

DRAFT

McLAUGHLIN COFFEE COMPANY

S-4 Coffee Roaster

Application #9265

May 13, 2004

INTRODUCTION

The McLaughlin Coffee Company is applying for a Permit to Operate:

S-4 Coffee Roaster, Jabez Burns, 4-Bag Roaster, 900,000 Btu/hr., fired exclusively on Natural Gas, abated by A-4 Afterburner, Maxon, Model 425 OPII, 2.5 MM Btu/hr

at their location in Emeryville, CA.

The McLaughlin Coffee Company is located within 1,000 feet of Emery Middle school at 1265 61st Street. The school is currently closed.

EMISSIONS

The emissions from S-4 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

(900 tpy)(0.092 lb PM10/ton) = 82.8 lb PM10/yr (0.041 tpy)

NOx: 1.06 lb/ton of beans

(900 tpy)(1.06 lb NOx/ton) = 954 lb NOx/yr (0.477 tpy)

POC: 0.16 lb/ton of beans

(900 tpy)(0.16 lb POC/ton)(1-0.90) = 14.4 lb POC/yr (0.007 tpy)

CO: 0.1 lb/ton of beans

(900 tpy)(0.1 lb PM10/ton) = 90 lb PM10/yr (0.045 tpy)

Afterburner Control efficiency for POC and toxic compounds - 90%

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

Organic acids (acetic acid): 0.9 lb/ton of beans

(900 tpy)(0.90 lb/ton)(1-0.90) = 81 lb/yr

Acrolein: 0.032 lb/ton of beans
(900 tpy)(0.032 lb/ton)(1-0.90) = 2.88 lb/yr

Acetaldehyde: 0.0164 lb/ton of beans
(900 tpy)(0.164 lb/ton)(1-0.90) = 9.84 lb/yr

Aldehydes (Formaldehyde): 0.2 lb/ton of beans
(900 tpy)(0.2 lb/ton)(1-0.90) = 18 lb/yr

Emissions of acrolein, acetaldehyde and formaldehyde do not exceed the 3.9 lb/yr, 72 lb/yr and 33 lb/yr respective trigger levels and, therefore, a risk assessment is not required. The health risk from these emissions is insignificant. There is no trigger level listed for acetic acid.

Grain Loading Calculation

Data:

Annual throughput = 900 tons of coffee beans

Flowrate: 1800 ascfm = 1,260 dscfm

$(82.8 \text{ lb/yr}) / (365 \text{ day/yr}) (7000 \text{ grain/lb}) = 1588 \text{ grains/day}$
 $(1588 \text{ grains/day}) / [(1260 \text{ dscfm}) (60 \text{ min/hr}) (8 \text{ hr/day})]$
 $= 2.6\text{E-}3 \text{ grains/dscf}$

Cumulative Site Emissions (TPY)

Pollutant	S-1	S-2	S-3	S-4	SITE EMISSIONS
NOx	0.13	0.438	0.008	0.477	1.053
CO	0.05	0.069	0.001	0.045	0.165
POC	0.14	0.100	-	0.007	0.247
PM	0.58	0.017	0.001	0.041	0.639

PUBLIC NOTICING

This facility is within 1,000 feet of a school:

Emery Middle School
1275 61st Street
Emeryville, CA.
(925-950 feet)

and therefore is subject to the public notification requirements of Regulation 2-1-412.

Public Comment

XXXXX
XXXXXX

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.

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

RECOMMENDATION

issue a Permit to Operate for:

S-4 Coffee Roaster, Jabez Burns, 4-Bag Roaster, 900,000 Btu/hr., fired exclusively on Natural Gas, abated by A-4 Afterburner, Maxon, Model 425 OPII, 2.5 MM Btu/hr

CONDITIONS

APPLICATION 9265; McLaughlin Coffee; PLANT 12105
CONDITIONS FOR S-4

- 1) The owner/operator shall not roast green coffee beans in S-4 in excess of 900 tons in any consecutive 12-month period. [Basis: cumulative increase]
- 2) The owner/operator shall not operate S-4 roaster unless it is abated at all times by A-4 afterburner. [Basis: cumulative increase]
- 3) The minimum temperature of A-4 afterburner shall be at least 1200 degrees F when the abated roaster reaches normal operating temperature. [Basis: Regulation 2-1-403]
- 4) The A-4 afterburner shall be equipped with a temperature-measuring device capable of continuously measuring and recording the temperature in A-4 afterburner. [Basis: Regulation 1-521]
- 5) The permit to operate for S-4 Coffee Roaster is 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

conduct a District-approved source test within 30 days of notification of the APCO. [Basis: Regulation 1-301, 7-301, 7-302, 7-303]

6) To determine compliance with the above conditions, the Permit Holder shall maintain the following records and provide all of the data necessary to evaluate compliance with the above conditions, including the following information:

a. Monthly records of the quantity of green coffee beans roasted.

b. Monthly usage records shall be totaled for each consecutive 12-month period.

All records shall be retained onsite for at least two years from the date of entry and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. [Basis: cumulative increase]