Subsumed Rule/CM	Rule-CM Description	Tier 1 Emission Factor	Tier 1 Emission Factor Units	Basis for BARCT	New Proposed BARCT (lb/mmBtu)	Control Technology	Cost Effectiveness (10 year life)	Cost Effectiveness (15 year life)	Cost Effectiveness (25 year life)
90A-C-5	Misc. Combustion (Ovens, Kilns, Calciners, Dryers, Furnaces)	0.062	lb/mmBtu	Manufacturer Information, Permit Data for Retrofit (70 units currently at or below 30 ppm)	0.036 (30 ppm)	LoNOx Burner	$9,500/ton		
9P-B-5	Petroleum Refinery FCC Units	70% reduction	lb/1000 BBL	Permit Data for Retrofit	1.439 lb/1000 BBL	SCR	$15,000 - $20,000/ton	$12,000 - $15,000/ton	$9,000 - $11,000/ton
90P-C-5	Metal Melting Furnaces	0.062 to 0.162	lb/mmBtu	Manufacturer Information, Permit Data (60 units currently at or below 45 ppm)	0.055 (45 ppm)	LoNOx Burner	$8,500/ton		
	Heat Treating Furnaces						$4,000/ton		
R1109	Refinery Boilers and Heaters > 110 mmBtu/hr	0.030	lb/mmBtu	Manufacturer Information, SJVUAPCD, Permit Data for Retrofit	0.006 (5 ppm)	SCR	$31,500/ton	$24,000/ton	$17,400/ton
R1146	Boilers and Heaters ≥ 5 MM Btu/hr	0.045	lb/mmBtu	Manufacturer Information, SJVUAPCD, Permit Data for Retrofit	0.018 (15 ppm)**	LoNOx/ Ultra LoNOx Burner	$13,200 - $21,700/ton	$10,200 - $16,700/ton	
R1146-1	Boilers and Heaters 2-5 MM Btu/hr	0.038	lb/mmBtu						
R2009	Utility Boilers	Differs by facility		Permit Data for Retrofit	0.0109 (9 ppm)	SCR	$3,100/ton*	$2,300/ton*	

*Rule 2009 utility boiler cost effectiveness is based on pre-Rule 2009 emissions.
**The proposed emission factor was determined as a weighted average using equipment counts and unit ratings based on available information.