



JUN 11 2012

Daniel Lee
Paramount King, LLC
13646 Highway 33
Lost Hills, CA 93249

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1114855

Dear Mr. Lee:

Enclosed for your review and comment is the District's analysis of Paramount King, LLC's application for an Authority to Construct for the addition of a new flavoring and dehydration line (S-713-4), the modification of emission factors for an existing 3.2 MMBtu/hr dehydrator ('-4), and the modification of fuel use limits on two existing permit units ('-1 and '-4), at 10429 King Road in Lost Hills, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. Please submit your written comments on this project within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Ms. Ashley Dahlstrom of Permit Services at (661) 392-5612.

Sincerely,

David Warner
Director of Permit Services

DW: ABD/cm

Enclosures



JUN 11 2012

Mike Tollstrup, Chief
Project Assessment Branch
Stationary Source Division
California Air Resources Board
PO Box 2815
Sacramento, CA 95812-2815

Re: Notice of Preliminary Decision - Authority to Construct
Project Number: S-1114855

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of Paramount King, LLC's application for an Authority to Construct for the addition of a new flavoring and dehydration line (S-713-4), the modification of emission factors for an existing 3.2 MMBtu/hr dehydrator ('-4), and the modification of fuel use limits on two existing permit units ('-1 and '-4), at 10429 King Road in Lost Hills, CA.

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Sincerely,

David Warner
Director of Permit Services

DW: ABD/cm

Enclosure

**NOTICE OF PRELIMINARY DECISION
FOR THE PROPOSED ISSUANCE OF
AN AUTHORITY TO CONSTRUCT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Paramount King, LLC for the addition of a new flavoring and dehydration line (S-713-4), the modification of emission factors for an existing 3.2 MMBtu/hr dehydrator ('-4), and the modification of fuel use limits on two existing permit units ('-1 and '-4), at 10429 King Road in Lost Hills, CA.

The analysis of the regulatory basis for this proposed action, Project #S-1114855, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on this project must be submitted within 30 days of the publication date of this notice to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 34946 FLYOVER COURT, BAKERSFIELD, CA 93308.**

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Facility Name: Paramount King, LLC
Mailing Address: 13646 Highway 33
Lost Hills, CA 93249
Contact Person: Daniel Lee
Telephone: (661) 797-6505
Fax: (661) 797-6542
E-Mail: dlee@paramountfarms.com
Application #s: S-713-1-20 and '4-14
Project #: S-1114855
Deemed Complete: December 22, 2011

Date: May 12, 2012
Engineer: Ashley Dahlstrom
Lead Engineer: Allan Phillips *AP SUPR A QE*

MAY 14 2012

I. Proposal

Paramount King, LLC (PKL) currently operates a pistachio processing facility that includes a receiving/hulling/drying operation, a finishing operation, a shelling operation, a roasting/bagging operation and a byproduct rework operation. PKL is requesting an Authority to Construct (ATC) permit to add a new flavoring and dehydration line, which includes an 8.16 MMBtu/hr dehydrator served by a MAC 144MCF361 dust collector, to their existing roasting and bagging operation (S-714-4).

With this project, PKL is requesting to modify the emission factors for unit S-714-4. Currently, emissions from the existing 3.2 MMBtu/hr dehydrator are based on the amount of pistachios placed in the dehydrator. PKL would like to revise the ATC so that emissions are based on grain loading and air flow instead. Included in Appendix H of this project is an excerpt from Project S-930331 which provides the total exhaust flow rate of the baghouse serving the 3.2 MMBtu/hr dryer. Using the existing PM₁₀ emission limit and the exhaust flow rate of the baghouse, the grain loading for the unit will be calculated below.

In addition, PKL is also requesting an ATC to increase the daily and annual fuel use limits of the roasting and bagging operation (S-713-4) by reallocating the fuel use from unit '-1 to unit '-4.

Pursuant to their current operating permit, this facility is an existing major source; however, the facility has not received their Title V permit. An application to comply with Rule 2520 - *Federally Mandated Operating Permits* has already been submitted to the District; therefore, no action is required at this time.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (04/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4202	Particulate Matter-Emission Rate (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92) - not applicable, pistachio dryers utilize direct heat transfer
Rule 4309	Dryers, Dehydrators, and Ovens (12/15/05)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)	
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines	

III. Project Location

The facility is located on 10429 King Road in Lost Hills within the NE/4 Section 12, Township 25S, and Range 19E. The facility is not within 1,000 feet of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Pistachios are harvested and hulled as rapidly as possible during the approximately 45 to 60 day season. Freshly harvested pistachios are extremely prone to damage; a delay in the hulling and drying of harvested pistachios not only results in stained pistachio shells, which makes the nuts much less valuable than unstained shells, but also results in the production of aflatoxin, a toxic byproduct of mold. Therefore, pistachios must be hulled and dried as soon as they are harvested.

After hulling, the nuts are transferred to column dryers to reduce the moisture content from 30-40% to approximately 7%. After drying, the nuts are conveyed to gravity decks to further separate the blanks prior to storage. The good nuts are then conveyed to storage silos where moisture content may be further reduced or maintained at the desired level. After this initial processing, the pistachio nuts can be stored, without sustaining damage, while they await final processing.

V. Equipment Listing

Pre-Project Equipment Description:

- S-713-1-19: MODIFICATION OF PISTACHIO RECEIVING/HULLING/DRYING OPERATION INCLUDING 4 RECEIVING PITS, 4 PRECLEANING LINES (EACH PRECLEANING LINE INCLUDES 2 CYCLONES FOR A TOTAL OF 8 CYCLONES), EIGHTEEN 27.0 MMBTU/HR COLUMN DRYERS, 2 PORTABLE SILO FANS, SAMPLE DRYER WITH TWO MODULES (EACH WITH 0.8 MMBTU/HR BURNER), AND PERMIT EXEMPT STORAGE SILOS (LOW EMITTING UNITS): INSTALL TWO 20 MMBTU/HR NATURAL GAS-FIRED COLUMN DRYERS
- S-713-4-12: PISTACHIO ROASTING AND BAGGING OPERATION INCLUDING 3-STAGE PROCTOR SCHWARTZ DEHYDRATOR WITH TWO 1.6 MM BTU/HR BURNERS VENTED TO FABRIC FILTER,

Proposed Modification:

- S-713-1-20: MODIFICATION OF PISTACHIO RECEIVING/HULLING/DRYING OPERATION INCLUDING 4 RECEIVING PITS, 4 PRECLEANING LINES (EACH PRECLEANING LINE INCLUDES 2 CYCLONES FOR A TOTAL OF 8 CYCLONES), EIGHTEEN 27.0 MMBTU/HR GSI MODEL 2426 COLUMN DRYERS, TWO 20 MMBTU/HR COLUMN DRYERS, 2 PORTABLE SILO FANS, SAMPLE DRYER WITH TWO MODULES (EACH WITH 0.8 MMBTU/HR BURNER), AND PERMIT EXEMPT STORAGE SILOS (LOW EMITTING UNITS): REALLOCATE 70 MMSCF/YR OF NATURAL GAS USE TO PERMIT S-713-4
- S-713-4-14: MODIFICATION OF PISTACHIO ROASTING AND BAGGING OPERATION INCLUDING 3-STAGE PROCTOR SCHWARTZ DEHYDRATOR WITH TWO 1.6 MM BTU/HR BURNERS VENTED TO FABRIC FILTER: ADD NEW FLAVORING AND DEHYDRATION LINE, INCLUDING ONE AEROGlide DEHYDRATOR WITH TWO 4.08 MMBTU/HR BURNERS VENTED TO MAC 144MCF361 FABRIC FILTER, REALLOCATE 70 MMSCF/YR OF NATURAL GAS USE FROM S-713-1, AND REVISE EMISSION LIMIT FOR EXISTING 3.2 MMBTU/HR DEHYDRATOR SO THAT EMISSIONS ARE BASED ON GRAIN LOADING AND AIR FLOW

Post Project Equipment Description:

S-713-1-20: PISTACHIO RECEIVING/HULLING/DRYING OPERATION INCLUDING 4 RECEIVING PITS, 4 PRECLEANING LINES (EACH PRECLEANING LINE INCLUDES 2 CYCLONES FOR A TOTAL OF 8 CYCLONES), EIGHTEEN 27.0 MMBTU/HR COLUMN DRYERS, TWO 20 MMBTU/HR COLUMN DRYERS, 2 PORTABLE SILO FANS, SAMPLE DRYER WITH TWO MODULES (EACH WITH 0.8 MMBTU/HR BURNER), AND PERMIT EXEMPT STORAGE SILOS (LOW EMITTING UNITS)

S-713-4-14: PISTACHIO ROASTING AND BAGGING OPERATION INCLUDING 3-STAGE PROCTOR SCHWARTZ DEHYDRATOR WITH TWO 1.6 MM BTU/HR BURNERS VENTED TO FABRIC FILTER AND AN AEROGLIDE DEHYDRATOR WITH TWO 4.08 MMBTU/HR BURNERS VENTED TO A MAC 144MCF361 FABRIC FILTER

VI. Emission Control Technology Evaluation

The pollutants of concern are NO_x, CO, VOC, PM₁₀, and SO_x emitted from the natural gas-fired dehydrator. The dehydrator is fired on natural gas and is equipped with Low-NO_x burners.

Low-NO_x burners reduce NO_x formation by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NO_x burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NO_x. In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.

In addition, to limit PM₁₀ emissions from the dehydrator, it is equipped with a MAC 144MCF361 dust collector. The filtering velocities listed in the Air Pollution Engineering Manual (Air & Waste Management Association –1992 Table 5, Page 128) are not applicable to sock filter type dust collectors. The sock filter is capable of achieving a PM₁₀ control efficiency of 90%.

VII. General Calculations

A. Assumptions

- The process weight of pistachios will not change as a result of this project: 6,000 ton/day for S-713-1 and 245 ton/day for S-713-4
- Non-combustion PM₁₀ emission calculations are based on 60 day/yr operating schedule for the receiving/pre-cleaning (S-1112813) and 365 day/yr for the bagging/roasting operation (S-1093886)
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)

- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60)
- Pre-project and post-project fuel limits, per applicant, are:

	Pre-Project Fuel Limits		Post-Project Fuel Limits	
	MMscf/day	MMscf/yr	MMscf/day	MMscf/yr
Receiving & Drying (S-713-1)	10.644	359.369	10.644	289.369
3.2 MMBtu/hr Dehydrator (S-713-4)	0.124	16.097	0.124	16.097
8.16 MMBtu/hr Dehydrator (S-713-4)	0.00**	0.00**	0.2**	70.0**

** Dehydrator added in this project

B. Emission Factors

Pre-Project:

S-713-1-20:

Pollutant	Burner Emission Factors				Source
NO _x	83.0	lb-NO _x /MMscf	0.083	lb-NO _x /MMBtu	Current Permit
SO _x	2.85	lb-SO _x /MMscf	0.00285	lb-SO _x /MMBtu	Current Permit
PM ₁₀	7.6	lb-PM ₁₀ /MMscf	0.0076	lb-PM ₁₀ /MMBtu	Current Permit
CO	84.0	lb-CO/MMscf	0.084	lb-CO/MMBtu	Current Permit
VOC	5.5	lb-VOC/MMscf	0.0055	lb-VOC/MMBtu	Current Permit
Pre-Cleaning Emission Factor					
PM ₁₀	0.00416 lb-PM ₁₀ /ton				Current Permit

S-713-4-14:

Emissions from the 3.2 MMBtu/hr dehydrator:

Pollutant	Burner Emission Factors				Source
NO _x	95.0	lb-NO _x /MMscf	0.095	lb-NO _x /MMBtu	Current Permit
SO _x	2.85	lb-SO _x /MMscf	0.00285	lb-SO _x /MMBtu	Current Permit
PM ₁₀	5.0	lb-PM ₁₀ /MMscf	0.005	lb-PM ₁₀ /MMBtu	Current Permit
CO	46.0	lb-CO/MMscf	0.046	lb-CO/MMBtu	Current Permit
VOC	5.0	lb-VOC/MMscf	0.005	lb-VOC/MMBtu	Current Permit

Per the current PTO, the roasting/dehydrators non-combustion PM₁₀ emission factor is:

PM₁₀ EF = 0.0145 lb/ton

Emissions from the 8.16 MMBtu/hr dehydrator:

New Emissions Unit

Post-Project:

S-713-1-20:

Pollutant	Burner Emission Factors				Source
NO _x	83.0	lb-NO _x /MMscf	0.083	lb-NO _x /MMBtu	Current Permit
SO _x	2.85	lb-SO _x /MMscf	0.00285	lb-SO _x /MMBtu	Current Permit
PM ₁₀	7.6	lb-PM ₁₀ /MMscf	0.0076	lb-PM ₁₀ /MMBtu	Current Permit
CO	84.0	lb-CO/MMscf	0.084	lb-CO/MMBtu	Current Permit
VOC	5.5	lb-VOC/MMscf	0.0055	lb-VOC/MMBtu	Current Permit
Non-combustion Emission Factors					
PM ₁₀	0.00416 lb-PM ₁₀ /ton				Current Permit

S-713-4-14:

Emissions from the 3.2 MMBtu/hr dehydrator:

Pollutant	Burner Emission Factors				Source
NO _x	95.0	lb-NO _x /MMscf	0.095	lb-NO _x /MMBtu	Current Permit
SO _x	2.85	lb-SO _x /MMscf	0.00285	lb-SO _x /MMBtu	Current Permit
PM ₁₀	5.0	lb-PM ₁₀ /MMscf	0.005	lb-PM ₁₀ /MMBtu	Current Permit
CO	46.0	lb-CO/MMscf	0.046	lb-CO/MMBtu	Current Permit
VOC	5.0	lb-VOC/MMscf	0.005	lb-VOC/MMBtu	Current Permit
Non-combustion Emission Factors					
Grain Loading	0.0005*	gr/dscf	Exhaust Flowrate	33,700 ft ³ /min	Current Permit and Project S-930331

* Non-combustion PM₁₀ Emissions:

$$\text{Daily PE2} = (0.0145 \text{ lb-PM}_{10}/\text{ton})(245 \text{ ton/day}) = 3.6 \text{ lb-PM}_{10}/\text{day}$$

$$\text{Annual PE2} = (0.0145 \text{ lb-PM}_{10}/\text{ton})(245 \text{ ton/day})(365 \text{ day/yr}) = 1,297 \text{ lb-PM}_{10}/\text{yr}$$

$$\text{PM Conc. (gr/scf)} = \frac{(\text{PM emission rate}) \times (7,000 \text{ gr/lb})}{(\text{Air flow rate}) \times (60 \text{ min/hr}) \times (24 \text{ hr/day})}$$

PM₁₀ emission rate = 3.6 lb/day. Assuming 100% of PM is PM₁₀
Exhaust Gas Flow = 33,700 scfm

$$\text{PM Conc. (gr/scf)} = [(3.6 \text{ lb/day}) * (7,000 \text{ gr/lb})] \div [(33,700 \text{ ft}^3/\text{min}) * (60 \text{ min/hr}) * (24 \text{ hr/day})]$$

PM Conc. = 0.0005 gr/dscf

S-713-4-14:

Emissions from the 8.16 MMBtu/hr dehydrator:

Pollutant	Burner Emission Factors				Source
NO _x	83.0	lb-NO _x /MMscf	0.083	lb-NO _x /MMBtu	Proposed
SO _x	2.85	lb-SO _x /MMscf	0.00285	lb-SO _x /MMBtu	District Policy APR 1720
PM ₁₀	7.6	lb-PM ₁₀ /MMscf	0.0076	lb-PM ₁₀ /MMBtu	AP-42 (07/98) Table 1.4-2
CO	84.0	lb-CO/MMscf	0.084	lb-CO/MMBtu	Proposed
VOC	5.5	lb-VOC/MMscf	0.0055	lb-VOC/MMBtu	AP-42 (07/98) Table 1.4-2
Non-combustion Emission Factors					
Grain Loading	0.0009	gr/dscf	Exhaust Flowrate	42,000 ft ³ /min	Proposed

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The PE1 for each pollutant from the burners is calculated with the following equation:

$$\text{PE1} = \text{EF (lb/MMscf)} \times \text{Maximum Fuel Usage (MMscf/day or year)}$$

S-713-1-19:

Emissions from Natural Gas Combustion:

Daily and Annual PE1					
Pollutant	EF (lb/MMscf)	Maximum Daily Fuel Usage (MMscf/day)	PE1 (lb/day)	Maximum Annual Fuel Usage (MMscf/yr)	PE1 (lb/yr)
NO _x	83.0	10.644	883.4	359.369	29,828
SO _x	2.85	10.644	30.3	359.369	1,024
PM ₁₀	7.6	10.644	80.9	359.369	2,731
CO	84.0	10.644	894.1	359.369	30,187
VOC	5.5	10.644	58.5	359.369	1,977

Receiving/Precleaning PM₁₀ Emissions:

$$PE1 \text{ (lb/day or yr)} = EF1 \text{ (lb-PM}_{10}\text{/ton)} \times \text{throughput (ton/day or yr)}$$

$$\text{Daily PE1} = (0.00416 \text{ lb-PM}_{10}\text{/ton})(6,000 \text{ ton/day}) = 25.0 \text{ lb-PM}_{10}\text{/day}$$

$$\text{Annual PE1} = (0.00416 \text{ lb-PM}_{10}\text{/ton})(6,000 \text{ ton/day})(60 \text{ day/yr}) = 1,498 \text{ lb-PM}_{10}\text{/yr}$$

S-713-4-12:

Emissions from the 3.2 MMBtu/hr dehydrator:

Daily and Annual PE1					
Pollutant	EF (lb/MMscf)	Maximum Daily Fuel Usage (MMscf/day)	PE1 (lb/day)	Maximum Annual Fuel Usage (MMscf/yr)	PE1 (lb/yr)
NO _x	95.0	0.124	11.8	16.097	1,529
SO _x	2.85	0.124	0.4	16.097	46
PM ₁₀	5.0	0.124	0.6	16.097	80
CO	46.0	0.124	5.7	16.097	740
VOC	5.0	0.124	0.6	16.097	81

Roasters/Dehydrators Non-combustion PM₁₀ Emissions:

$$\text{Daily PE1} = (0.0145 \text{ lb-PM}_{10}\text{/ton})(245 \text{ ton/day}) = 3.6 \text{ lb-PM}_{10}\text{/day}$$

$$\text{Annual PE1} = (0.0145 \text{ lb-PM}_{10}\text{/ton})(245 \text{ ton/day})(365 \text{ day/yr}) = 1,297 \text{ lb-PM}_{10}\text{/yr}$$

PE1 Summary

PE1 (lb/day)					
	NO _x	SO _x	PM ₁₀ **	CO	VOC
S-713-1-19	883.4	30.3	105.9	894.1	58.5
S-713-4-12	11.8	0.4	4.2	5.7	0.6
Total	895.2	30.7	110.1	899.8	59.1
PE1 (lb/yr)					
S-713-1-19	29,828	1,024	4,229	30,187	1,977
S-713-4-12	1,529	46	1,377	740	81
Total	31,357	1,070	13,218	30,927	2,058

** Combustion & non-combustion PM10

2. Post Project Potential to Emit (PE2)

The PE2 for each pollutant from the burners is calculated with the following equation:

$$PE2 = EF \text{ (lb/MMscf)} \times \text{Maximum Fuel Usage (MMscf/day or year):}$$

S-713-1-20:

Emissions from Natural Gas Combustion:

Daily and Annual PE2					
Pollutant	EF (lb/MMscf)	Maximum Daily Fuel Usage (MMscf/day)	PE2 (lb/day)	Maximum Annual Fuel Usage (MMscf/yr)	PE2 (lb/yr)
NO _x	83.0	10.644	883.4	289.369	24,018
SO _x	2.85	10.644	30.3	289.369	825
PM ₁₀	7.6	10.644	80.9	289.369	2,199
CO	84.0	10.644	894.1	289.369	24,307
VOC	5.5	10.644	58.5	289.369	1,592

Receiving/Precleaning PM₁₀ Emissions:

$$PE2 \text{ (lb/day or yr)} = EF1 \text{ (lb-PM}_{10}\text{/ton)} \times \text{throughput (ton/day or yr)}$$

$$\text{Daily PE2} = (0.00416 \text{ lb-PM}_{10}\text{/ton})(6,000 \text{ ton/day}) = 25.0 \text{ lb-PM}_{10}\text{/day}$$

$$\text{Annual PE2} = (0.00416 \text{ lb-PM}_{10}\text{/ton})(6,000 \text{ ton/day})(60 \text{ day/yr}) = 1,498 \text{ lb-PM}_{10}\text{/yr}$$

S-713-4-14:

Emissions from the 3.2 MMBtu/hr dehydrator:

Daily and Annual PE2					
Pollutant	EF (lb/MMscf)	Maximum Daily Fuel Usage (MMscf/day)	PE2 (lb/day)	Maximum Annual Fuel Usage (MMscf/yr)	PE2 (lb/yr)
NO _x	95.0	0.124	11.8	16.097	1,529
SO _x	2.85	0.124	0.4	16.097	46
PM ₁₀	5.0	0.124	0.6	16.097	80
CO	46.0	0.124	5.7	16.097	740
VOC	5.0	0.124	0.6	16.097	81

Non-combustion PM₁₀ Emissions:

$$\begin{aligned} \text{Daily PE2} &= \text{PM}_{10} \text{ Concentration} \times \text{minutes operated per day} \times \text{exhaust flowrate} \\ &= 0.0005 \text{ gr/dscf} \times 1440 \text{ min/day} \times 33,700 \text{ dscf/min} \times \text{lb/7000 gr} \\ &= 3.5 \text{ lb PM}_{10}\text{/day} \end{aligned}$$

$$\begin{aligned} \text{Annual PE2} &= \text{Daily PE2} \times 365 \\ &= 1,265 \text{ lb PM}_{10}/\text{year} \end{aligned}$$

Emissions from the NEW 8.16 MMBtu/hr dehydrator:

Daily and Annual PE2					
Pollutant	EF (lb/MMscf)	Maximum Daily Fuel Usage (MMscf/day)	PE2 (lb/day)	Maximum Annual Fuel Usage (MMscf/yr)	PE2 (lb/yr)
NO _x	83.0	0.2	16.6	70.0	5,810
SO _x	2.85	0.2	0.6	70.0	200
PM ₁₀	7.6	0.2	1.5	70.0	532
CO	84.0	0.2	16.8	70.0	5,880
VOC	5.5	0.2	1.1	70.0	385

Non-combustion PM₁₀ Emissions:

$$\begin{aligned} \text{Daily PE2} &= \text{PM}_{10} \text{ Concentration} \times \text{minutes operated per day} \times \text{exhaust flowrate} \\ &= 0.0009 \text{ gr/dscf} \times 1440 \text{ min/day} \times 42,000 \text{ dscf/min} \times \text{lb}/7000 \text{ gr} \\ &= 7.8 \text{ lb PM}_{10}/\text{day} \end{aligned}$$

$$\begin{aligned} \text{Annual PE2} &= \text{Daily PE2} \times 365 \\ &= 2,838 \text{ lb PM}_{10}/\text{year} \end{aligned}$$

PE2 Summary

PE2 (lb/day)					
	NO _x	SO _x	PM ₁₀ **	CO	VOC
S-713-1-20	883.4	30.3	105.9	894.1	58.5
S-713-4-14	28.4	1.0	13.4	22.5	1.7
Total	911.8	31.3	119.3	916.6	60.2
PE2 (lb/yr)					
S-713-1-20	24,018	825	3,697	24,307	1,592
S-713-4-14	7,339	246	4,715	6,620	466
Total	31,357	1,071	8,412	30,927	2,058

** Combustion & non-combustion PM₁₀

Greenhouse Gas Emissions (District Policy APR 2015)

Pre-project annual heat input

S-713-1-19: 359.369 MMscf/yr

S-713-4-12: 16.097 MMscf/yr

Total = 359.369 MMscf/yr + 16.097 MMscf/yr = 375.466 MMscf/yr

Post-project annual heat input

S-713-1-20: 289.369 MMscf/yr

S-713-4-14: 86.097 MMscf/yr

Total = 289.369 MMscf/yr + 86.097 MMscf/yr = 375.466 MMscf/yr

Net change in heat input

375.466 MMscf/yr – 375.466 MMBscf/yr

= 0 MMscf/yr

The annual heat input rating will not increase as a result of this project and therefore the annual GHG emissions will not increase either.

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-713-1-19	29,828	1,024	4,229	30,187	1,977
S-713-2-6	0	0	876	0	0
S-713-3-4	0	0	0	0	0
S-713-4-12	1,529	46	1377	740	81
S-713-5-4	0	0	769	0	0
S-713-6-0	0	0	0	0	0
S-713-8-2	00	0	365	0	0
Pre-Project SSPE (SSPE1)	31,357	1070	7,616	30,927	2,058

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Post-Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-713-1-20	24,018	825	3,697	24,307	1,592
S-713-2-6	0	0	876	0	0
S-713-3-4	0	0	0	0	0
S-713-4-14	7,339	246	4,715	6,620	466
S-713-5-4	0	0	769	0	0
S-713-6-0	0	0	0	0	0
S-713-8-2	0	0	365	0	0
Pre-Project SSPE (SSPE2)	31,357	1,071	10,422	30,927	2,058

5. Major Source Determination

Pursuant to Section 3.23 of District Rule 2201, a Major Source is a stationary source with post-project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.23.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site."

Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Pre-Project SSPE (SSPE1)	31,357	1,070	7,616	30,927	2,058
Post Project SSPE (SSPE2)	31,357	1,071	10,422	30,927	2,058
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	No

As seen in the table above, the facility is an existing Major Source for NO_x; however, the facility is not becoming a Major Source for any pollutant as a result of this project.

6. Baseline Emissions (BE)

The BE calculation (in lbs/year) is performed pollutant-by-pollutant for each unit within the project, to calculate the QNEC and if applicable, to determine the amount of offsets required.

Pursuant to Section 3.7 of District Rule 2201, BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.22 of District Rule 2201.

a. BE NO_x

Unit Located at a Non-Major Source

As shown in Section VII.C.5 above, the facility is a major source for NO_x emissions.

Clean Emissions Unit, Located at a Major Source

Pursuant to Rule 2201, Section 3.12, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

The dryers and dehydrators are the only source of NO_x emissions from the permit units being modified by this project. They are equipped with burners with NO_x emission rates of 0.083 which are fired on natural gas fuel. This meets the requirements for achieved-in-practice BACT during the five years immediately prior to the submission of the complete application. Therefore, these units are Clean Emissions Unit for NO_x, and Baseline Emissions (BE) are equal to the Pre-Project Potential to Emit (PE1).

BE = PE1

b. BE SO_x

Unit Located at a Non-Major Source

As shown in Section VII.C.5 above, the facility is not a major source for SO_x emissions:

Therefore Baseline Emissions (BE) are equal to the Pre-project Potential to Emit (PE1).

BE = PE1

c. BE PM₁₀

Unit Located at a Non-Major Source

As shown in Section VII.C.5 above, the facility is not a major source for PM₁₀ emissions.

Therefore Baseline Emissions (BE) are equal to the Pre-project Potential to Emit (PE1).

BE = PE1

d. BE CO

Unit Located at a Non-Major Source

As shown in Section VII.C.5 above, the facility is not a major source for CO emissions.

Therefore Baseline Emissions (BE) are equal to the Pre-project Potential to Emit (PE1).

BE = PE1

e. BE VOC

Unit Located at a Non-Major Source

As shown in Section VII.C.5 above, the facility is not a major source for VOC emissions.

Therefore Baseline Emissions (BE) are equal to the Pre-project Potential to Emit (PE1).

BE = PE1

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is a major source for NO_x, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	31,357	50,000	No
SO _x	n/a	80,000	No
PM ₁₀	n/a	30,000	No
VOC	n/a	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB288 Major Modification.

8. Federal Major Modification

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted for pollutants for which the facility is a major source. This facility is a major source for NO_x emissions. Emission decreases may not cancel out the increases for this determination.

Step 1

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

The project's combined total emission increases are equal to the post-project emissions for S-713-4-14 calculated in VII.C.2 and compared to the Federal Major Modification Thresholds in the following table:

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)**	Thresholds (lb/yr)	Federal Major Modification?
NO _x *	5,810	0	Yes
VOC*	n/a	0	Yes
PM ₁₀	n/a	30,000	No
PM _{2.5}	n/a	20,000	No
SO _x	n/a	80,000	No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since there is an increase in NO_x emissions, this project constitutes a Federal Major Modification, and no further analysis is required.

9. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix E.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install a new 8.16 MMBtu/hr dehydrator vented to a fabric collector with a PE greater than 2 lb/day for NO_x, PM₁₀, and CO. BACT is triggered for NO_x and PM₁₀ only since the PEs are greater than 2 lbs/day; however BACT is not triggered for CO since the SSPE2 for CO is not greater than 200,000 lbs/year, as demonstrated in Section VII.C.5 of this document.

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

c. Modification of emissions units – AIPE > 2 lb/day

$$\text{AIPE} = \text{PE}_2 - \text{HAPE}$$

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)

PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

Where,

PE1 = The emissions unit's Potential to Emit prior to modification or relocation, (lb/day)

EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1

EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

$$\text{AIPE} = \text{PE2} - (\text{PE1} * (\text{EF2} / \text{EF1}))$$

S-713-1-17: The PE2 is less than the PE1 for all criteria pollutants; therefore, the AIPE could not be >2 lb/day and BACT will not be triggered for this unit.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project constitutes a Federal Major Modification for NO_x emissions; therefore BACT is triggered for NO_x for all emissions units being modified in the project.

2. BACT Guideline

BACT Guideline 1.6.8, applies to the Pistachio Nut Dryer (Appendix C)

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Appendix C), BACT has been satisfied with the following:

Pistachio Drying:

NO_x: Low NO_x burner @ 0.083 lb/MMBtu and natural gas fuel (achieved in practice)

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The following table compares the post-project facility-wide annual emissions in order to determine if offsets will be required for this project.

Offset Determination (lb/year)					
	NO_x	SO_x	PM₁₀	CO	VOC
Post Project SSPE (SSPE2)	31,357	1,071	10,422	30,927	2,058
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	No	No	No	No

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for NO_x and the SSPE2 is greater than the offset thresholds; therefore offset calculations will be required for this project.

Per Sections 4.7.1 and 4.7.3, the quantity of offsets in pounds per year for NO_x is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(\sum[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

PE2 = Post Project Potential to Emit, (lb/year)

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE)

As calculated in Section VII.C.6 above, the Baseline Emissions (BE) from these units are equal to the Pre-Project Potential to Emit (PE1) since these units are Clean Emissions Units.

Also, there is only one emissions unit associated with this project and there are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

$$\text{Offsets Required (lb/year)} = ([\text{PE2} - \text{BE}] + \text{ICCE}) \times \text{DOR}$$

$$\begin{aligned} \text{PE2 (NO}_x\text{)} &= 24,018 \text{ lb/year ('-1)} + 7,339 \text{ ('-4)} = 31,357 \\ \text{BE (NO}_x\text{)} &= 29,828 \text{ lb/year ('-1)} + 1,529 \text{ ('-4)} = 31,357 \\ \text{ICCE} &= 0 \text{ lb/year} \end{aligned}$$

$$\begin{aligned} \text{Offsets Required (lb/year)} &= ([31,357 - 31,357] + 0) \times \text{DOR} \\ &= 0 \text{ lb NO}_x\text{/year} = 0 \text{ lb NO}_x\text{/year required} \end{aligned}$$

As demonstrated in the calculation above, the amount of offsets is zero; therefore, offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in VII.C.7, this project constitutes a Federal Major Modification; therefore, public noticing for Federal Major Modification purposes is required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	31,357	31,357	20,000 lb/year	No
SO _x	1,070	1,071	54,750 lb/year	No
PM ₁₀	7,616	10,422	29,200 lb/year	No
CO	30,927	30,927	200,000 lb/year	No
VOC	2,058	2,058	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. $SSIPE = SSPE2 - SSPE1$. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	31,357	31,357	0	20,000 lb/year	No
SO _x	1,071	1,070	1	20,000 lb/year	No
PM ₁₀	10,422	7,616	2,806	20,000 lb/year	No
CO	30,927	30,927	0	20,000 lb/year	No
VOC	2,058	2,058	0	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

2. Public Notice Action

As discussed above, this project will result in emissions, for NO_x, which would subject the project to the noticing requirements listed above. Therefore, public notice will be required for this project.

D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

S-713-1-20:

- *Emissions from natural gas combustion shall not exceed any of the following limits: 0.083 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu (as SO₂), 0.0076 lb-PM₁₀/MMBtu, 0.084 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rule 2201]N*
- *Natural gas combustion for this operation shall not exceed 10.644 Mscf/day nor 289.369 Mscf/yr. [District Rule 2201]*
- *Pistachio receiving/pre-cleaning operation throughput shall not exceed 6,000 ton/day. [District Rule 2201]*
- *Particulate matter (PM₁₀) emissions from the pistachio receiving/pre-cleaning operation shall not exceed 0.00416 lb/ton. [District Rule 2201]*

S-713-4-14:

- *Emission rates from natural gas combustion for the 3.2 MMBtu/hr dehydrator shall not exceed any of the following: PM₁₀: 0.005 lb/MMBtu, SO_x (as SO₂): 0.00285 lb/MMBtu, NO_x (as NO₂): 0.095 lb/MMBtu, VOC: 0.005 lb/MMBtu, and CO: 0.046 lb/MMBtu. [District Rule 2201] N*
- *Emission rates from natural gas combustion for the 8.16 MMBtu/hr dehydrator shall not exceed any of the following: PM₁₀: 0.0076 lb/MMBtu, SO_x (as SO₂): 0.00285 lb/MMBtu, NO_x (as NO₂): 0.083 lb/MMBtu, VOC: 0.0055 lb/MMBtu, and CO: 0.084 lb/MMBtu. [District Rule 2201] N*
- *Natural gas combustion for the 3.2 MMBtu/hr dehydrator shall not exceed 0.124 MMscf/day nor 16.097 MMscf/year. [District Rule 2201] N*
- *Natural gas combustion for the 8.16 MMBtu/hr dehydrator shall not exceed 0.2 MMscf/day nor 70.0 MMscf/year. [District Rule 2201] N*
- *Particulate matter emissions (as PM₁₀) from the dust collector serving the 3.2 MMBtu/hr dehydrator shall not exceed 0.0005 grains per dscf. [District Rule 2201] N*
- *Particulate matter emissions (as PM₁₀) from the dust collector serving the 8.16 MMBtu/hr dehydrator shall not exceed 0.0009 grains per dscf. [District Rule 2201] N*
- *Volumetric air flow through dust collector serving the 3.2 MMBtu/hr dehydrator shall not exceed 33,700 dscfm. [District Rule 2201] N*

- *Volumetric air flow through dust collector serving the 8.16 MMBtu/hr dehydrator shall not exceed 42,000 dscfm. [District Rule 2201] N*
- *This unit shall not operate more than 60 days per calendar year. [District Rule 2201] N*

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Fuel consumption and process rate records will be required. Existing recordkeeping conditions will be retained in the ATCs to ensure compliance with recordkeeping requirements.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

An AAQA is conducted by the Technical Services group, for any project which has an increase in emissions and triggers public notification requirements. Discuss the AAQA results as follows.

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard.

The proposed location is in an attainment area for NO_x, CO, and SO_x. The proposed location is in a non-attainment area for PM₁₀. The increase in criteria pollutants due to the proposed equipment will not cause a violation as shown on the table below titled "Criteria pollutant Modeling Results".

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass ¹	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ²	Pass ²
PM _{2.5}	X	X	X	Pass ²	Pass ²

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

As shown, the calculated contribution of CO, NO_x, SO_x, PM₁₀, and PM_{2.5}, will not exceed the EPA significance level. This project is not expected to cause or make worse a violation of an air quality standard. See Appendix C of this document for the AAQA summary sheet.

G. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to install a new flavoring line which includes a new 8.16 MMBtu/hr dehydrator served by a MAC 144MCF361 dust collector.

Since the project will provide the new flavoring line to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2520 Federally Mandated Operating Permits

Pursuant to their current operating permit, this facility is an existing major source; however, the facility has not received their Title V permit. An application to comply with Rule 2520 - *Federally Mandated Operating Permits* has already been submitted to the District; therefore, no action is required at this time.

Rule 4001 New Source Performance Standards (NSPS)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60. However, no subparts of 40 CFR Part 60 apply to dehydrators at nut processing facilities.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. However, no subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to nut processing operations.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). The following permit condition will be retained on the ATCs to ensure compliance with this rule:

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations provided the equipment is well maintained. Therefore, the following permit condition will be retained on the ATCs to ensure compliance with this rule:

- {98} No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – Risk Management Policy for Permitting New and Modified Sources specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project (Appendix D), the total facility prioritization score including this project was less than or equal to one. Therefore, no future analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

Baghouse serving the 3.2 MMBtu/hr dryer:

$$\text{PM Conc. (gr/scf)} = \frac{(\text{PM emission rate}) \times (7,000 \text{ gr/lb})}{(\text{Air flow rate}) \times (60 \text{ min/hr}) \times (24 \text{ hr/day})}$$

PM₁₀ emission rate = 3.6 lb/day. Assuming 100% of PM is PM₁₀
Exhaust Gas Flow = 33,700 scfm

$$\text{PM Conc. (gr/scf)} = [(3.6 \text{ lb/day}) \times (7,000 \text{ gr/lb})] \div [(33,700 \text{ ft}^3/\text{min}) \times (60 \text{ min/hr}) \times (24 \text{ hr/day})]$$

PM Conc. = 0.0005 gr/dscf

Since 0.0005 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

Baghouse serving the 8.16 MMBtu/hr dryer:

$$\text{PM Conc. (gr/scf)} = \frac{(\text{PM emission rate}) \times (7,000 \text{ gr/lb})}{(\text{Air flow rate}) \times (60 \text{ min/hr}) \times (24 \text{ hr/day})}$$

PM₁₀ emission rate = 7.8 lb/day. Assuming 100% of PM is PM₁₀
Exhaust Gas Flow = 42,000 scfm

$$\text{PM Conc. (gr/scf)} = [(7.8 \text{ lb/day}) * (7,000 \text{ gr/lb})] \div [(42,000 \text{ ft}^3/\text{min}) * (60 \text{ min/hr}) * (24 \text{ hr/day})]$$

PM Conc. = 0.0009 gr/dscf

Since 0.0009 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

District Rule 4301 Fuel Burning Equipment

The purpose of this rule is to limit the emission of air contaminants from fuel burning equipment. This rule limits the concentration of combustion contaminants and specifies maximum emission rates for sulfur dioxide, nitrogen oxide and combustion contaminant emissions. Section 3.1 of the rule defines fuel burning equipment as any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer. The dryers associated with this project are direct heat transfer units and are therefore not subject to the requirements of this rule.

Rule 4309 Dryers, Dehydrators, and Ovens

Dehydrators are required to meet the requirements of Section 5.1 of the rule. These requirements include operation and maintenance according to manufacturers specifications or APCO-approved alternative procedures, maintenance of records of operation and maintenance and manufacturers specifications/APCO-approved alternative procedures, and combustion of alternative fuels during natural gas curtailment as specified in Section 4.3.

The following condition is currently listed and will remain on the ATC:

- *3.2 MMBtu/hr and 6.0 MMBtu/hr dehydrators shall meet the requirements of Section 5.1 of Rule 4309. [District Rule 4309]*

Compliance is expected.

Rule 4801 Sulfur Compounds

This rule limits sulfur compound emissions to 2,000 ppmv as SO₂. Rule 4801 specifies testing methods for a stack source. As the combustion equipment associated with this project will be

fired on PUC quality natural gas, continued compliance with the requirements of this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The San Joaquin Valley Unified Air Pollution Control District (District) adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project. The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct S-713-1-20 and '4-14 subject to the permit conditions on the attached draft Authority to Construct in **Appendix A**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-713-1-20	3020-02-H	487.6 MMBtu/hr	\$1,030.00
S-713-4-14	3020-02-F	11.36 MMBtu/hr	\$607.00

Appendices

- A: Draft ATC
- B: Base Documents
- C: BACT Guideline
- D: HRA and AAQA Summaries
- E: Quarterly Net Emissions Change
- F: Emission Profiles
- G: Certification of Compliance
- H: Excerpt from Project S-930331

APPENDIX A
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-713-1-20

LEGAL OWNER OR OPERATOR: PARAMOUNT KING LLC
MAILING ADDRESS: 13646 HIGHWAY 33
LOST HILLS, CA 93249-9719

LOCATION: 10429 KING RD
LOST HILLS, CA 93249-9700

SECTION: NE12 TOWNSHIP: 25S RANGE: 19E

EQUIPMENT DESCRIPTION:

MODIFICATION OF PISTACHIO RECEIVING/HULLING/DRYING OPERATION INCLUDING 4 RECEIVING PITS, 4 PRECLEANING LINES (EACH PRECLEANING LINE INCLUDES 2 CYCLONES FOR A TOTAL OF 8 CYCLONES), EIGHTEEN 27.0 MMBTU/HR GSI MODEL 2426 COLUMN DRYERS, TWO 20 MMBTU/HR COLUMN DRYERS, 2 PORTABLE SILO FANS, SAMPLE DRYER WITH TWO MODULES (EACH WITH 0.8 MMBTU/HR BURNER), AND PERMIT EXEMPT STORAGE SILOS (LOW EMITTING UNITS): REALLOCATE 70 MMSCF/YR OF NATURAL GAS USE TO PERMIT S-713-4

CONDITIONS

1. S-713-1-19 shall be implemented prior to or concurrently with this ATC. [District Rule 2201]
2. The two 20 MMBtu/hr column dryers shall be equipped with staggered heaters and fans with premium efficiency electric motors powering fans and augers. [Public Resources Code 21000-21177: California Environmental Quality Act]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
6. The operation includes the following permit exempt equipment: wet process float tanks, bin dumpers, elevators, conveying, peeling, hulling equipment, detwiggers, scalper shakers, gravity decks, wet aspirators served by cyclones, and conveying and distribution equipment for clean dry pistachios. [District Rule 2010]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

S-713-1-20 - Feb 14 2012 12:58PM - DAHLSTRA - Joint Inspection Required with DAHLSTRA

7. Visible emissions from the cyclones serving the precleaning operation shall not exceed 5% opacity except for three minutes in any one hour. [District Rules 2201 and 4101]
8. Pistachio receiving/precleaning operation throughput shall not exceed 6,000 ton/day. [District Rule 2201]
9. Natural gas combustion for this operation shall not exceed 10.644 MMscf/day nor 289.369 MMscf/year. [District Rule 2201]
10. Particulate matter (PM10) emissions from the pistachio receiving/precleaning operation shall not exceed 0.00416 lb/ton. [District Rule 2201]
11. Emissions from natural gas combustion shall not exceed any of the following: 0.0076 lb-PM10/MMBtu, 0.00285 lb-SO_x/MMBtu (as SO₂), 0.083 lb-NO_x/MMBtu (as NO₂), 0.0055 lb-VOC/MMBtu, or 0.084 lb-CO/MMBtu. [District Rule 2201]
12. Daily records of pistachio receiving/precleaning throughput for this operation shall be maintained. [District Rules 1070 and 2201]
13. Daily and annual records of natural gas consumption for this operation shall be maintained. [District Rules 1070 and 2201]
14. {1958} All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: S-713-4-14

LEGAL OWNER OR OPERATOR: PARAMOUNT KING LLC
MAILING ADDRESS: 13646 HIGHWAY 33
LOST HILLS, CA 93249-9719

LOCATION: 10429 KING RD
LOST HILLS, CA 93249-9700

SECTION: NE12 TOWNSHIP: 25S RANGE: 19E

EQUIPMENT DESCRIPTION:

MODIFICATION OF PISTACHIO ROASTING AND BAGGING OPERATION INCLUDING 3-STAGE PROCTOR SCHWARTZ DEHYDRATOR WITH TWO 1.6 MM BTU/HR BURNERS VENTED TO FABRIC FILTER; ADD NEW FLAVORING AND DEHYDRATION LINE, INCLUDING ONE AEROGlide DEHYDRATOR WITH TWO 4.08 MMBTU/HR BURNERS VENTED TO MAC 144MCF361 FABRIC FILTER, REALLOCATE 70 MMSCF/YR OF NATURAL GAS USE FROM S-713-1, AND REVISE EMISSION LIMIT FOR EXISTING 3.2 MMBTU/HR DEHYDRATOR SO THAT EMISSIONS ARE BASED ON GRAIN LOADING AND AIR FLOW

CONDITIONS

1. {118} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Operation includes the following permit exempt equipment: portable receiving hoppers, bin dumpers, brine applicators, bucket elevators, conveyors, size graders, color sorters, aspirators, and packaging operations. [District Rule 2010]
3. Visible emissions shall not exceed 5% opacity except for three minutes in any one hour. [District Rule 2201]
4. Dehydrators shall be equipped with a non-resettable gas meter. [District Rule 2080]
5. Natural gas combustion for the 3.2 MMBtu/hr dehydrator shall not exceed 0.124 MMscf/day nor 16.097 MMscf/year. [District Rule 2201]
6. Natural gas combustion for the 8.16 MMBtu/hr dehydrator shall not exceed 0.2 MMscf/day nor 70.0 MMscf/year. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

S-713-4-14: May 12 2012 4:31PM - DAHLSTRA Joint Inspection Required with DAHLSTRA

7. Material removed from fabric filters shall be disposed of in a manner preventing visible emissions in excess of 5% opacity. [District Rule 2201]
8. Particulate matter emissions (as PM10) from the dust collector serving the 3.2 MMBtu/hr dehydrator shall not exceed 0.0005 grains per dscf. [District Rule 2201]
9. Particulate matter emissions (as PM10) from the dust collector serving the 8.16 MMBtu/hr dehydrator shall not exceed 0.0009 grains per dscf. [District Rule 2201]
10. Volumetric air flow through the dust collector serving the 3.2 MMBtu/hr dehydrator shall not exceed 33,700 dscfm. [District Rule 2201]
11. Volumetric air flow through the dust collector serving the 8.16 MMBtu/hr dehydrator shall not exceed 42,000 dscfm. [District Rule 2201]
12. Emission rates from natural gas combustion for the 3.2 MMBtu/hr dehydrator shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SO_x (as SO₂): 0.00285 lb/MMBtu, NO_x (as NO₂): 0.095 lb/MMBtu, VOC: 0.005 lb/MMBtu, and CO: 0.046 lb/MMBtu. [District Rule 2201]
13. Emission rates from natural gas combustion for the 8.16 MMBtu/hr dehydrator shall not exceed any of the following: PM10: 0.0076 lb/MMBtu, SO_x (as SO₂): 0.00285 lb/MMBtu, NO_x (as NO₂): 0.083 lb/MMBtu, VOC: 0.0055 lb/MMBtu, and CO: 0.084 lb/MMBtu. [District Rule 2201]
14. The 3.2 MMBtu/hr dehydrator and 8.16 MMBtu/hr dehydrator shall meet the requirements of Section 5.1 of Rule 4309. [District Rule 4309]
15. Permittee shall maintain daily records of dehydrator throughput and natural gas consumption for a period of five years and shall be made readily available for District inspection upon request. [District Rule 1070]

DRAFT

APPENDIX B
Base Documents

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-713-4-12

EXPIRATION DATE: 12/31/2011

SECTION: NE12 **TOWNSHIP:** 25S **RANGE:** 19E

EQUIPMENT DESCRIPTION:

PISTACHIO ROASTING AND BAGGING OPERATION INCLUDING 3-STAGE PROCTOR SCHWARTZ DEHYDRATOR WITH TWO 1.6 MM BTU/HR BURNERS VENTED TO FABRIC FILTER,

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Operation includes the following permit exempt equipment: portable receiving hoppers, bin dumpers, brine applicators, bucket elevators, conveyors, size graders, color sorters, aspirators, and packaging operations. [District Rule 2010]
3. Visible emissions shall not exceed 5% opacity except for three minutes in any one hour. [District Rule 2201]
4. Dehydrators shall be equipped with a non-resettable gas meter. [District Rule 2080]
5. Natural gas combustion for the 3.2 MMBtu/hr dehydrator shall not exceed 124 Mscf/day and 16,097 Mscf/year. [District Rule 2201]
6. Throughput of dehydrators shall not exceed 245 ton/day. [District Rule 2201]
7. Material removed from fabric filters shall be disposed of in a manner preventing visible emissions in excess of 5% opacity. [District Rule 2201]
8. Particulate matter (PM10) emission rate from 3.2 MMBtu/hr dehydrator shall not exceed 0.0145 lb/ton. [District Rule 2201]
9. Emission rates from natural gas combustion for the 3.2 MMBtu/hr dehydrator shall not exceed any of the following: PM10: 0.005 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, NOx (as NO2): 0.095 lb/MMBtu, VOC: 0.005 lb/MMBtu, and CO: 0.046 lb/MMBtu. [District Rule 2201]
10. The 3.2 MMBtu/hr dehydrator shall meet the requirements of Section 5.1 of Rule 4309. [District Rule 4309]
11. Permittee shall maintain daily records of dehydrator throughput and natural gas consumption for a period of five years and shall be made readily available for District inspection upon request. [District Rule 1070]

These terms and conditions are part of the Facility-wide Permit to Operate.

INSPECTION
ISSUANCE DATE: 08/04/2011

LEGAL OWNER OR OPERATOR: PARAMOUNT KING LLC
MAILING ADDRESS: 13646 HIGHWAY 33
LOST HILLS, CA 93249-9719

LOCATION: 10429 KING RD
LOST HILLS, CA 93249-9700

SECTION: NE12 **TOWNSHIP:** 25S **RANGE:** 19E

INSPECT PROGRAM PARTICIPANT: NO

EQUIPMENT DESCRIPTION:

MODIFICATION OF PISTACHIO RECEIVING/HULLING/DRYING OPERATION INCLUDING 4 RECEIVING PITS, 4 PRECLEANING LINES (EACH PRECLEANING LINE INCLUDES 2 CYCLONES FOR A TOTAL OF 8 CYCLONES), EIGHTEEN 27.0 MMBTU/HR COLUMN DRYERS, 2 PORTABLE SILO FANS, SAMPLE DRYER WITH TWO MODULES (EACH WITH 0.8 MMBTU/HR BURNER), AND PERMIT EXEMPT STORAGE SILOS (LOW EMITTING UNITS): INSTALL TWO 20 MMBTU/HR NATURAL GAS-FIRED COLUMN DRYERS

CONDITIONS

1. The two 20 MMBtu/hr column dryers shall be equipped with staggered heaters and fans with premium efficiency electric motors powering fans and augers. [Public Resources Code 21000-21177: California Environmental Quality Act]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. The operation includes the following permit exempt equipment: wet process float tanks, bin dumpers, elevators, conveying, peeling, hulling equipment, detwiggers, scalper shakers, gravity decks, wet aspirators served by cyclones, and conveying and distribution equipment for clean dry pistachios. [District Rule 2010]
6. Visible emissions from the cyclones serving the precleaning operation shall not exceed 5% opacity except for three minutes in any one hour. [District Rules 2201 and 4101]
7. Pistachio receiving/precleaning operation throughput shall not exceed 6,000 ton/day. [District Rule 2201]
8. Natural gas combustion for this operation shall not exceed 10,644 Mscf/day nor 359,369 Mscf/year. [District Rule 2201]
9. Particulate matter (PM10) emissions from the pistachio receiving/precleaning operation shall not exceed 0.00416 lb/ton. [District Rule 2201]
10. Emissions from natural gas combustion shall not exceed any of the following: 0.0076 lb-PM10/MMBtu, 0.00285 lb-SOx/MMBtu (as SO₂), 0.083 lb-NOx/MMBtu (as NO₂), 0.0055 lb-VOC/MMBtu, or 0.084 lb-CO/MMBtu. [District Rule 2201]
11. Daily records of pistachio receiving/precleaning throughput for this operation shall be maintained. [District Rules 1070 and 2201]
12. Daily and annual records of natural gas consumption for this operation shall be maintained. [District Rules 1070 and 2201]
13. {1958} All records shall be retained for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070]

APPENDIX C
BACT Guideline

[Per » B A C T » Bact Guideline.asp?category Level1=1&category Level2=6&category Level3=8&last Update=4 » 14 :](#)

Back

Best Available Control Technology (BACT) Guideline 1.6.8
Last Update: 4/14/1995

Pistachio Nut Dryer

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO		Natural gas with LPG as backup fuel	
NOx	Low NOx burner @ 0.083 lb/MMBtu and natural gas fuel		
PM10		Natural gas with LPG as backup fuel	
SOx		PUC quality natural gas with LPG as backup fuel	
VOC		Natural gas with LPG as backup fuel	

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source. For background information, see Permit Specific BACT Determinations on [Details Page](#).

APPENDIX D
HRA and AAQA Summaries

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Ashley Dahlstrom – Permit Services
 From: Leland Villalvazo– Technical Services
 Date: January 8, 2012
 Facility Name: Paramount Farms
 Location: 10429 King Road
 Application #(s): S-713-4-14
 Project #: S-1114855

A. RMR SUMMARY

RMR Summary				
Categories	Dehydration Unit (Unit 4-14)		Project Totals	Facility Totals
Prioritization Score	0.04		0.04	0.07
Acute Hazard Index	NA		NA	NA
Chronic Hazard Index	NA		NA	NA
Maximum Individual Cancer Risk (10 ⁻⁶)	NA		NA	NA
T-BACT Required?	No			
Special Permit Conditions?	No			

Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

Unit # 4-14

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on January 4, 2012 to perform a Risk Management Review for a proposed installation of a new flavor line and a 8.16 MMBTU dehydration operation.

II. Analysis

Toxic emissions for this proposed unit were calculated using Ventura County's emission factors for external combustion sources. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the

proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for this proposed unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

The following parameters were used for the review:

Analysis Parameters Unit 4-14			
Throughput (MMscf/yr)	70	Max Hours per Year	8760
Closest Receptor (m)	312		

Technical Services also performed modeling for criteria pollutants CO, NO_x, SO_x and PM₁₀; as well as a RMR. The emission rates used for criteria pollutant modeling were provided as part of the permit application submittal.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	Pass ¹	X	X	X	Pass
SO _x	Pass	Pass	X	Pass	Pass
PM ₁₀	X	X	X	Pass ²	Pass ²
PM _{2.5}	X	X	X	Pass ²	Pass ²

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The prioritization score is less than 1.0. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on page 1 of this report must be included for this proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Prioritization score
- E. Facility Summary

APPENDIX E
Quarterly Net Emissions Change

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
- PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.
- PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$PE2_{\text{quarterly}} = PE2_{\text{annual}} \div 4 \text{ quarters/year}$$

$$PE1_{\text{quarterly}} = PE1_{\text{annual}} \div 4 \text{ quarters/year}$$

S-713-1-20:

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	6,005	7,457	-1,452
SO _x	206	256	-50
PM ₁₀	924	1,057	-133
CO	6,077	7,547	-1,470
VOC	398	494	-96

S-713-4-14:

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	1,835	382	1,453
SO _x	62	12	50
PM ₁₀	1,179	344	835
CO	1,655	185	1,470
VOC	117	20	97

APPENDIX F
Emission Profiles

Permit #: S-713-1-20	Last Updated
Facility: PARAMOUNT KING LLC	01/16/2012 DAHLSTRA

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	24018.0	825.0	3697.0	24307.0	1592.0
Daily Emis. Limit (lb/Day)	883.4	30.3	105.9	894.1	58.5
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	-1452.0	-50.0	-133.0	-1470.0	-96.0
Q2:	-1452.0	-50.0	-133.0	-1470.0	-96.0
Q3:	-1452.0	-50.0	-133.0	-1470.0	-96.0
Q4:	-1452.0	-50.0	-133.0	-1470.0	-96.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

Permit #: S-713-4-14	Last Updated
Facility: PARAMOUNT KING LLC	05/12/2012 DAHLSTRA

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	7339.0	246.0	4715.0	6620.0	466.0
Daily Emis. Limit (lb/Day)	28.4	1.0	13.4	22.5	1.7
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	1453.0	50.0	835.0	1470.0	97.0
Q2:	1453.0	50.0	835.0	1470.0	97.0
Q3:	1453.0	50.0	835.0	1470.0	97.0
Q4:	1453.0	50.0	835.0	1470.0	97.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

APPENDIX G
Certification of Compliance

CERTIFICATION

Paramount Farms, LLC hereby certifies as follows:


1. Paramount Farms owns or operates certain major stationary sources in the State of California. Such sources are comprised of a vast number of emission points. As used in this certification, the term "major stationary source" shall, with respect to Paramount Farms stationary sources in the SJVUAPCD, have the meaning ascribed thereto in SJVUAPCD Rule 2201, Section 3.23, and shall, with respect to all of Paramount's other stationary sources in the State of California, have the meaning ascribed thereto in section 302(J) of the Clean Air Act (42 U.S.C. Section 7602 (J)).

2. Subject to paragraphs 3 and 4 below, all major stationary sources owned or operated by Paramount Farms in the State of California are either in compliance, or on an approved schedule of compliance, with all applicable emission limitations and standards under the Clean Air Act and all of the State Implementation Plan approved by the Environmental Protection Agency.

3. This certification is made on information and belief and is based upon a review of Paramount Farms major stationary sources in the State of California by those employees of Paramount Farms who have operational responsibility for compliance. In conducting such reviews, Paramount Farms and its employees have acted in good faith and have exercised best efforts to identify any exceedance of the emission limitations and standards referred to in paragraph 2 thereof.

4. This certification shall speak as of the time and date of its execution.

CERTIFICATION

By: 
Dave Szeflin

Title: Vice President of Operations

Date: 1/31/2012

APPENDIX H
Excerpt from Project S-930331

HOMA RANCH ROASTING OPERATION
DESIGN REVIEW / Engineering Analysis
Control Equipment For Roasting Machine

2/26/92

1 1

Fabric Filter Sizing Calculation

MANUFACTURER INFORMATION:

Fabric Filter Manufacturer = P & F Fabricators

Model = Recov-cure, RJ10-336-4728

FILTER BAG MATERIAL = POLYESTER FELT

TOTAL SURFACE AREA = 4,728 ft² (336 Bags, 5.5" dia x 10' long)

Air Cloth Ratio = 7.1 : 1 cfm/ft^2

Cleaning Mechanism = Impulse Jet, 0.1 sec. blast @ 90-100 psi

TOTAL ESTIMATED ROASTER EXHAUST = 4,300 CFM

ESTIMATED EXHAUST AIR TEMPERATURE = 220°F

TOTAL EXHAUST FROM EACH 7'-2" COOLING ZONE = 14,700 CFM

TOTAL FAN EXHAUST AGAINST RESISTANCE OF SYSTEM = 33,700 ACFM

TOTAL SURFACE AREA = 4,728 ft²

\therefore Air/Cloth Ratio = $33,700 \text{ cfm} / 4,728 \text{ ft}^2 = 7.1 \text{ cfm}/\text{ft}^2$

BRANCH PIPE VELOCITY Calculation:

The main duct dia = 42"

\therefore Cross Sectional Area = $\pi (42/12)^2 = 9.62 \text{ ft}^2$

Velocity = $33,700 \text{ ft}^3/\text{min} / 9.62 \text{ ft}^2 = 3,502.7 \text{ fpm}$

Based on AP-4.0 Page 117 Table 38. Recommended Maximum Filtering Velocities & Minimum Dust-Carrying Velocities, the filtering velocity is on the high side, however the branch pipe velocity of 3,500 fpm is acceptable.

The manufacturer has guaranteed the performance of the fabric filter at the 7.1/1 cfm/ft^2 .