DRAFT

Simple Pleasures Coffee Roasting Company

S-1 Coffee Roaster

Application #18851

December 22, 2008

INTRODUCTION

Simple Pleasures Coffee Roasting Company is applying for a Permit to Operate:

S-1 Coffee Roaster, The San Franciscan, Model L-12, 0.2 MM Btu/hr, fired exclusively on Natural Gas, abated by A-1 Afterburner, Midco, Model Incinomite J81A-3

at their location in San Francisco, CA.

EMISSIONS

The emissions from S-1 coffee roaster are as follows:

AP-42 Emission Factors (w/o control) and annual emissions (POC control only)

PM10: 0.092 lb/ton of beans
(5.5 tpy)(0.092 lb PM10/ton) = 0.51 lb PM10/yr (0.0 tpy)
NOx: 1.06 lb/ton of beans
(5.5 tpy)(1.06 lb NOx/ton) = 5.8 lb NOx/yr (0.003 tpy)
POC: 0.16 lb/ton of beans
(5.5 tpy)(0.16 lb POC/ton)(1-0.98) = 0.02 lb POC/yr (0.0 tpy)
CO: 0.1 lb/ton of beans
(5.5 tpy)(0.1 lb PM10/ton) = 0.55 lb PM10/yr (0.0 tpy)

Control efficiency for POC and toxic compounds - 98%

Toxic Compounds: Emission factors from ARB (w/o control) and annual emissions (with control):

Organic acids (acetic acid): 0.9 lb/ton of beans
(5.5 tpy)(0.90lb/ton)(1-0.98) = 0.099 lb/yr

Acrolein: 0.032 lb/ton of beans
(5.5 tpy)(0.032 lb/ton)(1-0.98) = 3.5E-3 lb/yr
(3.5E-3 lb/yr)/(1040 hr/yr) = 3.4E-6 lb/hr

Acetaldehyde: 0.0164 lb/ton of beans
(5.5 tpy)(0.0164 lb/ton)(1-0.98) = 1.8E-3 lb/yr

Aldehydes (Formaldehyde): 0.2 lb/ton of beans
(5.5 tpy)(0.2 lb/ton)(1-0.98) = 0.022 lb/yr
(0.022 lb/yr)/(1040 hr/yr) = 2.1E-5 lb/hr

Emissions of acrolein, acetaldehyde and formaldehyde do not exceed the 3.9 lb/yr, 72 lb/yr and 33 lb/yr respective trigger levels. Emissions of acrolein and formaldehyde do not exceed the 4.2E-4 lb/hr and 2.1E-1 lb/hr respective acute trigger levels. There is no trigger level listed for acetic acid.

Data:
Annual throughput = 5.5 tons of coffee beans
Flowrate: 250 ascfm = 175 dscfm

Grain Loading:

(0.51 lb/yr)/(365 day/yr)(7000 grain/lb) = 10 grains/day
(10 grains/day)/[(175 dscfm)(60 min/hr)(8 hr/day)]
= 1.2E-4 grains/dscf

Cumulative Site Emissions (TPY)

Pollutant	S-1	SITE EMISSIONS
NOx	0.003	0.003
CO	0.0	0.0
POC	0.0	0.0
PM	0.0	0.0

STATEMENT OF COMPLIANCE

The proposed project complies with the Regulation 6-310 particulate emission rate limit of 0.15 gr/dscf.

This application is considered to be ministerial under the District's CEQA Regulation 2-1-311 because the evaluation is a ministerial action conducted using the fixed standards and objective measurements outlined in the District's Permit Handbook, Chapter 11.3.

BACT, OFFSETS, PSD, NSPS, and NESHAPS are not triggered.

The project is within 1,000 feet of a school; therefore the public notice requirements of Regulation 2-1-412 are triggered.

RECOMMENDATION

issue a Permit to Operate for:

S-1 Coffee Roaster, The San Franciscan, Model L-12, 0.2 MM Btu/hr, fired exclusively on Natural Gas, abated by A-1 Afterburner, Midco, Model Incinomite J81A-3

CONDITIONS

Application No. 18851; Simple Pleasures Coffee Roasting Company; Plant No. 19286, December 22, 2008, Conditions for S-1 Coffee Roaster

1. The owner/operator shall not process green coffee beans to exceed 5.5 tons in any consecutive 12-month period. [basis: Cumulative Increase]

2. The owner/operator shall abate S-1 Coffee Roaster(s) at when it is operating with A-1 Afterburner. [basis: Cumulative Increase]

3. The owner/operator shall maintain a minimum furnace temperature of A-1 to be 1400° F and maintain a residence time of at least 0.3 seconds. The owner/operator may petition for a lower furnace temperature after start-up but prior to permit issuance if they can demonstrate based upon source test results that there is no change in afterburner destruction efficiency and all pollutants emissions meet required levels as stipulated in the conditions that follow. [basis: Regulation 2-1-403]

4. The owner/operator shall ensure that A-1 Afterburner are equipped with a temperature-measuring device capable of continuously measuring and recording the temperature in the thermal oxidizers. These devices shall be accurate to within 10 degrees Fahrenheit (° F) and shall be maintained in accordance with manufacturer's recommendations. These temperature monitors shall be used to determine compliance with the temperature requirements in Part 3. [basis: Regulation 1-521]

5. The permits to operate for S-1 Coffee Roaster(s) are contingent upon compliance with Regulation 1-301, Standard for Public Nuisance, and Regulation 7, Odorous Substances. Upon receipt of a violation for either of these statutes, the Air Pollution Control Officer may require the operator to curtail operations until either the operation can be modified or the meteorological conditions change, such that the community is no longer adversely impacted. [basis: Regulation 1-301, 7-301, 7-302, 7-303]

6. The owner/operator shall abate the following sources with the following abatement device:
Source #2 Afterburner*
NOTE: Where indicated by an "*", the afterburner shall be used as needed to comply with Part 6 of this permit condition.
[basis: Cumulative Increase]