RV 11/13/25

SOUTH COAST AQMD
CLERK OF THE BOARDS
2025 OCT 7 AM 7:09

PETITION FOR VARIANCE
BEFORE THE HEARING BOARD OF THE
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

PETITIONER: American Nuts CASE NO: 6279-1

FACILITY ID: 203361

FACILITY ADDRESS: 12950 San Fernando Road
[location of equipment/site of violation; specify business/corporate address, if different, under Item 2, below]

City, State, Zip: Sylmar, CA 91342

1. TYPE OF VARIANCE REQUESTED (more than one box may be checked; see Attachment A, Item 1, before selecting)

☐ INTERIM ☐ SHORT ☒ REGULAR ☐ EMERGENCY ☐ EX PARTE EMERGENCY

2. CONTACT: Name, title, company (if different than Petitioner), address, and phone number of persons authorized to receive notices regarding this Petition (no more than two authorized persons).

Jim Buatte
CEO/President, American Nuts
12950 San Fernando Road
Sylmar, CA Zip 91342
☎ (682) 999-9647 Ext.
Fax ( )

Aron Potash
Latham & Watkins LLP
355 S Grand Avenue
Los Angeles, CA Zip 90071
☎ (213) 891-8758 Ext.
Fax ( )

Persons with disabilities may request this document in an alternative format by contacting the Clerk of the Board at 909-396-2500 or by e-mail at clerkofboard@aqmd.gov.

If you require disability-related accommodations to facilitate participating in the hearing, contact the Clerk of the Board at least five (5) calendar days prior to the hearing.

[ALL DOCUMENTS FILED WITH CLERK'S OFFICE BECOME PUBLIC RECORD]

E-mail _____ E-mail aron.potash@lw.com

3. RECLAIM Permit ☐ Yes ☒ No Title V Permit ☐ Yes ☒ No

4. **GOOD CAUSE:** Explain why your petition was not filed in sufficient time to issue the required public notice. (Required only for Emergency and Interim Variances; see Attachment A, Item 4)

Not applicable

5. Briefly describe the type of business and processes at your facility.

Petitioner American Nuts roasts nuts and seeds using oil roasters and dry roasters.

American Nuts has operated in Sylmar, CA since the 1980s.

In April 2024, the District identified that the facility's dry roasters and oil roasters require District permits to operate. American Nuts filed permit applications with the District in May 2024 to obtain permits for the roasters. The District issued permits for the roasters, which American Nuts received from the District in August 2025. These permits are attached to this petition (Attachment 1).

The newly-issued permits impose throughput limits that are, in certain cases, orders of magnitude lower than historic facility throughputs that the facility has operated at for decades. Operating at the lower throughputs in the permits would force American Nuts out of business, as the throughputs are so low that the business could not be profitably run.

American Nuts has developed a plan to revise these throughputs. The plan will require American Nuts to purchase a thermal oxidizer and retrofit certain burners with lower NOx burners.

American Nuts is also willing to shut down certain roasters that it will not be financially viable to retrofit, which will mitigate facility emissions.

American Nuts respectfully petitions the Hearing Board for variance coverage for two dry roasters to allow it to operate the roasters at levels higher than permitted (but significantly lower than historic throughput levels) for the next year while American Nuts works with the District to modify its permit to increase throughput limits, obtains permits to construct for a thermal oxidizer and lower NOx burners, and installs the new equipment.

6. List the equipment and/or activity(s) that are the subject of this petition (see Attachment A, Item 6, Example #1). **Attach copies of the Permit(s) to Construct and/or Permit(s) to Operate for the subject equipment. For RECLAIM or Title V facilities, attach *only* the relevant sections of the Facility Permit showing the equipment or process and conditions that are subject to this petition. You must bring the entire Facility Permit to the hearing.**

Equipment/Activity	Application/ Permit No.	RECLAIM Device No.	Date Application/Plan Denied (if relevant)*
Nut Dry Roaster, DR2	G80477		
Nut Dry Roaster, DR5	G80480		

*Attach copy of denial letter

[YOU MAY ATTACH ADDITIONAL PAGES IF NECESSARY]

7. Briefly describe the activity or equipment, and why it is necessary to the operation of your business. A schematic or diagram may be attached, in addition to the descriptive text.

American Nuts has historically operated three oil roasters (OR1, OR2, and OR3) and five dry roasters (DR1, DR2, DR3, DR4, and DR5). Operating these roasters is the heart of American Nuts' nut and seed roasting business.

8. Is there a regular maintenance and/or inspection schedule for this equipment? Yes ☒ No ☐

If yes, how often: Daily Date of last maintenance and/or inspection date of filing

Describe the maintenance and/or inspection that was performed.

American Nuts performs daily burner and exhaust system checks to ensure safe and efficient operation. In addition, American Nuts performs complete deep-cycle cleaning at least every two weeks to maintain hygienic and mechanical performance. On an annual basis, American Nuts carries out comprehensive maintenance activities, which include inspection and repair of burners, blowers, conveyors, and electrical components. These practices provide both routine monitoring and scheduled preventive maintenance to minimize downtime and ensure compliance with food safety and operational standards.

9. List all District rules, and/or permit conditions [indicating the specific section(s) and subsection(s)] from which you are seeking variance relief (if requesting variance from Rule 401 or permit condition, see Attachment A). Briefly explain how you are or will be in violation of each rule or condition (see Attachment A, Item 9, Example #2).

Rule	Explanation
Condition 5 (DR2 and DR5)	Condition 5 limits daily nut throughput at each of DR2 and DR5 to 0.67 tons. American Nuts requests a higher nut throughput limit during the variance period.
Condition 8 (DR2 and DR5)	Condition 8 limits roaster fuel usage to 7,692 scf/day. To allow for operation at the nut throughput limits American Nuts requests during the variance period, American Nuts requests that this fuel usage limit apply on a monthly basis (as opposed to a daily basis) during the variance period (230,760 scf/month).
Condition 7 & Rule 1153.1 (DR2 and DR5)	Condition 7 requires compliance with Rule 1153.1. Rule 1153.1 requires that dry roasters either (i) comply with a 30 ppm NOx limit or (ii) a NOx mass emissions limit of 1 lb/day. Condition 8 of the permits imposes a daily fuel usage limit to keep emissions at each roaster below 1 lb/day of NOx. American Nuts requests that this variance apply the fuel usage limit on a monthly basis (30 lbs/month).
Condition 9 (DR2 and DR5)	Condition 9 requires installing a fuel meter to measure natural gas flow to the roasters. American Nuts is in the process of installing the fuel meters and requests 15 days to complete this work.
District Rule 203(b)	District Rule 203(b) requires that equipment be operated in compliance with the above-referenced permit conditions.

10. Are the equipment or activities subject to this request currently under variance coverage? Yes ☐ No ☒

Case No.	Date of Action	Final Compliance Date	Explanation

[YOU MAY ATTACH ADDITIONAL PAGES IF NECESSARY]

11. Are any other equipment or activities at this location currently (or within the last six months) under variance coverage? Yes ☐ No ☒

Case No.	Date of Action	Final Compliance Date	Explanation

12. Were you issued any Notice(s) of Violation or Notice(s) to Comply concerning this equipment or activity within the past year? Yes ☐ No ☒

If yes, you must attach a copy of each notice.

13. Have you received any complaints from the public regarding the operation of the subject equipment or activity within the last six months? Yes ☐ No ☒

If yes, you should be prepared to present details at the hearing.

14. Explain why it is beyond your reasonable control to comply with the rule(s) and/or permit condition(s). Provide specific event(s) and date(s) of occurrence(s), if applicable.

In April 2024, the District identified that the facility's dry roasters and oil roasters require District permits to operate. American Nuts filed permit applications with the District in May 2024 for all of the roasters at the facility. The District issued permits for the roasters, which American Nuts received from the District in August 2025.

The newly-issued permits impose throughput limits that are, in certain cases, orders of magnitude lower than historic facility throughputs that the facility has operated at for decades. Operating at the lower throughputs in the permits would force American Nuts out of business—it is not financially viable to operate at the very low throughputs in the current permits.

American Nuts has developed a plan to revise these throughputs. The plan will require American Nuts to purchase a thermal oxidizer and retrofit certain burners with lower NOx burners.

American Nuts is also in the process of shutting down certain roasters that it will not be financially viable to retrofit.

American Nuts respectfully petitions the Hearing Board for variance coverage for two dry roasters (DR2 and DR5) to allow it to operate the roasters at throughput levels higher than permitted (but significantly lower than historic throughput levels) for the next year while American Nuts works with the District to modify its permit to increase throughput limits, obtain permits to construct for a thermal oxidizer and lower NOx burners, and

[YOU MAY ATTACH ADDITIONAL PAGES IF NECESSARY]

installs the new equipment.

DR2

The District imposed a daily nut throughput of 0.67 tons on DR2 (Condition 5).

As shown in the District's engineering evaluation for DR2, the District's rationale in imposing the throughput limit was as follows:

- Facilities which permit equipment resulting in an increase of 1 lb per day of any nonattainment air contaminant must employ BACT per Rule 1303(a)(1).
- If DR2 throughput were to exceed 0.67 tons, then VOC emissions from DR2 would exceed 1 lb per day.
- Employing BACT for VOCs would require installing control equipment (presumably a thermal oxidizer).

To prevent the need for thermal oxidation on DR2, the District imposed Condition 5 to limit VOC emissions to below the level that would trigger BACT.

However, thermal oxidation does not constitute BACT for DR2 because thermal oxidation is not cost effective given that American Nuts is planning to remove DR2 from service within the next year (and is willing to take an enforceable permit condition requiring that DR2 be removed from service within a year). Further, American Nuts' outside environmental consultant, Envera Consulting, prepared a BACT analysis for DR2 finding that no additional VOC controls are needed to satisfy BACT. Please find Envera Consulting's BACT analysis at Attachment 2.

Envera's determination is consistent with a November 2024 determination from the Sacramento AQMD. After surveying BACT determinations from USEPA, CARB, SMAQMD, SCAQMD, BAAQMD, SJVAPCD, and SDAPCD, the Sacramento AQMD concluded that there is no BACT standard for VOCs from nut roasters. Please find the Sacramento AQMD's BACT determination at Attachment 3.

Envera Consulting approached District staff (Faye Ganser) in late August 2025 to discuss BACT and request the administrative reissuance of Condition 5 based on the fact that installing a thermal oxidizer is not cost effective. District staff requested that Envera Consulting have a pre-application meeting to discuss Envera Consulting's cost effectiveness analysis, but District staff signaled they are likely to disagree with Envera Consulting's analysis.

Regardless of whether the District agrees with American Nuts' position that there is no cost-effective control technology for VOCs for DR2, it is beyond American Nuts' reasonable control to comply with Condition 5 during the variance period, as DR2 is the only roaster in which American Nuts is able to process certain products (which require a lower heat and less browning to be saleable).

As such, American Nuts respectfully requests that the District grant a variance from Condition 5 of the DR2 permit for a period of up to 12 months while either (i) District staff amends the permit to remove this condition or (ii) American Nuts is able to complete testing of DR5 to transition the products current roasted on DR2 to DR5.

American Nuts asks that the Hearing Board allow for operation of DR2 at the nut throughput limit equivalent to its fuel usage limit (9,596 lbs/day), albeit applied on a monthly basis (143.9 tons/month).

To allow for production to exceed 9,596 lbs/day on certain days (so long as the monthly average does not exceed 9,596 lbs/day), American Nuts requests that the daily fuel usage limit for DR2 (7,692 scf/day) be converted into a monthly fuel usage limit during the variance period (230,760 scf/month).

DR5

For the same reason discussed above with respect to DR2, the District imposed a nut throughput limit of 0.67 tons per day (1,340 lbs/day) on DR5 (Condition 5).

It is beyond American Nuts' reasonable control to comply with Condition 5 as it has historically operated at a maximum throughput of approximately 38,000 lbs/day and needs to continue to operate at closer to this throughput to maintain a viable business. American Nuts has binding contractual obligations with both public

and private sector customers. These include procurement agreements with state agencies and Public Institutional Accounts groups, as well as ongoing supply commitments to private label and branded retail customers. To meet these commitments, American Nuts requires average daily production capacity of 22,000 lbs at DR5 (applied on a monthly basis, such that the variance nut throughput limit would be 330 tons per month).

To allow for production to exceed 22,000 lbs/day on certain days (so long as the monthly average does not exceed 22,000 lbs/day), American Nuts requests that the daily fuel usage limit for DR5 (7,692 scf/day) be converted into a monthly fuel usage limit during the variance period (230,760 scf/month).

The District's rationale in imposing the fuel limit to each roaster was as follows:

- District Rule 1153.1 requires that dry roasters either (i) comply with a 30 ppm NOx limit or (ii) a NOx mass emissions limit of 1 lb/day
- If roaster fuel usage were to exceed 7,692 scf/day, then NOx emissions from DR5 would exceed 1 lb per day.

To prevent the need for retrofitting DR5's burners with 30 ppm burners, the District imposed Condition 8 to limit NOx emissions to below 1 lb/day.

American Nuts plans to file a permit application to (i) install a thermal oxidizer and remove the throughput limit at DR5 (ii) retrofit DR5 with lower NOx burners so that the fuel usage limit is removed. However, American Nuts' financial ability to install a thermal oxidizer and lower NOx burners is dependent upon the Hearing Board granting this variance allowing American Nuts to continue operation at the levels requested in this petition (which are well below historic throughput levels) for the next year while American Nuts works with the District to modify its permit to increase throughput limits, obtain permits to construct for a thermal oxidizer and lower NOx burners, and installs the new equipment.

15. When and how did you first become aware that you would not be in compliance with the rule(s) and/or permit condition(s)? Provide specific event(s) and date(s) of occurrence(s).

Upon receiving the issued permit in mid-August, Petitioner assessed its options for operating its facility, preparing a business plan for ceasing operation of certain roasters and installing control equipment on other equipment. In undertaking this process, Petitioner determined that it would be economically infeasible to operate its facility at the throughput limits set forth in the current permit.

In March 2025, the District informed Petitioner that it intended to use emission factors that are different from those set forth in AP-42; however, it was not clear if District intended these factors to apply to the oil roasters, the dry roasters, or both, nor was it clear what these alternative emissions factors would be (and what throughput limits they would result in). In mid-June, the District informed Petitioner that it intended to use default AP-42 emissions factors for the facility's dry roasters but different emissions factors for the facility's oil roasters. After that point and prior to permit issuance, Petitioner's consultant discussed the draft permit conditions with District engineering staff, requesting that any throughput limits allow the facility to continue operating at throughputs closer to those it historically operated at.

16. List date(s) and action(s) you have taken since that time to achieve compliance. That the Petition Form HB-V, and any related instructions, include requirement that the Petitioner include a timeline in suitable, chronological format to address the events, dates, and actions called for by Questions 15 and 16, including the dates of communication with the South Coast AQMD to notify them of the occurrence(s) giving rise to the requested variance.

Two weeks after receiving the permits, on August 27, 2025, Petitioner's consultant reached out to District permitting staff to discuss modifying the permit limits, including specifically with respect to DR2.

Petitioner began preparations to cease operation of dry roasters DR1, DR3, and DR4 in early September 2025.

Petitioner began working with an engineering firm to obtain fuel meters for DR2 and DR5 in mid September 2025.

Petitioner's counsel reached out to District counsel on September 30, 2025, to discuss Petitioner's plans to seek a permit modification, and in the meantime, seek variance coverage via this petition.

17. What would be the harm to your business during **and/or after** the period of the variance if the variance were not granted?

Economic losses: $_____12-20 million per year_____

Number of employees laid off (if any):_____25-300_____

Provide detailed information regarding economic losses, if any, (anticipated business closure, breach of contracts, hardship on customers, layoffs, and/or similar impacts).

If the current permit limits remain in place, American Nuts would be forced to shut down its roasting operations, resulting in the layoff of nearly the entire roasting team. This includes the Roasting Manager, Quality Control Lead, QC Supervisors, and approximately 22 production employees, for a total of 25.

In addition, the loss of roasting capacity would jeopardize our ability to fulfill key contracts, including those with U.S. government agencies and major private-sector customers. Petitioner estimates that it would lose contracts worth $12 million to $20 million per year if forced to shut down its roasting operations.

To keep even a portion of its retail business running, American Nuts would be compelled to source finished goods from competitors and growers at significantly higher cost, placing it at a severe competitive disadvantage. The resulting financial strain could threaten the viability of the company, risking the loss of up to 300 jobs and substantial revenue across multiple customer channels.

18. Can you curtail or terminate operations in lieu of, or in addition to, obtaining a variance? Please explain.

American Nuts is willing to significantly curtail operations during the variance period.

It is willing to accept a variance condition requiring that it not use DR1, DR3, or DR4 during the variance period, eliminating emissions from a majority of the facility's dry roasters.

American Nuts is also willing to operate within the current fuel limits on DR2 and DR5 (albeit applied on a monthly as opposed to daily basis), which will limit DR2 and DR5 emissions to approximately two-thirds of historic levels.

19. Estimate excess emissions, if any, on a daily basis, including, if applicable, excess opacity (the percentage of total opacity above 20% during the variance period). If the variance will result in no excess emissions, insert "N/A" here and skip to No. 20.

Pollutant	(A) Total Estimated Excess Emissions (lbs/day)	(B) Reduction Due to Mitigation (lbs/day)	(C)* Net Emissions After Mitigation (lbs/day)
VOC (lb/day)	20.260	2.976	17.285

NOx (lb/day)	0.000	3.000	(3.000)
SOx (lb/day)	0.000	0.014	(0.014)
CO (lb/day)	0.000	0.808	(0.808)
PM (lb/day)	9.551	1.500	8.052

* Column A minus Column B = Column C

Excess Opacity:_____%

20. Show calculations used to estimate quantities in No. 19, **or** explain why there will be no excess emissions.

Emission calculations supporting the values presented in Section 19 are presented as Attachment 4.

21. Explain how you plan to reduce (mitigate) excess emissions during the variance period to the maximum extent feasible, or why reductions are not feasible.

American Nuts is willing to significantly curtail operations during the variance period. It is willing to accept a variance condition requiring that it not use DR1, DR3, or DR4 during the variance period, eliminating emissions from a majority of the facility's dry roasters.

American Nuts is also willing to accept the current fuel limits on DR2 and DR5 (albeit applied on a monthly as opposed to daily basis), which will limit DR2 and DR5 emissions to well below historic levels.

American Nuts also proposes to take reasonable nut throughput limits during the variance period to balance the need to reduce emissions as much as possible but not force the facility out of business.

22. How do you plan to monitor or quantify emission levels from the equipment or activity(s) during the variance period, and to make such records available to the District? **Any proposed monitoring does not relieve RECLAIM facilities from applicable missing data requirements.**

American Nuts has committed to installing fuel meters on DR2 and DR5. American Nuts will monitor fuel flow during the variance period, which will allow it to measure NOx emissions from the roasters.

American Nuts will monitor nut throughput at DR2 and DR5 during the variance period. This will allow it to estimate VOC emissions from the roasters.

23. How do you intend to achieve compliance with the rule(s) and/or permit condition(s)? Include a detailed description of any equipment to be installed, modifications or process changes to be made, permit conditions to be amended, etc., dates by which the actions will be completed, and an estimate of total costs.

To achieve compliance with the rules and permit conditions specified in this variance, with respect to DR5, Petitioner intends to purchase a thermal oxidizer and retrofit the burners with lower NOx burners and seek a

permit modification allowing it to increase its nut throughput limit and fuel usage limit.

With respect to DR2, Petitioner intends to cease operation of DR2 when it increases the nut throughput limit and fuel usage limit at DR5.

Petitioner proposes the following variance conditions:

1. Petitioner shall limit DR5 nut throughput during the variance period to 330 tons/month.
2. Petitioner shall limit DR5 fuel usage during the variance period to 230,760 SCF/month.
3. Petitioner shall limit DR2 nut throughput during the variance period to 143.9 tons/month.
4. Petitioner shall limit DR2 fuel usage during the variance period to 230,760 SCF/month.
5. Petitioner shall maintain records on DR2 and DR5 nut throughput and fuel usage and make such records available to the District upon request.
6. Petitioner shall not operate DR1, DR3, or DR4 during the variance period.
7. Petitioner shall install fuel flow meters on DR2 and DR5 within 15 days of the date this variance is granted.
8. Petitioner shall file a permit application with the District within 60 days of the date this variance is granted requesting a District permit to construct for a thermal oxidizer to control emissions from DR5 and to retrofit DR5 with low NOx (30 ppm or less) burners.
9. Within 30 days of the issuance of the District permit to construct for such thermal oxidizer and burners, Petitioner shall place a purchase order for such equipment.
10. Petitioner shall promptly install such equipment upon receipt.
11. Petitioner shall include in its permit application for such equipment a request that its permit be modified to increase or eliminate DR5 nut throughput limits and eliminate the DR5 fuel usage limit upon the conversion of the permit to construct for such equipment into a permit to operate.
12. The petitioner shall achieve final compliance no later than November 1, 2026.
13. The petitioner shall notify the Clerk of the Hearing Board (ClerkofBoard@aqmd.gov) and District by calling 1-800-CUT-SMOG within twenty-four (24) hours after achieving final compliance.
14. Petitioner shall pay all applicable fees, including excess emissions fees if applicable, to the Clerk of the Hearing Board within fifteen days upon notification in writing that the fees are due or the variance shall be invalidated pursuant to Rule 303 — Hearing Board Fees, subsection k.

24. State the date you are requesting the variance to begin: November 5, 2025; and the date by which you expect to achieve final compliance: November 1, 2026.

If the regular variance is to extend beyond one year, you **must** include a **Schedule of Increments of Progress**, specifying dates or time increments for steps needed to achieve compliance. See District Rule 102 for definition of Increments of Progress (see Attachment A, Item 24, Example #3).

List Increments of Progress here:

N/A (but increments of progress included at proposed conditions 7-12 above)

25. List the names of any District personnel with whom facility representatives have had contact concerning this variance petition or any related Notice of Violation or Notice to Comply.

___Nicholas Sanchez, Deputy District Counsel_____Ext.___3450_____

_____Ext._____

If the petition was completed by someone other than the petitioner, please provide their name and title below.

_____

Name Company Title

The undersigned, under penalty of perjury, states that the above petition, including attachments and the items therein set forth, is true and correct.

Executed on 9/30/2025, at Sylmar, California

J. Buatte
Signature

Jim Buatte
Print Name

Title: CEO/President, American Nuts

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26. SMALL BUSINESS and TABLE III SCHEDULE A FEES: To be eligible for reduced fees for small businesses, individuals, or entities meeting small business gross receipts criterion [see District Rule 303(h)], you must complete the following:

Declaration Re Reduced Fee Eligibility

1. The petitioner is
   a) ☐ an individual, or
   b) ☐ an officer, partner or owner of the petitioner herein, or a duly authorized agent of the petitioner authorized to make the representations set forth herein.

If you selected 1a, above, skip item 2.

2. The petitioner is
   a) ☐ a business that meets the following definition of Small Business as set forth in District Rule 102:

   SMALL BUSINESS means a business which is independently owned and operated and meets the following criteria, or if affiliated with another concern, the combined activities of both concerns shall meet these criteria:

   (a) the number of employees is 10 or less; **AND**

   (b) the total gross annual receipts are $500,000 or less **or**

   (iii) the facility is a not-for-profit training center.

   -OR-

   b) ☐ an entity with total gross annual receipts of $500,000 or less.

3. Therefore, I believe the petitioner qualifies for reduced fees for purpose of filing fees and excess emission fee calculations, in accordance with Rule 303(h).

I declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, at _____, California

_____ _____
Signature Print Name

Title _____

ATTACHMENT A

ITEM 1

Type of Variance Requested:

(a) **SHORT:** If compliance with District rule(s) can be achieved in **90 days or less**, request a short variance. *(Hearing will be held approximately 21 days from date of filing--10-day posted notice required.)*

(b) **REGULAR:** If compliance with District rule(s) will take **more than 90 days**, request a regular variance. If the variance request will extend beyond one year, you **must** include a specific detailed schedule of

[YOU MAY ATTACH ADDITIONAL PAGES IF NECESSARY]

ATTACHMENT 1

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

PERMIT TO OPERATE

Permit No.
G80474
A/N 652964

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301(d)) is not received by the expiration date, contact the District.

ID 203361

Legal Owner or Operator:
AMERICAN NUTS LLC
12950 SAN FERNANDO RD
SYLMAR, CA 91342

Equipment Location: 12950 SAN FERNANDO RD, SYLMAR, CA 91342

Equipment Description :

Nut Fryer, OR1, Heat and Control, Model No. MM-C-14-30, Natural Gas, Direct Fired, with Two (2) Eclipse Burners, Total Rating 1.84 MMBtu/hr, 19'10" L. x 11'4" W. x 9'8" H.

Conditions :

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.
3. This equipment shall be fired on natural gas only.
4. This equipment shall not operate more than 10 hours per day.
5. This equipment shall be used for processing nuts only.
6. The total quantity of nuts processed in this equipment shall not exceed 21,540 pounds per day.
7. Materials used in this equipment shall not contain any toxic air contaminants identified in Rule 1401, Table I, with an effective date of September 1, 2017 or earlier.
8. This equipment shall be operated in compliance with Rule 1147.
9. This equipment shall emit no more than 60 ppm of oxides of nitrogen (NOx), calculated as NO2, measured by volume on a dry basis at 3% O2.
10. This equipment shall emit no more than 1,000 ppm of carbon monoxide (CO), measured by volume on a dry basis at 3% O2.
11. This equipment shall not be operated at a temperature above 400 degrees Fahrenheit. The operator shall install and maintain a continuous temperature measuring device to accurately indicate the operating temperature in this equipment.

12. The owner or operator of this equipment shall conduct an initial source test no later than 180 days after the issuance of this permit and conduct subsequent source test every five years thereafter per Rule 1147 to verify compliance with NOx and CO emission limits in this permit unless otherwise approved by the Executive Officer. The source test shall be conducted under the following conditions:

A. A source test protocol shall be submitted to the South Coast AQMD (addressed to the South Coast AQMD, Attn: Faye Ganser, Engineering & Permitting, 21865 Copley Drive, Diamond Bar, CA 91765). The source test protocol shall be approved in writing by the South Coast AQMD before the test commences. The test protocol shall include the completed South Coast AQMD Forms ST-1 and ST-2 specifying the proposed operating conditions of the equipment during the test, identity of the testing laboratory, a statement from the testing laboratory certifying it meets the criteria in South Coast AQMD Rule 304(k), and a description of the sampling and analytical procedures to be used.

B. The source test protocol shall be submitted no later than 90 days prior to the scheduled source test and the source test shall be conducted within the 90-day period, or within 30 days following the source test protocol approval, whichever is later.

C. The test shall be performed by a testing laboratory certified by the California Air Resources Board or South Coast AQMD Laboratory Approval Program (LAP) in the required test methods for criteria pollutant(s) to be measured, and in compliance with South Coast AQMD Rule 304 (No Conflict of Interest).

D. Written notice of the source test shall be submitted to the South Coast AQMD at least 14 days prior to testing so that an observer may be present.

13. Two copies of the source test results shall be submitted to the South Coast AQMD within 60 days of the test. The report shall include, but not be limited to, the following:

A. The exhaust flow rates, in actual cubic feet per minute (acfm)
B. The firing rates, in Btu per hour
C. NOx and CO concentrations in exhaust gases
D. The oxygen content of the exhaust gases, in percent
E. The fuel flow rate and
F. The exhaust temperature, in degrees F

Report shall include emissions of CO and NOx (as NO2), in units of lbs/hr, ppmv, and ppmv dry basis, at 3% oxygen.

The source test report shall be submitted to attention of:
South Coast AQMD
PO Box 4941
Diamond Bar, CA 91765

14. This equipment shall display and maintain the model number and Rated Heat Input Capacity of the Unit burner on a permanent rating plate.

15. The owner or operator of this equipment shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual and other written materials supplied by the manufacturer or distributor.

16. Records shall be maintained to demonstrate compliance with the Conditions on this permit. Records shall be kept in a format acceptable to the South Coast AQMD, shall be retained at the facility for a minimum of five years, and shall be made available to South Coast AQMD personnel upon request.

NOTICE

In accordance with Rule 206, this Permit to Operate or copy shall be posted on or within 8 meters of the equipment.

This permit does not authorize the emission of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the applicable Rules and Regulations of the South Coast Air Quality Management District (SCAQMD). This permit cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other government agencies.

Executive Officer

BY JASON ASPELL/FG04
7/17/2025

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

PERMIT TO OPERATE

Permit No.
G80475
A/N 652965

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301(d)) is not received by the expiration date, contact the District.

Legal Owner or Operator:

ID 203361

AMERICAN NUTS LLC
12950 SAN FERNANDO RD
SYLMAR, CA 91342

Equipment Location: 12950 SAN FERNANDO RD, SYLMAR, CA 91342

Equipment Description :

Nut Fryer, OR2, Heat and Control, Model No. MM-C-14-30, Natural Gas, Direct Fired, with Two (2) Eclipse Burners, Total Rating 1.84 MMBtu/hr, 19'10" L. x 11'4" W. x 9'8" H.

Conditions :

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.
3. This equipment shall be fired on natural gas only.
4. This equipment shall not operate more than 10 hours per day.
5. This equipment shall be used for processing nuts only.
6. The total quantity of nuts processed in this equipment shall not exceed 21,540 pounds per day.
7. Materials used in this equipment shall not contain any toxic air contaminants identified in Rule 1401, Table I, with an effective date of September 1, 2017 or earlier.
8. This equipment shall be operated in compliance with Rule 1147.
9. This equipment shall emit no more than 60 ppm of oxides of nitrogen (NOx), calculated as NO2, measured by volume on a dry basis at 3% O2.
10. This equipment shall emit no more than 1,000 ppm of carbon monoxide (CO), measured by volume on a dry basis at 3% O2.
11. This equipment shall not be operated at a temperature above 400 degrees Fahrenheit. The operator shall install and maintain a continuous temperature measuring device to accurately indicate the operating temperature in this equipment.

12. The owner or operator of this equipment shall conduct an initial source test no later than 180 days after the issuance of this permit and conduct subsequent source test every five years thereafter per Rule 1147 to verify compliance with NOx and CO emission limits in this permit unless otherwise approved by the Executive Officer. The source test shall be conducted under the following conditions:

A. A source test protocol shall be submitted to the South Coast AQMD (addressed to the South Coast AQMD, Attn: Faye Ganser, Engineering & Permitting, 21865 Copley Drive, Diamond Bar, CA 91765). The source test protocol shall be approved in writing by the South Coast AQMD before the test commences. The test protocol shall include the completed South Coast AQMD Forms ST-1 and ST-2 specifying the proposed operating conditions of the equipment during the test, identity of the testing laboratory, a statement from the testing laboratory certifying it meets the criteria in South Coast AQMD Rule 304(k), and a description of the sampling and analytical procedures to be used.

B. The source test protocol shall be submitted no later than 90 days prior to the scheduled source test and the source test shall be conducted within the 90-day period, or within 30 days following the source test protocol approval, whichever is later.

C. The test shall be performed by a testing laboratory certified by the California Air Resources Board or South Coast AQMD Laboratory Approval Program (LAP) in the required test methods for criteria pollutant(s) to be measured, and in compliance with South Coast AQMD Rule 304 (No Conflict of Interest).

D. Written notice of the source test shall be submitted to the South Coast AQMD at least 14 days prior to testing so that an observer may be present.

13. Two copies of the source test results shall be submitted to the South Coast AQMD within 60 days of the test. The report shall include, but not be limited to, the following:

A. The exhaust flow rates, in actual cubic feet per minute (acfm)
B. The firing rates, in Btu per hour
C. NOx and CO concentrations in exhaust gases
D. The oxygen content of the exhaust gases, in percent
E. The fuel flow rate and
F. The exhaust temperature, in degrees F

Report shall include emissions of CO and NOx (as NO2), in units of lbs/hr, ppmv, and ppmv dry basis, at 3% oxygen.

The source test report shall be submitted to attention of:

South Coast AQMD
PO Box 4941
Diamond Bar, CA 91765

14. This equipment shall display and maintain the model number and Rated Heat Input Capacity of the Unit burner on a permanent rating plate.

15. The owner or operator of this equipment shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual and other written materials supplied by the manufacturer or distributor.

16. Records shall be maintained to demonstrate compliance with the Conditions on this permit. Records shall be kept in a format acceptable to the South Coast AQMD, shall be retained at the facility for a minimum of five years, and shall be made available to South Coast AQMD personnel upon request.

NOTICE

In accordance with Rule 206, this Permit to Operate or copy shall be posted on or within 8 meters of the equipment.

This permit does not authorize the emission of air contaminants in excess of those allowed by Division 26 of the Health and Safety Code of the State of California or the applicable Rules and Regulations of the South Coast Air Quality Management District (SCAQMD). This permit cannot be considered as permission to violate existing laws, ordinances, regulations or statutes of other government agencies.

Executive Officer

BY JASON ASPELL/FG04
7/17/2025

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

PERMIT TO OPERATE

Permit No.
G80476
A/N 652967

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301(d)) is not received by the expiration date, contact the District.

ID 203361

Legal Owner or Operator:
AMERICAN NUTS LLC
12950 SAN FERNANDO RD
SYLMAR, CA 91342

Equipment Location: 12950 SAN FERNANDO RD, SYLMAR, CA 91342

Equipment Description :

Nut Dry Roaster, DR1, Drying, JetZone, Model No. SNB, Natural Gas, Indirect Fired, With One (1) Maxon Burner, Model No. Cyclomax, Total Rating 0.945 MMBtu/hr, 12'0" L. x 11'4" W. x 9'8" H.

Conditions :

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.
3. This equipment shall be fired on natural gas only.
4. This equipment shall be used for processing nuts only.
5. The total quantity of nuts processed in this equipment shall not exceed 0.67 tons per day.
6. Materials used in this equipment shall not contain any toxic air contaminants identified in Rule 1401, Table I, with an effective date of September 1, 2017 or earlier.
7. This equipment shall be operated in compliance with Rule 1153.1.
8. The maximum fuel rate used by this equipment shall not exceed 7.692 scf in any one day. A log shall be kept indicating daily fuel usage used by this equipment.
9. A dedicated non-resettable fuel totalizing meter shall be installed and maintained in the natural gas supply line to measure and indicate the amount of fuel (in scfm) used by this equipment in order to demonstrate compliance with Condition No. 8.
10. This equipment shall display and maintain the model number and Rated Heat Input Capacity of the Unit burner on a permanent rating plate.

11. The owner or operator of this equipment shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual and other written materials supplied by the manufacturer or distributor.

12. Records shall be maintained to demonstrate compliance with the Conditions on this permit. Records shall be kept in a format acceptable to the South Coast AQMD, shall be retained at the facility for a minimum of five years, and shall be made available to South Coast AQMD personnel upon request.

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Executive Officer

BY JASON ASPELL/FG04
7/17/2025

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

PERMIT TO OPERATE

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301(d)) is not received by the expiration date, contact the District.

ID 203361

Legal Owner or Operator:
AMERICAN NUTS LLC
12950 SAN FERNANDO RD
SYLMAR, CA 91342

Equipment Location: 12950 SAN FERNANDO RD, SYLMAR, CA 91342

Equipment Description :

Nut Dry Roaster, DR2, Drying, Jet Zone, Model No. SNB, Natural Gas, Direct Fired, With Two (2) Eclipse Burners, Model No. RA0040, Total Rating 1.01 MMBtu/hr, 12'0" L. x 6'0" W. x 10'0" H.

Conditions :

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.
3. This equipment shall be fired on natural gas only.
4. This equipment shall be used for processing nuts only.
5. The total quantity of nuts processed in this equipment shall not exceed 0.67 tons per day.
6. Materials used in this equipment shall not contain any toxic air contaminants identified in Rule 1401, Table I, with an effective date of September 1, 2017 or earlier.
7. This equipment shall be operated in compliance with Rule 1153.1.
8. The maximum fuel rate used by this equipment shall not exceed 7,692 scf in any one day. A log shall be kept indicating daily fuel usage used by this equipment.
9. A dedicated non-resettable fuel totalizing meter shall be installed and maintained in the natural gas supply line to measure and indicate the amount of fuel (in scfm) used by this equipment in order to demonstrate compliance with Condition No. 8.
10. This equipment shall display and maintain the model number and Rated Heat Input Capacity of the Unit burner on a permanent rating plate.

11. The owner or operator of this equipment shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual and other written materials supplied by the manufacturer or distributor.

12. Records shall be maintained to demonstrate compliance with the Conditions on this permit. Records shall be kept in a format acceptable to the South Coast AQMD, shall be retained at the facility for a minimum of five years, and shall be made available to South Coast AQMD personnel upon request.

NOTICE

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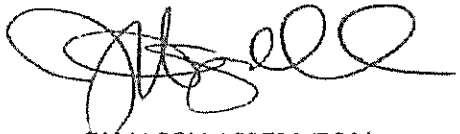
Executive Officer



BY JASON ASPELL/FG04
7/17/2025

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

PERMIT TO OPERATE

Permit No.
G80478
A/N 652969

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301(d)) is not received by the expiration date, contact the District.

ID 203361

Legal Owner or Operator:
AMERICAN NUTS LLC
12950 SAN FERNANDO RD
SYLMAR, CA 91342

Equipment Location: 12950 SAN FERNANDO RD, SYLMAR, CA 91342

Equipment Description :

Nut Dry Roaster, DR3, Drying, A.C. HORN, Model No. 333, Natural Gas, Direct Fired, With One (1) Maxon Burner, Model No. PL1000, Total Rating 0.80 MMBtu/hr, 9'0" L. x 5'0" W. x 6'0" H.

Conditions :

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.
3. This equipment shall be fired on natural gas only.
4. This equipment shall be used for processing nuts only.
5. The total quantity of nuts processed in this equipment shall not exceed 0.67 tons per day.
6. Materials used in this equipment shall not contain any toxic air contaminants identified in Rule 1401, Table I, with an effective date of September 1, 2017 or earlier.
7. This equipment shall be operated in compliance with Rule 1153.1
8. The maximum fuel rate used by this equipment shall not exceed 7,619 scf in any one day. A log shall be kept indicating daily fuel usage used by this equipment.
9. A dedicated non-resettable fuel totalizing meter shall be installed and maintained in the natural gas supply line to measure and indicate the amount of fuel (in scfm) used by this equipment in order to demonstrate compliance with Condition No. 8.
10. This equipment shall display and maintain the model number and Rated Heat Input Capacity of the Unit burner on a permanent rating plate.

11. The owner or operator of this equipment shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual and other written materials supplied by the manufacturer or distributor.

12. Records shall be maintained to demonstrate compliance with the Conditions on this permit. Records shall be kept in a format acceptable to the South Coast AQMD, shall be retained at the facility for a minimum of five years, and shall be made available to South Coast AQMD personnel upon request.

NOTICE

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Executive Officer

BY JASON ASPELL/FG04
7/17/2025

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

PERMIT TO OPERATE

Permit No.
G80479
A/N 652970

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301(d)) is not received by the expiration date, contact the District.

ID 203361

Legal Owner or Operator:
AMERICAN NUTS LLC
12950 SAN FERNANDO RD
SYLMAR, CA 91342

Equipment Location: 12950 SAN FERNANDO RD, SYLMAR, CA 91342

Equipment Description :

Nut Dry Roaster, DR4, Drying, BIONOT, Model No. LION85BIG, Natural Gas, Direct Fired, With One (1) Giersch Burner, Model No. RG30-N, Total Rating 0.80 MMBtu/hr, 9'0" L. x 5'0" W. x 6'0" H.

Conditions :

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.
3. This equipment shall be fired on natural gas only.
4. This equipment shall be used for processing nuts only.
5. The total quantity of nuts processed in this equipment shall not exceed 0.67 tons per day.
6. Materials used in this equipment shall not contain any toxic air contaminants identified in Rule 1401, Table I, with an effective date of September 1, 2017 or earlier.
7. This equipment shall be operated in compliance with Rule 1153.1.
8. The maximum fuel rate used by this equipment shall not exceed 7,619 scf in any one day. A log shall be kept indicating daily fuel usage used by this equipment.
9. A dedicated non-resettable fuel totalizing meter shall be installed and maintained in the natural gas supply line to measure and indicate the amount of fuel (in scfm) used by this equipment in order to demonstrate compliance with Condition No. 8.
10. This equipment shall display and maintain the model number and Rated Heat Input Capacity of the Unit burner on a permanent rating plate.

11. The owner or operator of this equipment shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual and other written materials supplied by the manufacturer or distributor.

12. Records shall be maintained to demonstrate compliance with the Conditions on this permit. Records shall be kept in a format acceptable to the South Coast AQMD, shall be retained at the facility for a minimum of five years, and shall be made available to South Coast AQMD personnel upon request.

NOTICE

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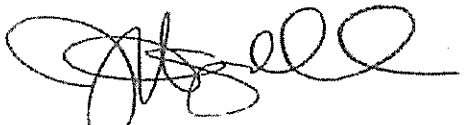
Executive Officer



BY JASON ASPELL/FG04
7/17/2025

South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178

PERMIT TO OPERATE

Permit No.
G80480
A/N 652971

This initial permit must be renewed ANNUALLY unless the equipment is moved, or changes ownership.
If the billing for the annual renewal fee (Rule 301(d)) is not received by the expiration date, contact the District.

ID 203361

Legal Owner or Operator:
AMERICAN NUTS LLC
12950 SAN FERNANDO RD
SYLMAR, CA 91342

Equipment Location: 12950 SAN FERNANDO RD, SYLMAR, CA 91342

Equipment Description :

Nut Dry Roaster, DR5, Drying, Ceselsan, Model No. CS 12000 KF, Natural Gas, Indirect Fired, With Four (4) Eclipse Burners, Model No. RA0025, Total Rating 1.32 MMBtu/hr, 33'5" L. x 12'11" W. x 9'8" H.

Conditions :

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
2. This equipment shall be properly maintained and kept in good operating condition at all times.
3. This equipment shall be fired on natural gas only.
4. This equipment shall be used for processing nuts only.
5. The total quantity of nuts processed in this equipment shall not exceed 0.67 tons per day.
6. Materials used in this equipment shall not contain any toxic air contaminants identified in Rule 1401, Table I, with an effective date of September 1, 2017 or earlier.
7. This equipment shall be operated in compliance with Rule 1153.1.
8. The maximum fuel rate used by this equipment shall not exceed 7,692 scf in any one day. A log shall be kept indicating daily fuel usage used by this equipment.
9. A dedicated non-resettable fuel totalizing meter shall be installed and maintained in the natural gas supply line to measure and indicate the amount of fuel (in scfm) used by this equipment in order to demonstrate compliance with Condition No. 8.
10. This equipment shall display and maintain the model number and Rated Heat Input Capacity of the Unit burner on a permanent rating plate.

11. The owner or operator of this equipment shall perform combustion system maintenance in accordance with the manufacturer's schedule and specifications as identified in the manual and other written materials supplied by the manufacturer or distributor.

12. Records shall be maintained to demonstrate compliance with the Conditions on this permit. Records shall be kept in a format acceptable to the South Coast AQMD, shall be retained at the facility for a minimum of five years, and shall be made available to South Coast AQMD personnel upon request.

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Executive Officer

BY JASON ASPELL/FG04
7/17/2025

ATTACHMENT 2

Grant T. Aguinaldo
Principal
grant.aguinaldo@enveraconsulting.com
Direct Dial: +1 415 203 0520

ENVERA CONSULTING™
1107 Fair Oaks Avenue # 295
South Pasadena, CA 91030
www.enveraconsulting.com

MEMORANDUM

To: American Nuts, LLC

From: Grant T. Aguinaldo, Envera Consulting

Date: September 25, 2025

Re: BACT Analysis for Dry Roaster 2

ENVILEARN, LLC DBA ENVERA CONSULTING ("Envera Consulting") has prepared this BACT analysis for Dry Roaster 2 ("DR2").

From this analysis, the following conclusions have been reached. First, consistent with the findings of other BACT determinations for nut roasting completed by the SMAQMD, there is no standard for VOC. Second, within the SCAQMD, a nut roasting BACT determination does exist; however, it specifies afterburner technology/thermal oxidation for PM only. Third, while it is technically feasible to install afterburner technology/thermal oxidation technology to control VOC emissions, it is not cost-effective to do so, since DR2 will be removed in one year.

Moreover, while thermal oxidation technology is technically feasible for controlling both VOC and PM emissions from DR2, the cost-effectiveness analysis finds that such installation cannot be economically justified. Indeed, when using SCAQMD's cost-effectiveness methodology, the analysis shows that the use of thermal oxidation exceeds the District's maximum cost-effectiveness by more than 4X for VOC control and 41X for PM control. These results represent orders of magnitude above acceptable cost-effectiveness levels. To that end, while the operation of DR2 does result in maximum daily uncontrolled emissions of VOC and PM exceeding 1 lb/day, the installation of BACT (thermal oxidation) is not required because the use of this technology fails to meet the cost-effectiveness criteria under any reasonable scenario.

1. Regulatory Background

Under South Coast Air Quality Management District ("SCAQMD", "Agency", or "District") Rule 1303 (a), equipment with maximum daily uncontrolled emissions ("MDU") exceeding 1 lb/day of any non-attainment pollutant such as volatile organic compounds ("VOC") and particulate matter ("PM") must install Best Available Control Technology ("BACT"). Accordingly, BACT represents the most stringent control technology for a specific class or category of equipment that is found in a state implementation plan ("SIP"), achieved in practice, or is technically feasible and cost-effective.

2. Facility Operations for Dry Roaster 2

The MDU emission rates from the operation of DR2 were calculated and are presented in Table 1. Given that the MDU emissions for VOC and PM exceed 1 lb/day, Rule 1303 (a) requires that BACT be installed for this equipment, unless it can be determined that it is not cost-effective to do so.

Table 1: Maximum Daily Uncontrolled ("MDU") Emissions from Nut Roasting

VOC (lb/day)	PM10 (lb/day)
6.711	3.224

3. Emissions Control Technologies for Nut Dry Roasters

a. Review of Current BACT Determinations

To understand what type of control technology may be considered as BACT for nut roasting operations, a review of publicly available BACT determinations was conducted. This analysis included a review of the EPA's BACT/RACT/LAER clearinghouse database[1] (collectively "Clearinghouse") and a review of determinations from major California air quality districts, including the SCAQMD, Bay Area Air Quality Management District ("BAAQMD"), San Joaquin Valley Air Pollution Control District ("SJVAPCD"), San Diego Air Pollution Control District ("SDAPCD"), and the Sacramento Metropolitan Air Quality Management District ("SMAQMD").

A review of the national Clearinghouse revealed no BACT determinations specifically applicable to nut roasting or even baking operations that do not involve yeast-containing products. The search excluded yeast-containing products because these operations emit VOC during the baking process as part of their inherent process emission profile, creating fundamentally different emission characteristics from nut roasting operations. Regionally, no nut roasting BACT determinations were identified in the BAAQMD, SJVAPCD, and SDAPCD.

The SCAQMD's Guidelines for Non-Major Polluting Facilities specify that for nut roasters, BACT is defined as the use of natural gas for NOx control and an afterburner with a retention time greater than or equal to 0.3 seconds at a process temperature greater than or equal to 1400°F for PM control (pg 89).[2] There is no specified technology for the control of VOC

[1] RACT/BACT/LAER Clearinghouse, available at: https://cfpub.epa.gov/rblc/index.cfm?action=Search.BasicSearch&lang=en (accessed on September 10, 2025).
[2] Best Available Control Technology Guidelines Part D: BACT Guidelines for Non-Major Polluting Facilities, available at: https://www.aqmd.gov/docs/default-source/bact/bact-guidelines/bact-guidelines-2024/part-d_bact-guidelines-for-non-major-polluting-facilities.pdf (accessed on September 10, 2025).

based on the SCAQMD's guidelines. Additionally, we did find a determination for a nut oven, supporting a seasoning and flavoring process within the SMAQMD.[3]

The SMAQMD determination is particularly significant for this analysis. For this analysis, the SMAQMD conducted a cost-effectiveness evaluation for a thermal oxidizer venting a nut dryer operation used to support flavoring and additive processes and concluded that this control technology was not cost-effective. This determination establishes a key regulatory datapoint that suggests that thermal oxidation may not be economically justified for nut processing operations, with emission characteristics/profiles that may exceed the basic nut roasting activities of DR2.

b. Regulatory Precedent and Implications

The SMAQMD's cost-effectiveness determination provides a key regulatory datapoint for evaluating emissions control requirements for nut roasting operations. The fact that a permanent installation with a potentially higher emission profile (due to flavoring and additive processing) compared to basic nut roasting could not justify thermal oxidation indicates that this control technology faces economic challenges for the nut roasting applications that are conducted on DR2. This finding is particularly relevant because SMAQMD's determination involved host equipment (i.e., a nut oven) with an assumed lifetime that is longer than one year, thereby allowing the costs to be amortized over the equipment's full useful life. Therefore, if thermal oxidation could not achieve cost-effectiveness for a permanent operation with potentially higher emissions, the economic justification becomes substantially more challenging for the one-year operational period of DR2.

c. Analogous Source Determinations

In the absence of a BACT determination specific to nut roasting, a broader search was conducted to identify potential analogous food processing operations that did not utilize yeast-containing products. Again, the search excluded yeast-containing products because these operations emit VOC during the baking process as part of their inherent process emission profile, creating fundamentally different emission characteristics from nut roasting operations.

Accordingly, no determinations were identified within BAAQMD or SDAPCD for comparable food processing ovens. However, one determination for tortilla oven was found in the SMAQMD that specifies natural gas use for PM10 control but explicitly notes that no standards exist for VOC and PM2.5 emissions.[4] Similarly, an SJVAPCD determination for snack chip ovens lists natural gas for PM10 and VOC control (pg 37).[5] Notably, SJVAPCD's peanut

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[3] Dryer/Oven used for nut processing, available at: https://www.airquality.org/StationarySources/Documents/Oven%20Used%20for%20Nut%20Drying%20BACT%20384.pdf (accessed on September 10, 2025).
[4] Tortilla Oven BACT Determination, available at: https://www.airquality.org/StationarySources/Documents/Tortilla%20Oven%20%E2%89%A4%20500%20%C2%B0F%20BACT%20367.pdf (accessed on September 10, 2025).
[5] BACT Determinations, available at: https://www.valleyair.org/media/tygavwbf/chapter1.pdf (accessed on September 10, 2025).

and pistachio roasting determinations have been rescinded (pg 42, and 43), which suggests challenges in establishing viable emissions control for nut roasting operations. The SCAQMD has published draft lowest achievable emission rate ("LAER") determinations for tortilla ovens and cheese puff ovens from 2017[6]; however, they do not specify any control technologies for VOC and PM emissions, though the acceptance status of these determinations remains unclear

A coffee roasting operation does represent a process that is closely analogous to a nut roasting process in terms of thermal processing characteristics and emission profiles. Along these lines, BACT determinations within the SCAQMD[7], BAAQMD[8], and SDAPCD[9] for coffee roasting operations consistently specify thermal oxidation for VOC and PM control.

d. Technical Feasibility Analysis

For VOC emissions control, thermal oxidation and carbon adsorption are established control methods that are achieved in practice across various industrial applications. However, the exhaust stream temperature from nut roasting operations (> 200°F) exceeds the effective operating range for carbon adsorption systems, which typically operate between 32-104°F.[10] Therefore, thermal oxidation represents the only technically viable method to control VOC emissions from this source.

For PM emissions control, available technologies include cyclones, filtration systems such as baghouses, and thermal oxidation. Thermal oxidation can effectively control emissions from both pollutants simultaneously, as demonstrated in the SCAQMD's BACT determinations for coffee roasting and deep fat frying operations. While PM emissions from the nut roasting process could potentially be controlled using cyclones or baghouse filtration systems, implementing these technologies alone would still require thermal oxidation installation to address VOC emissions.

The ability of thermal oxidation to control both VOC and PM emissions is technically superior to employing separate control devices for individual pollutants. Therefore, this cost-effectiveness analysis evaluates thermal oxidation as the only control technology for both PM and VOC emissions from DR2. This approach reflects the technical reality that thermal oxidation provides the most comprehensive and efficient control solution for DR2's dual-pollutant emission profile, eliminating the need for multiple separate control systems while achieving superior overall performance.

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[6] LAER Part B, Sections I and III Draft Proposals BACT Scientific Review Committee Meeting, December 12, 2017, available at: https://www.aqmd.gov/docs/default-source/bact/proposed_updates_bact_partb_draft_2-2-18.pdf (accessed on September 10, 2025).
[7] Id Ref 2 (pg 30).
[8] BACT / TBACT Workbook, available at: https://www.baaqmd.gov/permits/permitting-manuals/bact-tbact-workbook (accessed on September 10, 2025).
[9] New Source Review Requirements for Best Available Control Technology (BACT), available at : https://www.sdapcd.org/content/dam/sdapcd/documents/permits/SDAPCD-BACT-Guidance.pdf (accessed on September 10, 2025).
[10] Carbon Adsorbers, available at: https://www.epa.gov/sites/default/files/2018-10/documents/final_carbonadsorberschapter_7thedition.pdf (accessed on September 10, 2025)

4. Cost Effectiveness Methodology

Cost-effectiveness within the BACT framework is determined by calculating the cost of controls per amount of air emissions reduced, expressed in dollars per mass using the Discount Cash Flow ("DCF") method. Using this methodology, a technology is deemed to be cost-effective if the cost per ton of emissions reduced is below the required cost-effectiveness levels established by the SCAQMD.

The SCAQMD establishes both average and incremental cost-effectiveness levels, with the average levels used to determine cost-effectiveness between a specific control technology and an uncontrolled case, and incremental levels used to determine the cost-effectiveness between multiple control technologies. The SCAQMD publishes maximum cost-effectiveness values monthly on its webpage. For this analysis, the average values for ROG ($43,117/ton) and PM10 ($9,605/ton) from the second quarter of 2025 were used. [11]

Implementation of the DCF method uses a variety of assumptions, including a real interest rate and the effective useful life of the control device, among others. Generally, the DCF method calculates the present value of costs to control air emissions over equipment life by adding capital costs to the present value of all operating and other periodic costs for the EUL of the equipment. While SCAQMD guidelines indicate that a 10-year effective useful life ("EUL") and 4% real interest rate are default values, the Agency acknowledges that "… for case-specific situations other values may be considered."[12]

5. Techno-Economic Analysis of a Thermal Oxidizer

For the techno-economic analysis of thermal oxidation, specific assumptions were established to provide a conservative, lower-bound estimate of costs. Under these conditions, if lower-bound cost estimates are not cost-effective, then including additional costs (e.g., a more defined OPEX cost profile that includes other operational and maintenance expenses) into the analysis will not change the outcomes of the analysis.

For this analysis, the capital expenditures ("CAPEX") were set at $150,000 for a thermal oxidizer unit equipped with a 1.5 MMBTU/hr burner. In addition, operating expenditures ("OPEX") were limited to natural gas fuel costs based on current Henry Hub[13] pricing as published on the EIA website. The control efficiency was established at 99% for both VOC and PM to develop the theoretical maximum control effectiveness. The analysis used a real interest rate of 4% and an effective useful life of one (1) year, reflecting the actual operational timeline for DR2.

a. Results

[11] Cost Effectiveness Values, and Calculations available at: https://www.aqmd.gov/home/permits/bact/cost-effectiveness-values (accessed on September 10, 2025).
[12] Id at Ref 11.
[13] The Henry Hub Spot Price was used since it represents a lower bound because costs at the California Citygate, and other delivery and transmission charges from SoCalGas are expected to increase the overall fuel costs.

Using these assumptions, the baseline cost-effectiveness values were computed for a one-year EUL and are presented in Tables 1 and 2 (Entries 1 and 8). When compared to SCAQMD's maximum cost-effectiveness thresholds, the installation of a thermal oxidizer is not cost-effective, particularly given that the host equipment (i.e., DR2) will be permanently removed after one year of operation. In fact, the results demonstrate that when considering an afterburner to control emissions of both PM and VOC, the cost-effectiveness values are orders of magnitude above the respective thresholds established by the SCAQMD for each pollutant.

Table 3: Techno-Economic Parameters

Parameter	Value
CAPEX	$150,000 (US)
Additional OPEX, as Percent of CAPEX	0%/year
Burner Size	1.5 MMBTU/hr
Control Efficiency for PM and VOC	99%
Real Interest Rate	4%
Effective Useful Life ("EUL")	1 year
Fuel Cost[14]	$3.00/MMBTU
Daily Nut Throughput	9,596 lb/day
PM Emission Factor	0.66 lb/ton
VOC Emission Factor	1.4 lb/ton

b. Sensitivity Analysis

A sensitivity analysis was performed to understand how changes in individual parameters affect the baseline cost-effectiveness value. For this analysis, each parameter of interest was increased by 1%, the resulting cost-effectiveness value was calculated, and the percent increase relative to the baseline value was computed. Parameters showing higher percent increases indicate greater sensitivity to changes in that parameter. The analysis examined capital expenditures, operating expenditures, real interest rate, natural gas fuel pricing, burner capacity, and pollutant emission rates, and the results are presented in Tables 2 and 3 (entries 2-7 and 9-14).

The sensitivity analysis reveals that changes to CAPEX and the additional OPEX have the largest positive impact on the final cost-effectiveness value. Indeed, a 1% increase in CAPEX or additional OPEX ("Add'l OPEX") results in increases of 0.93% or 0.89% in the final cost-effectiveness value, respectively, with all other parameters held constant. Therefore, any increase in fuel costs through additional delivery and transmission charges from SoCalGas, changes to spot prices at the California city gate, or additional operating costs such as maintenance would increase the overall OPEX and thus the final cost-effectiveness value. Additionally, a 1% increase in the interest rate, fuel cost, or burner size did not lead to an appreciable change in the final cost effectiveness value. Notably, there is an inverse relationship with the PM or VOC

[14] Based on Henry Hub Spot Price, as reported by the Energy Information Administration (EIA) for September 3, 2025 (https://www.eia.gov/naturalgas/weekly/#tabs-prices-2)

emission factors, where a 1% decrease leads to a nearly 1% increase in the final cost-effectiveness value.

Table 4: Sensitivity Analysis for PM with an EUL of 1 Year.

Entry	Parameter	Cost Effectiveness Value ($/ton)	Percent Change, From Baseline Case (%)
1	Baseline	$395,655.31	---
2	CAPEX	$399,335.82	0.93%
3	Add'l OPEX	$399,194.26	0.89%
4	Interest Rate	$395,644.70	0.00%
5	Fuel Cost	$395,931.35	0.07%
6	Burner Size	$395,931.35	0.07%
7	PM Emission Factor	$399,651.83	1.01%

Table 5: Sensitivity Analysis for VOC with an EUL of 1 Year.

Entry	Parameter	Cost Effectiveness Value ($/ton)	Percent Change, From Baseline Case (%)
8	Baseline	$186,523.22	---
9	CAPEX	$188,258.32	0.93%
10	Add'l OPEX	$188,191.58	0.89%
11	Interest Rate	$186,518.21	0.00%
12	Fuel Cost	$186,653.35	0.07%
13	Burner Size	$186,653.35	0.07%
14	VOC Emission Factor	$188,407.29	1.01%

c. Regulatory Implication and Economic Feasibility

The results presented represent a lower-bound analysis designed to provide the most favorable cost-effectiveness scenario possible. Even under these conservative assumptions, the cost-effectiveness values exceed SCAQMD thresholds, demonstrating that thermal oxidizer installation cannot be economically justified for this limited-duration operation.

While District Staff has contended that using a one-year EUL is not acceptable given the facility's operating history, it is unreasonable to apply the full EUL to cost-effectiveness

calculations when the facility will cease roaster operations at the end of the variance period. The actual operational timeline must be reflected in any meaningful economic analysis.

6. Discussion and Conclusion

From this analysis, the following conclusions have been reached. First, consistent with the findings of other BACT determinations for nut roasting completed by the SMAQMD, there is no standard for VOC. Second, within the SCAQMD, a nut roasting BACT determination does exist; however, it specifies afterburner technology/thermal oxidation for PM only. Third, while it is technically feasible to install afterburner technology/thermal oxidation technology to control VOC emissions, it is not cost-effective to do so, since DR2 will be removed in one year.

Moreover, while thermal oxidation technology is technically feasible for controlling both VOC and PM emissions from DR2, the cost-effectiveness analysis finds that such installation cannot be economically justified. Indeed, when using SCAQMD's cost-effectiveness methodology, the analysis shows that the use of thermal oxidation exceeds the District's maximum cost-effectiveness by more than 4X for VOC control and 41X for PM control. These results represent orders of magnitude above acceptable cost-effectiveness levels. To that end, while the operation of DR2 does result in maximum daily uncontrolled emissions of VOC and PM exceeding 1 lb/day, the installation of BACT (thermal oxidation) is not required because the use of this technology fails to meet the cost-effectiveness criteria under any reasonable scenario.

Please contact me if you require additional information or have any questions regarding this analysis.

Cost Parameters

Interest Rate (%)	Add'l OPEX (%)	CAPEX ($)	Schedule (hrs/day)	Schedule (day/week)
4.00%	0%	150,000	10	5

Schedule (weeks/yr)	Schedule (days/yr)
52	260

Burner Size (MMBTU/hr)	HHV (BTU/SCF)
1.5	1,050

Natural Gas Price

Henry Hub Price ($/MMBTU)	Henry Hub Price ($/MSCF)	Total Fuel Cost ($/day)	Total Fuel Cost ($/year)	Effective OPEX ($/year)
$3.00	3.15	$45.00	$11,700.00	$11,700.00

Emission Factors

PM EF (lb/ton)	VOC EF (lb/ton)	Control (%)	Throughput (lb/day)
0.66	1.4	99%	9,596

VOC Emission Reduction

VOC MDU (lb/day)	VOC MDC (lb/day)	VOC Reduction (lb/day)	VOC Reduction (tons/day)	VOC Reduction (tons/yr)
6.72	0.07	6.65	0.003	0.865

PM Emission Reduction

PM MDU (lb/day)	PM MDC (lb/day)	PM Reduction (lb/day)	PM Reduction (tons/day)	PM Reduction (tons/yr)
3.17	0.03	3.14	0.002	0.408

Cost Effectiveness Values

Effective Useful Life (years)	VOC Emission Reduction (tons/yr)	PM Emission Reduction (tons/yr)	Present Value Factor	Present Value ($)
1	0.8645	0.408	0.9615	$161,250.00
2	1.7290	0.815	1.8861	$172,067.31
3	2.5935	1.223	2.7751	$182,468.57
4	3.4580	1.630	3.6299	$192,469.77
5	4.3225	2.038	4.4518	$202,086.32
6	5.1870	2.445	5.2421	$211,333.00
7	6.0515	2.853	6.0021	$220,224.04
8	6.9160	3.260	6.7327	$228,773.12
9	7.7805	3.668	7.4353	$236,993.38
10	8.6450	4.076	8.1109	$244,897.48

VOC Cost Effectiveness Summary

Effective Useful Life (years)	Cost Effectiveness Value ($/ton VOC, reduced)	Cost Effectiveness Threshold ($/ton VOC, reduced)	VOC, Cost Effective?
1	$186,523.22	$43,117.00	No
2	$99,517.98	$43,117.00	No
3	$70,355.81	$43,117.00	No
4	$55,659.04	$43,117.00	No
5	$46,751.99	$43,117.00	No
6	$40,742.65	$43,117.00	Yes
7	$36,391.49	$43,117.00	Yes
8	$33,078.68	$43,117.00	Yes
9	$30,459.79	$43,117.00	Yes
10	$28,328.10	$43,117.00	Yes

PM Cost Effectiveness Summary

Effective Useful Life (years)	Cost Effectiveness Value ($/ton PM, reduced)	Cost Effectiveness Threshold ($/ton PM, reduced)	PM, Cost Effective?
1	$395,655.31	$9,605.00	No
2	$211,098.74	$9,605.00	No
3	$149,239.60	$9,605.00	No
4	$118,064.63	$9,605.00	No
5	$99,170.88	$9,605.00	No
6	$86,423.80	$9,605.00	No
7	$77,194.07	$9,605.00	No
8	$70,166.90	$9,605.00	No
9	$64,611.67	$9,605.00	No
10	$60,089.92	$9,605.00	No

ATTACHMENT 3

SMAQMD BACT CLEARINGHOUSE

ACTIVE

CATEGORY Type: **Dryer/Oven used for nut processing**

BACT Category: Minor Source BACT

BACT Determination Number:	384	**BACT Determination Date:**	11/26/2024

Equipment Information

Permit Number:	N/A - Generic BACT Determination
Equipment Description:	Dryer oven used for nut processing
Unit Size/Rating/Capacity:	< 5.0 MMBTU/hr, VOC <0.7 TPY, operating <392F
Equipment Location:	N/A - Generic BACT Determination

BACT Determination Information

District Contact: Venk Reddy **Phone No.:** 2972071146 **Email:** vreddy@airquality.org

ROCs	**Standard:**	No Standard
	Technology Description:	
	Basis:	Achieved in Practice
NOx	**Standard:**	25 ppmv @ 3% O2
	Technology Description:	Low NOx Burner
	Basis:	Achieved in Practice
SOx	**Standard:**	Natural Gas fuel or (0.05% by volume)
	Technology Description:	
	Basis:	Achieved in Practice
PM10	**Standard:**	Natural Gas or equivalent
	Technology Description:	
	Basis:	Achieved in Practice
PM2.5	**Standard:**	No Standard
	Technology Description:	
	Basis:	Achieved in Practice
CO	**Standard:**	75 ppmv @ 3% O2
	Technology Description:	

	Basis:	Achieved in Practice
LEAD	**Standard:**	No standard
	Technology Description:	
	Basis:	Achieved in Practice
Comments:	This is a generic BACT determination based on BACT determinations made, and published, by other air agencies in California and/or other States.	

Printed: 11/26/2024

777 12th Street, Ste. 300

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Sacramento, CA 95814

BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION

DETERMINATION NOS.: 384

DATE: 9/22/2024

ENGINEER: Venk Reddy

Category/General Equip Description: Dryer/oven used for nut processing (non roasting), Food grade <5.0 MMBTU/hr, VOC emissions < 0.7 TPY lbs/year and operating < 320F

Equipment Specific Description: Dryer/Oven, natural gas fired, food grade without yeast <5.0 MMBTU/hr total VOC let than 0.7 TPY and operating at less than 320F.

Equipment Size/Rating: Minor Source BACT

Previous BACT Det. No.: none

This BACT determination is for a dryer/oven used for processing nuts. As part of the process of preparing the nuts for market, additives and flavorings are added and then placed in the oven. During the process, VOCs in the flavorings are released as emissions. Other emissions involved are from natural gas combustion. This process will be compared to other comparable ovens used in food manufacturing that do not use yeast.

BACT/T-BACT ANALYSIS

A. ACHIEVED IN PRACTICE (Rule 202, §205.1a):

The following control technologies are currently employed as BACT/T-BACT for ovens used for food production by the following agencies and air pollution control districts:

US EPA

Projects entered in the EPA RACT/BACT LAER clearinghouse between the period of 1/1/2014 and 9/22/2024 were reviewed for this BACT determination. There were no projects involved with nuts or food.

RULE REQUIREMENTS:

There are no rules that govern nut processing or food production. There are rules that govern cellulose food casing and the production of baker's yeast used in bread production which will not be considered since yeast is not part of the nut preparation process.

California Air Resource Board (CARB)

BACT

Three projects were identified as similar operations. SJVUAPCD has several BACT guidelines that could be considered as applicable but have been rescinded or updated. They are listed at the end of this section.

BACT FOR FOOD OVEN, SNACK FOOD, Cheese Puffs, Application No. 499293/551284 (SCAQMD)	
Pollutant	**Standard**
VOC	No standard
NOx	25 ppmv @ 3% O2
SOx	No standard
PM10	No standard
PM2.5	No standard
CO	75 ppmv @ 3% O2

BACT FOR FOOD OVEN, TORTILLA CHIP OVEN, Application No. 551284 (SCAQMD)	
Pollutant	**Standard**
VOC	No standard
NOx	54 ppmv @ 3% O2
SOx	No standard
PM10	No standard
PM2.5	No standard
CO	2000 ppmv @ 3% O2

From SJVUAPCD

1.6.4 Snack Food Oven. (revised in 2023 to be discussed in the SJVUAPCD section)
1.6.7 Pistachio Roasting Operation (rescinded)
1.6.9 Dryer Almond Processing, < 10 MMBTU/hr (rescinded)
1.6.16 Dryer Seed Processing (rescinded)
1.6.23 Pistachio, Almond and Walnut Dryers (rescinded)

Source: ARB BACT Clearinghouse

T-BACT
There are no T-BACT standards published in the clearinghouse for this category.

RULE REQUIREMENTS:
There are no rule standards for this source category.

Sacramento Metropolitan AQMD

BACT

BACT FOR FOOD OVEN, TORTILLA OVEN, BACT 292	
Pollutant	**Standard**
VOC	No standard
NOx	30 ppmv @ 3% O2
SOx	Natural Gas Fuel or equivalent and 500 ppmvd @ 3% O_2 (0.05% by volume)
PM10	Natural gas fuel or equivalent
PM2.5	No standard
CO	400 ppmv @ 3% O2

T-BACT For Tortilla Ovens ≤ 500 °F		
Pollutant	**Standard**	**Source**
Organic HAP/VHAP (T-BACT)	T-BACT is equivalent to BACT for VOC	SMAQMD

SMAQMD BACT 292

RULE REQUIREMENTS:

Rule 419 – NOx from Miscellaneous Combustion Units (Adopted 7/26/2018)

This rule applies to any miscellaneous combustion unit or cooking unit with a total rated heat input capacity of 2 million Btu per hour or greater that is located at a major stationary source of NOx and to any miscellaneous combustion unit or cooking unit with a total rated heat input capacity of 5 million Btu per hour or greater that is not located at a major stationary source of NOx. The NOx and CO emission limits for cooking units are summarized in the following table.

COOKING UNITS EMISSION LIMITS EXPRESSED AS PPMV, corrected to 3% O_2 (A)		
Equipment Category	**NOx Limit ppmv, corrected to 3% O_2 (lb/MMBtu)**	**CO Limit ppmv, corrected to 3% O_2 (lb/MMBtu)**
	Process Temperature	
	< 500 °F	800 (0.60)
Cooking Unit	40 (0.049)	

(A) Limits from Table 2 of SMAQMD Rule 419

Rule 406 – Specific Contaminants (Amended 12/6/1978)

This rule limits the emission of sulfur compounds and combustion contaminants.

A person shall not discharge into the atmosphere from any single source of emission equipment whatsoever:
Sulfur compounds in any state or combination thereof exceeding in concentration at the point of discharge: sulfur compounds, calculated as sulfur dioxide: 0.2% volume.
Combustion contaminants in any state or combination thereof exceeding in concentration at the point of discharge: 0.23 grams per dry standard cubic meter (0.1 grains per dry standard cubic foot) of gas calculated to 12% carbon dioxide at standard conditions.

South Coast AQMD

BACT

Source: SCAQMD BACT Guidelines for Non-Major Polluting Facilities, page 59 (Last Revised 2/1/2019)

Food Oven	
VOC	No Standard
NOx	For Ribbon Burners ≤ 500°F 30 ppmvd @ 3% O_2 Other Direct Fired Burner 30 ppmvd @ 3% O_2 Infrared Burner 30 ppmvd @ 3% O_2
SOx	Natural gas
PM10	Natural gas
PM2.5	No standard
CO	Compliance with applicable SCAQMD Rules 407 or 1153.1

RULE REQUIREMENTS:

Reg IV, Rule 407 – Liquid and Gaseous Air contaminants (Last amended 4/2/1982)
A person shall not discharge into the atmosphere from any equipment:

1. Carbon Monoxide (CO) exceeding 2,000 ppm by volume measured on a dry basis, averaged over 15 consecutive minutes
2. Sulfur compounds which would exist as liquid or gas at standard conditions exceeding 500 ppm, calculated as sulfur dioxide (SO2) and averaged over 15 consecutive minutes

Reg IV, Rule 1147 – NOx Reductions from Miscellaneous Sources (Last amended 5/6/2022)
This rule is to reduce NOx emissions from gaseous and liquid fuel fired combustion equipment. Per section (m)(2), this rule does not apply to charbroilers or food ovens. Therefore, this rule is not applicable to this BACT Determination.

Reg XI, Rule 1153.1 – Emissions of Oxides of Nitrogen from Commercial Food Ovens (Last amended 8/4/2023)
This rule applies to ovens, dryers, smokers, and dry roaster with NOx emissions from fuel combustion and are used to prepare food or products for making beverages for human consumption. For nut preparation, and units that will be subject to this BACT, the ovens are used to remove water or moisture to dry food products.

Any person owning or operating a drying oven subject to this rule shall not operate the unit in a manner that exceeds NOx 30 ppm and CO emissions of 800 ppm by volume at 3% O_2.

NOX AND CO EMISSION LIMITS AT 3% O2 PER RULE 1153.1		
	NOx	CO
Drying Oven	30	800

San Joaquin Valley APCD

BACT
Source: SJVAPCD Guidelines

BACT FOR FOOD OVEN, Snack Chip Oven, BACT 1.6.4 (6/21/23)	
Pollutant	**Standard**
VOC	Use of Natural Gas
NOx	30 ppmv @ 3% O2 (0.036 lb/MMBTU) with use of low NOx burner.
SOx	Use of Natural Gas
PM10	Natural gas fuel
PM2.5	No standard
CO	400 ppmv @ 3% O2

T-BACT
There are no T-BACT standards published in the clearinghouse for this category.

RULE REQUIREMENTS:

Rule 4309 – Dryers, Dehydrators, and Ovens (12/15/05)
This rule applies to any dryer, dehydrator, or oven that has a total rated heat input of ≥ 5.0 MMbtu/hr. Per Section 4.1.4 the requirements of this rule shall not apply to units used to bake or fry food for human consumption. Therefore, this rule does not apply.

Rule 4801 – Sulfur Compounds (Amended 12/17/1992)
A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in the concentration at the point of discharge: two-tenths (0.2) percent by volume calculated as sulfur dioxide, on a dry basis averaged over 15 consecutive minutes.

San Diego County APCD

BACT
Source: NSR Requirements for BACT (November 2023)
There are no BACT determinations for ovens used for food.

T-BACT
There are no T-BACT standards published in the clearinghouse for this category.

RULE REQUIREMENTS:
Regulation 4, Rule 68 – Fuel-Burning Equipment – Oxides of Nitrogen (9/20/1994)
This rule does not apply to fuel burning equipment which has a maximum input rating of < 50 mmBTU/hr.

Emissions of nitrogen oxides, from any non-vehicular fuel burning equipment subject to this rule, calculated as nitrogen dioxide at three percent oxygen on a dry basis, shall not exceed the following levels:

Type of Fuel	Nitrogen Oxides, Concentration	
	Volume (ppm)	Mass (mg/m3, at 20°C)
Gaseous	125	240
Liquid or Solid	225	430

When more than one type of fuel is used, the allowable NOx concentration shall be determined by proportioning the gross heat input for each fuel to its respective allowable concentration.

Regulation 4, Rule 53 – Specific Air Contaminants – (1/22/1997)
A person shall not discharge into the atmosphere from any single source of emission equipment whatsoever:
1. Sulfur compounds calculated as sulfur dioxide: 0.05 percent, by volume, on a dry basis.
2. Combustion particulates: 0.1 grains per dry standard cubic foot of gas which is standardized to 12% of carbon dioxide by volume.

Bay Area AQMD

BACT
Source: BAAQMD BACT Guidelines
There are no BACT standards published in the clearinghouse for this category.

T-BACT
There are no T-BACT standards published in the clearinghouse for this category.

RULE REQUIREMENTS:
Reg 8, Rule 2 – Organic Compounds from Miscellaneous Operations (5-4-22)
Preparation of Food: Emissions from the preparation of food for human consumption provided best modern practices are used, are exempt from this Rule.

Reg 9, Rule 3 – Inorganic Gaseous Pollutants; NOx from Heat Transfer Operations §9-3-301(3-17-1982)
This rule does not apply to any new or modified heat transfer operation designed for a maximum heat input of less than 264 GJ (250 million BTU) per hour.

Summary of Achieved in Practice Control Technologies

The following control technologies have been identified and are ranked based on stringency:

SUMMARY OF ACHIEVED IN PRACTICE CONTROL TECHNOLOGIES	
Pollutant	**Standard**
VOC	1. No Standard [USEPA, CARB, SMAQMD, SCAQMD, BAAQMD, SJVAPCD, SDAPCD]
NOx	1. 25 ppmv @3% O2 [CARB] 2. 30 ppmv @ 3% O2 [SMAQMD, SCAQMD, SJVAPCD] 3. 125 ppm [SDCAPCD] 4. No standard [BAAQMD]
SOx	1. Natural gas fuel or equivalent and 500 ppmvd @ 3% O_2 (0.05% by volume) [SMAQMD, SCAQMD] 2. No standard [USEPA, CARB, BAAQMD]
PM10	1. Natural gas fuel or equivalent [SMAQMD, SCAQMD] 2. No standard [USEPA, CARB, BAAQMD]
PM2.5	1. No Standard [USEPA, CARB, SMAQMD, SCAQMD, BAAQMD, SJVAPCD, SDAPCD]
CO	1. 75 ppmv @ 3% O2 [CARB] 2. 400 ppmv @3% O2 [SMAQMD, SJVAPCD] 3. No standard [SCAQMD, USEPA, BAAQMD, SDAPCD]
T-BACT	1. T-BACT is equivalent to BACT for VOC [SMAQMD] 2. No standard [SCAQMD, CARB, USEPA, BAAQMD, SJVAPCD, SDAPCD]

Summary Table
The following control technologies have been identified as the most stringent, achieved in practice control technologies:

BEST CONTROL TECHNOLOGIES ACHIEVED IN PRACTICE		
Pollutant	**Standard**	**Source**
VOC	No standard	All
NOx	25 ppmv @ 3% O2	CARB
SOx	Natural gas fuel or equivalent and 500 ppmvd @ 3% O_2 (0.05% by volume)	SMAQMD, SCAQMD

BEST CONTROL TECHNOLOGIES ACHIEVED IN PRACTICE		
PM10	Natural gas fuel or equivalent	SMAQMD, SCAQMD
PM2.5	No standard	All
CO	75 ppmv @ 3% O2	CARB
T-BACT	T-BACT is equivalent to BACT for VOC	SMAQMD

B. TECHNOLOGICALLY FEASIBLE AND COST EFFECTIVE (Rule 202, §205.1.b.):

Technologically Feasible Alternatives:
Any alternative basic equipment, fuel, process, emission control device or technique, singly or in combination, determined to be technologically feasible by the Air Pollution Control Officer.

The table below shows the technologically feasible alternatives identified as capable of reducing emissions beyond the levels determined to be "Achieved in Practice" as per Rule 202, §205.1.a.

A carbon bed is not considered for the control of VOCs because the exhaust temperature is too hot for this technology. Exhaust temperatures are 270F for this process. An SCR was not considered for NOx control since the minimum temperature to operate an SCR with a low temperature catalyst is 160C to 300C or 320F to 572F (ref. *Low Temperature SCR Catalyst Development and Industrial applications in China, published March 17, 2022)*. Ovens/dryers used for nut processing operate at temperatures lower than 320F would not be able to use an SCR. This BACT will be restricted to only be applicable to ovens/dryers that operate below 320F.

Pollutant	Technologically Feasible Alternatives
VOC	Thermal Oxidizer
NOx	No other technologically feasible option identified
SOx	No other technologically feasible option identified
PM10	No other technologically feasible option identified
PM2.5	No other technologically feasible option identified
CO	No other technologically feasible option identified

Cost Effective Determination:
After identifying the technologically feasible control options, a cost analysis is performed to take into consideration economic impacts for all technologically feasible controls identified.

Per the SMAQMD BACT policy the interest rate is calculated by using the 6-month average 20-year treasury rate. The 20-year treasury rate was used since the life of the equipment is expected to be 20 years.

9-1-24 4.13%
8-1-24 4.21%
7-1-24 4.56%
6-1-24 4.54%
5-1-24 4.71%
4-1-24 4.77%

The average is 4.49% adding two interest point and round up gives an interest rate to be used in this assessment of 7%.

VOC:
The lowest cost oxidizer, the recuperative oxidizer, was chosen to do the cost analysis. The source of VOCs comes from the natural gas combustion and the flavorings that are added to the nuts. The dryer heats up the nuts and evaporates the VOCs from the added flavorings. To determine the size of the thermal oxidizer needed for this process, a VOC PPM value of 1417 was used as an estimate of the VOCs from the flavorings. This value is based on the amount of flavoring that will be added to the nuts.

An expected VOC loading of 1417 ppm was used in order to size the equipment. As a worst case analysis, an operating time of only 1 hour per year was chosen to minimize the equipment and operational costs. With this assumption, the VOC limit was established such that the resultant cost effectiveness value was just above the District's published cost effectiveness thresholds. Therefore any increased equipment or operational cost or any reductions in the amount of VOC reduced would only increase the calculated cost effectiveness making it more not cost effective.

At an operation time of 1 hour a year and a controlled VOC amount of 0.7 tons/year with a loading of the thermal oxidizer of 1417 PPM, the cost effectiveness value is $26,927. Since this is higher than the $26,300 cost effective threshold for VOCs, effective July 1, 2024, it has been determined to be not cost effective. See Attachment A for more details.

C. SELECTION OF BACT:

Based on the above analysis, BACT for VOC, NOx, SOx, PM10, and CO will remain at what is currently achieved in practice and BACT for PM2.5 will be set to be the same as for PM10.

BACT FOR OVEN USED FOR NUT PROCESSING OPERATING <5 MMBTU/HR, < 320F AND <0.7 TPY OF VOC		
Pollutant	**Standard**	**Source**
VOC	No standard	All
NOx	25 ppmv @ 3% O2	CARB

BACT FOR OVEN USED FOR NUT PROCESSING OPERATING <5 MMBTU/HR, < 320F AND <0.7 TPY OF VOC		
SOx	Natural gas fuel or equivalent and 500 ppmvd @ 3% O_2 (0.05% by volume)	SMAQMD, SCAQMD
PM10	Natural gas fuel or equivalent	SMAQMD, SCAQMD
PM2.5	No standard	All
CO	75 ppmv @ 3% O2	CARB

T-BACT FOR OVEN USED FOR NUT PROCESSING OPERATING <5 MMBTU/HR, <320F AND <0.7 TPY OF VOC		
Pollutant	**Standard**	**Source**
VOC	Equivalent to VOC standard	SMAQMD

(A) Since the current BACT standards are more health protective than previously published T-BACT standards, T-BACT standards will be updated to follow the BACT standards.

APPROVED BY: Steve Mosunic **DATE:** 11/26/24

Appendix A

Cost Effectiveness Analysis for a Thermal Oxidizer

ATTACHMENT 4

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MEMORANDUM

To: American Nuts, LLC

From: Grant T. Aguinaldo, Envera Consulting

Date: September 25, 2025

Re: Excess Emission Calculations for Planned Variance Petition

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ENVILEARN, LLC DBA ENVERA CONSULTING ("Envera Consulting") has prepared this memorandum outlining the excess emissions during the variance period for American Nuts, LLC ("American Nuts").

1. Operational Assumptions During the Variance Period

During the Variance period, American Nuts will operate two roasters: DR2 will process nuts at a rate of 9,596 lb/day and DR5 at 22,027 lb/day. Natural gas consumption for each roaster will be limited to 7,692 SCF/day to ensure that the oxides of nitrogen ("NOx") emissions will remain below 1 lb/day per unit. In addition, three dry roasters will be removed from service, DR1, DR3, and DR4.

Table 1: Operational Parameters

Parameter (units)	DR1	DR2	DR3	DR4	DR5
Nut Throughput (lb/day)	0	9,596	0	0	22,027
Fuel Limit (SCF/day)	0	7,692	0	0	7,692

2. Emission Sources and Calculations Methodology

Emissions from the dry roasters originate from two sources, namely the combustion of pipeline natural gas and the nut roasting process. Combustion emissions were calculated using the South Coast Air Quality Management District's ("SCAQMD") default emission factors for

external combustion sources[1] and include NOx, volatile organic compounds ("VOC"), particulate matter ("PM"), oxides of sulfur ("SOx"), and carbon monoxide ("CO"). Process emissions for both VOC and PM were calculated using the Environmental Protection Agency's ("EPA") AP42 default emission factors for coffee roasting operations, found in Tables 9.13.2-1, and 9.13.2-2, which provide an appropriate surrogate for the nut roasting process.[2] For purposes of the variance, emissions from both sources are added together to obtain the entire emission profile from each roaster.

Table 2: Combustion Emission Factors

Pollutant	Emission Factor (lb/MMSCF)
VOC	7.00
NOx	130.00
SOx	0.6
CO	35.00
PM	7.50

Table 3: Process Emission Factors

Pollutant	Emission Factor (lb/ton)
VOC	1.4
PM	0.66

3. Emissions During the Variance Period

Emissions from DR2 and DR5 during the variance permit are based on the operational parameters in Table 1, and the emission factors in Tables 2, and 3.

Table 4: Variance Period Emissions

Roaster	VOC (lb/day)	NOx (lb/day)	SOx (lb/day)	CO (lb/day)	PM (lb/day)
DR2	6.771	1.000	0.005	0.296	3.224
DR5	15.473	1.000	0.005	0.296	7.327
Total	**22.244**	**2.000**	**0.009**	**0.538**	**10.551**

[1] SCAQMD Default Emission Factors for Combustion, available at: https://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/default-combustion-emission-factors.pdf?sfvrsn=12 (accessed September 5, 2025).
[2] AP42 Default Emission Factors for Coffee Roasting, available at: https://www.epa.gov/sites/default/files/2020-10/documents/c9s13-2.pdf (accessed September 5, 2025).

4. Baseline Emissions for DR2 and DR5

The baseline emissions from DR2 and DR5 are shown in Table 5. The baseline emissions were calculated assuming operation of DR2 (A/N: 652968) and DR5 (A/N: 652971) at the maximum nut throughput limits in the permits.

Table 5: Baseline Emissions

Roaster	VOC (lb/day)	NOx (lb/day)	SOx (lb/day)	CO (lb/day)	PM (lb/day)
DR2	0.992	1.000	0.005	0.296	0.500
DR5	0.992	1.000	0.005	0.296	0.500
Total	**1.984**	**2.000**	**0.009**	**0.538**	**1.000**

5. Excess Emissions During the Variance Period

Net emissions during the variance period are shown Table 6 and were calculated as the difference between the variance level emissions and the baseline emissions that are allowed from the current permits (that is the difference between Table 4 and Table 5).

Table 6: Net Variance Period Emissions

Roaster	VOC (lb/day)	NOx (lb/day)	SOx (lb/day)	CO (lb/day)	PM (lb/day)
DR2	5.779	0.000	0.000	0.000	2.724
DR5	14.481	0.000	0.000	0.000	6.827
Total	**20.260**	**0.000**	**0.000**	**0.000**	**9.551**

6. Mitigation Emissions During the Variance Period

During the variance period, mitigation will come in the form of the removal from service of three existing dry roasters. The total reduction in emissions due to mitigation for the variance are the sum of the avoided emissions from DR1, DR3, and DR5 and are presented in Table 7.

Table 7: Emissions from Removed Equipment

Roaster	VOC (lb/day)	NOx (lb/day)	SOx (lb/day)	CO (lb/day)	PM (lb/day)
DR1	0.992	1.000	0.005	0.296	0.500
DR3	0.992	1.000	0.005	0.296	0.500
DR4	0.992	1.000	0.005	0.296	0.500
Total	**2.976**	**3.000**	**0.014**	**0.808**	**1.500**

7. Net Emissions After Mitigation During the Variance Period

The net emissions after mitigation are calculated by subtracting the reduction due to mitigation (Table 7) from the excess emissions (Table 6) and are presented in Table 8.

Table 8: Excess Emissions

Pollutant	Excess Emissions (lb/day)	Reduction Due to Mitigation (lb/day)	Net Emissions After Mitigation (lb/day)
VOC	20.260	2.976	17.285
NOx	0.000	3.000	(3.000)
SOx	0.000	0.014	(0.014)
CO	0.000	0.808	(0.808)
PM	9.551	1.500	8.052