

**ENGINEERING EVALUATION
AUTHORITY TO CONSTRUCT**

Facility Name: Dark Horse Coffee Roasters

Application Number: APCD2026-APP-009139

Equipment Type: 50A – 280 lbs/hour coffee roaster

Facility ID: APCD2026-SITE-04988

Equipment Address: 5980 Fairmount Ave, Suite 100, San Diego, CA 92120

Facility Contact: Daniel Charlson
(805) 689-1245, kayleigh@darkhorsecoffeeroasters.com

Permit Engineer:

X

John Lee
Asst. Air Pollution Control Engineer

Senior Engineer Signature:

X

Joe Herzig
Senior Air Pollution Control Engineer

1.0 BACKGROUND

1.1 Type of Application: New equipment application.

1.2 Permit History: First permit application for this equipment.

1.3 Facility Description: Coffee roasting facility.

1.4 Other Background Information: The site was issued a notice of comply, APCD2026-NTC-00038, on February 19th, 2026. This application is a result of remediating the NTC. No hearing board actions, permit denials, legal settlements, not a Title V facility.

2.0 PROCESS DESCRIPTION

2.1 Equipment Description:

Coffee Roaster Make: Loring Smart Roaster

Model: S35T Kestrel,

S/N: 001355

Roasting Capacity: 280 lbs/hour; 77 lbs or 35 kg batch size,

Single burner of 310,000 Btu/hour natural gas burner for both roaster and afterburner;

2.2 Process Description: Coffee beans are roasted in the roasting drum and released into the cooling pan. Pulps generated from the rotating roaster are collected by the cyclone. Smoke and odor from the roasting process are captured and controlled by the afterburner.

2.3 Emissions Controls: Afterburner

2.4 Attachments: Manufacturer specs sheets.

3.0 EMISSIONS

3.1 Emission Estimate Summary:

Criteria/Pre-cursor Potential Emissions

	lbs/hr	lbs/day	lbs/year
NOx	0.05	1.2	453
CO	0.007	0.2	63.9
SOx	0.0002	0.004	1.6
NMHC	0.008	0.2	72.3
PM10	0.01	0.3	126.9
VOC	0.007	0.2	57.6

TAC Potential Emissions

		Emission Factor	Hourly Emissions	Annual Emissions
Compound	CAS	(lbs/mmcf)	(lbs/hr)	(lbs/yr)
Benzene	71432	0.0021	6.4E-07	5.6E-03
Formaldehyde	50000	0.075	2.3E-05	2.0E-01
Dichlorobenzene	106467	0.0012	3.6E-07	3.2E-03
Hexane	110543	1.8	5.5E-04	4.8E+00
Naphthalene	91203	0.00061	1.9E-07	1.6E-03
Toluene	108883	0.0034	1.0E-06	9.1E-03

3.2 Emission Estimate Assumptions:

- Potential emissions are based on 24 hours/day and 365 days/year roasting operation,
- Emission factors for Coffee Roasting are from AP-42 Table 9.13.2. Emission factors for natural gas combustion are from District default emission factors for uncontrolled boilers.

3.3 Emission Calculations: See APP009139_Calculations

4.0 APPLICABLE RULES

4.1 Prohibitory Rules

Rule 50: Visible emissions

This Rule prohibits any person from discharging from any sources of emissions for a period of more than three minutes any air contaminant which is darker in shade than that designated as Number 1 on the Ringelmann Chart, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as number 1 on the Ringelmann chart. *The roaster is equipped with an afterburner which is expected to reduce visible emissions significantly. This coffee roaster is expected to comply with this rule.*

Rule 51: Nuisance

This Rule prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other materials which causes injury, nuisance or annoyance to the public or which causes damage to business or property.

With an afterburner, nuisance complaints are not expected from this coffee roaster.

Rule 52: Particulate matter

This rule prohibits any source from discharging particulate matter in excess of 0.10 grains per dry standard cubic foot of gas.

Particulate emissions from this coffee roaster are 0.001 grains/dry standard cubic foot of gas.

4.2 New Source Review (NSR) 20.1 – 20.4

Best Available Control Technology

Rule 20.2(d)(1)(i) requires any new or modified unit which has any increase in its potential to emit and which has a post-project potential to emit of 10 lbs per day or more of particulate matter (PM), NO_x, VOC, SO_x, or CO to be equipped with Best Available Control Technology (BACT) for each such air contaminant.

Daily emissions from this coffee roaster do not trigger BACT.

Air Quality Impact Analysis

Rule 20.2 (d)(2)(i) requires any new or modified unit which results in emissions increase equal to or greater than the amounts listed below to perform an Air Quality Impact Analysis:

Particulate Matter (PM): 100 lbs/day, 15 tpy

NO_x: 25 lbs/hour, 250 lbs/day, 40 tpy

SO_x: 25 lbs/hour, 250 lbs/day, 40 tpy

CO: 100 lbs/hour, 550 lbs/day, 100 tpy

Lead and lead compounds: 3.2 lbs/day, 0.6 tpy

This coffee roaster does not trigger AQIA.

Prevention of Significant Deterioration (PSD)

Rule 20.2 (d)(3) states that the District shall not issue an Authority to Construct or modified Permit to Operate for any project which will have a significant impact on a Class I Area or will have after issuance of a Permit, an aggregate potential to emit one or more air contaminants in amounts equal to or greater than 250 tons/year of PM₁₀, NO_x, VOC, SO_x, CO.

The emissions from this coffee roaster do not trigger PSD requirements.

Public Notice and Comment

Rule 20.2 (d)(4) requires a public notice and comment period for any applications which require an AQIA under Sections d(2) or d(3).

This coffee roaster does not trigger the Public notice and Comments requirements.

4.3 Toxic New Source Review – Rule 1200

Rule 1200 applies to any new, relocated or modified emission unit which results in any increase in emissions of one or more toxic air contaminant(s), and for which an Authority to Construct or Permit to Operate is required. This rule requires health risks be reviewed to ensure the risks are below one in one million for cancer (with T-BACT installed), and that the health hazard index is less than one from chronic non-cancer and acute toxic air contaminants.

The majority of toxic emissions from this coffee roaster are from the natural gas combustion of the roaster and afterburner burners. The use of natural gas as fuel for the coffee roaster and use of an afterburner qualify this equipment as T-BACT, which allows for cancer risk to be 10 in one million or less. The toxic emissions from this coffee roaster were evaluated through a Rule 1200 risk

screening tool and were below the Rule 1200 thresholds for acute and cancer risks. Therefore, a refined HRA was not required.

4.4 AB3205

AB3205 requires a public notice prior to issuing an Authority to Construct for equipment emitting hazardous air contaminants at a facility within 1000 feet of a school.

This coffee roaster is located within 1,000 ft of a school. Therefore, an AB3205 public notice is required.

*The comment period closed on **DATE**.*

4.5 State and Federal Regulations

National Emission Standards for Hazardous Air Pollutants

These regulations do not apply to coffee roasters.

New Source Performance Standards

These regulations do not apply to coffee roasters.

4.6 Title V

This is not a Title V facility; therefore, this requirement does not apply.

4.7 CEQA

The California Environmental Quality Act (CEQA) requires government agencies, such as air districts, to consider the environmental consequences of their actions before approving plans and policies or committing to a course of action on a project.

CEQA Guidelines §15303 exempts construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure.

5.0 RECOMMENDATION

The proposed coffee roaster is expected to comply with all the applicable rules and regulations. An Authority to Construct is recommended.

6.0 RECOMMENDED CONDITIONS

Standard conditions of APCD2023-CON-002056 with a new condition to indicate the afterburner operating temperature are recommended.

Condition #	Description	Rule Reference
1. C1600	Visible emissions from this equipment shall not exceed 20% opacity (#1 Ringelmann) for more than a total of 3 minutes in any 60 consecutive minutes. (Rule 50)	Rule 50
2. C7256	The emission control equipment including the cyclone and afterburner shall be in operation whenever the coffee roaster is operated.	Rule 1200 Rule 20.2

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3. New	Within 3 minutes of the start of a roasting cycle, the afterburner exhaust temperature as indicated on the temperature control panel shall be between 1200 and 1550 degrees Fahrenheit until the end of the roasting cycle.	Rule 1200 Rule 20.2 Rule 50 Rule 51
4. C46640	The afterburner shall be equipped with an operational temperature gauge that displays the temperature of the exhaust. Records of afterburner exhaust temperature readings during each batch shall be maintained onsite for a minimum of 3 years and be readily available for District inspection upon request.	Rule 1200 Rule 20.2
5. C21726	Roaster fan, chaff collector, and all exhaust ductwork shall be cleaned as frequently as required to 1) minimize build-up on the walls of the exhaust ductwork, and 2) minimize any odors permeating from the roaster to the surrounding area that may cause a public nuisance.	Rule 50 Rule 51 Rule 52
6. C7257	There shall be no leakage of gases from the coffee roaster exhaust prior to treatment in the emission control system. At the start of each day the control equipment and gas transport ducts shall be inspected for leaks and upon discovery, all gas leaks shall be sealed prior to any coffee roasting.	Rule 1200 Rule 20.2
7. C22729	At no time shall the subject equipment cause or contribute to a public nuisance as specified in District Rule 51.	Rule 51
8. CHW001	Access, facilities, utilities and any necessary safety equipment for source testing and inspection shall be provided upon request of the Air Pollution Control District.	District Standard
9. CHW002	This Air Pollution Control District Permit does not relieve the holder from obtaining permits or authorizations required by other governmental agencies.	District Standard
10. CHW003	The permittee shall, upon determination of applicability and written notification by the District, comply with all applicable requirements of the Air Toxics "Hot Spots" Information and Assessment Act (California Health and Safety Code Section 44300 et seq.)	District Standard

All relevant attachments are uploaded to BCMS under the corresponding application numbers.