



State of Oregon
Department of
Environmental
Quality

**EMISSION FACTORS
OIL FIRED BOILERS**

AQ-EF04

Boiler Size	Grade of Oil	Type of Firing	Pounds of Pollutant per 1000 Gallons of Oil Burned ¹						
			PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
Large/Utility (>100 million Btu/hr)	Residual oil, #6 oil, PS400, Bunker C	Normal	20.8	15.2	11.5	275	47	5	0.76
		Normal with low NO _x burner	20.8	15.2	11.5	275	40	5	0.76
		Tangential	20.8	15.2	11.5	275	32	5	0.76
		Tangential with low NO _x burner	20.8	15.2	11.5	275	26	5	0.76
	Residual oil, #5 oil, PS300	Normal	11.5	8.6	6.7	275	47	5	0.76
		Tangential	11.5	8.6	6.7	275	32	5	0.76
	Residual oil, #4 oil, PS300	Normal	8.3	6.5	5.1	263	47	5	0.76
		Tangential	8.3	6.5	5.1	263	32	5	0.76
	Distillate oil, #2, PS200	Without LNB/FGR	3.3	2.3	1.6	71	24	5	0.76
		With LNB/FGR	3.3	2.3	1.6	71	10	5	0.76
Medium/Industrial (<100 million Btu/hr and >10 million Btu/hr)	Residual oil, #6 oil, PS400, Bunker C	All	20.8	18.2	12.4	275	55	5	0.28
	Residual oil, #5, PS300	All	11.5	10.1	7.1	275	55	5	0.28
	Residual oil, #4, PS300	All	8.5	7.5	5.4	263	20	5	0.2
	Distillate oil, #2, PS200	All	3.3	2.3	1.6	71	20	5	0.2
	Distillate oil, #1, PS100	All	3.3	2.3	1.6	42.6	18	5	0.2
Small/Commercial/Industrial/Residential (<10 million Btu/hr)	Residual oil, #6 oil, PS400, Bunker C	All	20.8	13.5	6.0	275	55	5	1.13
	Residual oil, #5, PS300	All	11.5	7.7	3.8	275	55	5	1.13
	Residual oil, #4, PS300	All	8.5	5.8	3.1	263	20	5	0.34
	Distillate oil, #2, PS200	All	3.3	2.4	2.1	71	20	5	0.34
	Residential	All	3.3	1.8	1.4	42.6	18	5	0.71

¹ All emission factors are from AP-42, Tables 1.3-1 through 1.3-7 and include both filterable and condensable particulate.