-Fired Industrial Boilers

Pollutant	PM & Acid Gas	CO	Mercury	Dioxin
Likely Control	• SDA (Spray Dryer Absorber) for acid gas; OR • SDA & FF (Fabric Filter) for PM; OR • No control (78)[1]	• Oxidation Catalyst (CATOX)	• Carbon Injection (CI)	• Possible FF
Comments	• Units need only a SDA if they already have a FF or ESP (Electrostatic Precipitator) • Units need a SDA & FF if they do not already have a FF or ESP		• CI necessary only if the unit does not have a wet scrubber	• In some cases, the CI control for mercury may also control for dioxins; however, where a unit has an ESP, this chart assumes it will need to add a FF as well. • Thus, the 186 units with ESPs will also need FFs.
Capital Cost Per Unit	• Range of SDA Costs Per Unit: $6M-$40M (some units had zero costs for SDAs)[2] • Average Per Unit Cost of SDA: $16M[3] • Range of SDA & FF Costs Per Unit: $5M-$25M • Average Per Unit Cost of SDA & FF: $14M[4]	• Range of CATOX Costs Per Unit: $1M-$6M (some units had zero costs for CATOX) • Average Per Unit Cost of CATOX: $2M[5]	• Range of CI Costs Per Unit: $0.2-$5.3M (some units had zero costs for CI) • Average Per Unit Cost of CI: $1.4M[6]	• We need per unit costs for FFs on these units.
O&M Cost Per Unit	Need O&M Cost Info	Need O&M Cost Info	Need O&M Cost Info	Need O&M Cost Info
# of Oil-Fired Boilers for which EPA has Data	442 • 324 need SDAs; • 40 need SDAs and FFs; • 78 need no control	442 • All 442 need CATOX	442 • 367 need CI, i.e., do not have wet scrubbers	442 • 186 units need FFs, i.e., have ESPs
Total Cost				

[1] I am assuming that 78 units have no control b/c they already have sufficient controls in place for PM and acid gas – is this correct?
[2] The spreadsheet indicates that some units need SDAs but have zero costs associated with them – why is this?
[3] Average SDA cost was calculated by adding up the per unit cost for each unit requiring a SDA to get the total cost for all units requiring a SDA ($5,223M) and then dividing the total cost by the number of units requiring a SDA (324).
[4] Calculation per the formula above: $573M ÷ 40.
[5] Calculation per the formula above: $862M ÷ 442.
[6] Calculation per the formula above: $506M ÷ 367.