

DRAFT Preliminary Assessment - Refinery Sector

	No of Units	2011 Emissions (tpd)	2005 BARCT	2011 Emissions at 2005 BARCT (tpd)	2013 BARCT Under Consideration	2011 (or 2023) Emissions at 2013 BARCT (tpd)
		a		b		c
FCCUs/CO Boilers	8	1.08	85% red	0.60	5 ppmv	0.45
Turbines/Duct Burners	21	1.33	62.27	2.61	2.5 ppmv	0.97
Coke Calciner	2	0.55	30 ppmv	0.25	5 ppmv	0.04
Sulfur Recovery/Tail Gas Incinerators	17	0.43	RV	0.43	80% red	0.09
Boilers/Heaters > 110 mmbtu/hr	73	4.88	5 ppmv	0.82	2 ppmv	0.33
Heaters 40-110 mmbtu/hr	69	2.00	25 ppmv	0.97	5 ppmv	0.20
Heaters 20-40 mmbtu/hr	52	0.45	9 ppmv	0.10	5 ppmv	0.06
Heaters <20 mmbtu/hr	18	0.06	12 ppmv	0.02	9 ppmv	0.01
Furnace > 110 mmbtu/hr	1	0.01	30 ppmv	0.00	2 ppmv	0.00
Others	4	0.10	RV	0.10	RV	0.10
Total (tpd)	265	10.90		5.92		<u>2.25</u>

Note: The cost analysis for the 2013 BARCT standards under consideration is still on-going and therefore this assessment is subject to further analysis and refinement.