

**Appendix A - LONG BEACH GENERATION, LLC  
Alstom 11D5 CTG - Start-Up Emissions**

PAGES	PAGE	A/N 463222
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**Start-Up Emissions**

Pollutant	Start-Up Emission Factor (lb/start-up) <sup>1</sup>	Max No. of Start-ups per day	Start-Up Emissions (lbs/hr)
CO	61.0	2	122.00
NOx	80.0	2	160.00
VOC	1.4	2	2.70
PM10 <sup>2</sup>	N/A	N/A	4.60
SOx <sup>2</sup>	N/A	N/A	0.61

<sup>1</sup> According to the applicant, each start-up will last for 30 minutes

<sup>2</sup> Start-ups do not significantly affect SOx or PM10 emissions.

Therefore, PM10 and SOx during start-up are assumed to be equal to normal operation