

Potential to Emit Calculations, Pyrolysis Oven

Equipment: One (1) pyrolysis oven to remove grease from parts with a load capacity of 400 lbs/hr.

Calculations:

Pyrolysis oven:

Emission Factors are from Bayco Industries of California Burnoff Oven, Dec. 15, 1985 for Oven Model #42

Pollutant	Load Capacity	Emission
PM	400 lb/hr	0.039 lb/hr
SO _x	400 lb/hr	0.003 lb/hr
NO _x	400 lb/hr	0.058 lb/hr
HC	400 lb/hr	0.005 lb/hr
CO	400 lb/hr	0.028 lb/hr

PTE for PM:

Pyrolysis oven:

$$(0.039 \text{ lb/hr})(8760 \text{ hr/yr})/(2000 \text{ lb/ton}) = 0.171 \text{ tpy PM}$$

Total = 0.171

PTE for PM₁₀

Assuming all PM is PM₁₀: 0.171 tpy PM₁₀

PTE for SO₂:

Pyrolysis oven:

$$(0.003 \text{ lb/hr})(8760 \text{ hr/yr})/(2000 \text{ lb/ton}) = 0.013 \text{ tpy SO}_2$$

Total = 0.013

PTE for NO_x:

Pyrolysis oven:

$$(0.058 \text{ lb/hr})(8760 \text{ hr/yr})/(2000 \text{ lb/ton}) = 0.254 \text{ tpy NO}_x$$

Total = 0.254

PTE for CO:

Pyrolysis oven:

$$(0.028 \text{ lb/hr})(8760 \text{ hr/yr})/(2000 \text{ lb/ton}) = 0.123 \text{ tpy CO}$$

Total = 0.123

PTE for HC:

Pyrolysis oven:

$$(0.005 \text{ lb/hr})(8760 \text{ hr/yr})/(2000 \text{ lb/ton}) = 0.022 \text{ tpy}$$

Total = 0.022

Total for VOC: 0.022 + 0.0014 = 0.023 tpy

Conclusion:

This project is not major for any of the criteria pollutants.