BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Best Available Control Technology (BACT) Guideline

Source Category

Source:	**Boiler**	**Revision:**	**5**
		Document #:	**17.3.1**
Class:	**≥ 50 MMBtu/hr Heat Input**	**Date:**	**08/04/10**

Determination

Pollutant	BACT 1. Technologically Feasible/ Cost Effective 2. Achieved in Practice	TYPICAL TECHNOLOGY
POC	1. n/d 2. n/s	1. n/d[f] *2.* Good Combustion Practice[a]
NOx	1. n/d[b, c, d] 2. n.d[a, c, d]	1. Selective Catalytic Reduction (SCR) + Low NO_x Burners (LNB) + Flue Gas Recirculation (FGR) [b, c, d] 2. Ultra Low NO_x Burners (ULNB) + FGR [a, c, d]
SO_2	*1.* Natural Gas or Treated Refinery Gas Fuel w/ <.50 ppmv Hydrogen Sulfide and <100 ppmv Total Reduced Sulfur [a,c] *2.* Natural Gas or Treated Refinery Gas Fuel w/ <100 ppmv Total Reduced Sulfur [a,c]	1. Fuel Selection[a,c] 2. Fuel Selection[a,c]
CO	1. 10 ppmv @ 3% O_2 Dry [f] 2. 50 ppmv @ 3% O_2 Dry [a, c, e]	1. Oxidation Catalyst [f] 2. Good Combustion Practice in Conjunction with SCR System or Ultra Low NO_x Burners and FGR [a, c, e]
PM_{10}	1. n/d *2.* Natural Gas or Treated Refinery Gas Fuel [a,c]	1. n/d *2.* Fuel Selection[a,c]
NPOC	1. n/a 2. n/a	1. n/a 2. n/a

References

a.	BAAQMD
b.	SCAQMD. Cost effectiveness evaluations shall be based on emissions from firing primary fuels but not emergency backup fuels.
c.	BACT limits apply to all fuels except for emergency backup fuel oil used during natural gas curtailment. For emergency backup fuel oil: BACT(1) for NOx and CO (achieved using LNB+FGR+SCR and GCP) is 25 ppmvd NOx @3%O2, 100 ppmvd CO @3%O2, and 5 ppmvd NH3 @ 3%O2 BACT(2) for NOx and CO (achieved using ULNB+FGR and GCP) is 40 ppmvd NO_x @3%O2 and 100 ppmvd CO @#%O2 BACT(2) for SO2 and PM10 is the use of low sulfur fuel with < 0.05 wt% S BACT(2) for POC is GCP
d.	NOx determination by Continuous Emission Monitor (3-hr average), or BAAQMD approved equivalent.
e.	CO determination by Continuous Emission Monitor (3-hr average), or BAAQMD approved equivalent.
f.	The BACT(1) CO limit does not apply to boilers smaller than 250 MMBTU/hr unless an oxidation catalyst is found to be cost effective for TBACT or POC Control.