San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

August 5, 2022

Melissa McCormick
Wonderful Pistachios & Almonds
13646 Highway 33
Lost Hills, CA 93249

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: S-377
Project Number: S-1213018

Dear Ms. McCormick:

Enclosed for your review and comment is the District's analysis of Wonderful Pistachios & Almonds's application for an Authority to Construct for the modification of one pistachio hulling and drying operation (permit S-377-58) to install four new precleaning lines with associated equipment and twenty new 20 MMBtu/hr natural gas-fired column dryers, sixty permit exempt storage silos with permit exempt natural gas-fired silo heaters, and various permit exempt wet processing equipment. In addition, the modification of four methyl bromide and sulfuryl fluoride fumigation operations (permits S-377-43, '-44, -45, and '-46) to establish a total combined methyl bromide fumigant usage limit of 2,556 lb/year, at 13646 Highway 33, Lost Hills, CA 93249.

The notice of preliminary decision for this project has been posted on the District's website (www.valleyair.org). After addressing all comments made during the 30-day public notice period, the District intends to issue the Authority to Construct. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Entor Pineda of Permit Services at (559) 230-5956.

Sincerely,

Brian Clements
Director of Permit Services

BC:ep

Enclosures

cc: Courtney Graham, CARB (w/ enclosure) via email

Samir Sheikh
Executive Director/Air Pollution Control Officer

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www.valleyair.org www.healthyairliving.com

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Modification to Pistachio Processing and Fumigation Operations

Facility Name:	Wonderful Pistachios & Almonds	Date:	August 5, 2022
Mailing Address:	13646 Highway 33 Lost Hills, CA 93249	Engineer:	Entor Pineda
		Lead Engineer:	Dustin Brown
Contact Person:	Melissa McCormick		
Telephone:	(661) 797-6441		
E-Mail:	Melissa.McCormick@wonderful.com		
Application #(s):	S-377-43-5, -44-5, -45-5, -46-5, and -58-2		
Project #:	S-1213018		
Deemed Complete:	September 23, 2021		

I. Proposal

The primary business of Wonderful Pistachios & Almonds (WPA) is the processing of pistachios and almonds. WPA has submitted an Authority to Construct (ATC) application for the following modifications:

Permit S-377-58-1 - Pistachio Hulling and Drying Operation

- The installation of four receiving pits with conveyors and cyclones, permit exempt wet processing equipment including hullers/peelers, wash decks, float tanks, wet aspirators with cyclones and/or expansion boxes, gravity decks and classification decks with high efficiency cyclones, conveyors, elevators, hoppers, and augers, twenty 20 MMBtu/hr GSI type column dryers and 60 permit exempt storage silos.
- The maximum heat input rating of the column dryers is estimated at 20 MMBtu/hr based on anticipated operating conditions. If needed, warm air to the silos will be provided by permit exempt certified indirect fired air heaters with a heat input rating of less than 2.0 MMBtu/hr.
- Each new pre-cleaning line will be served by a dedicated 44-inch high efficiency cyclone similar in design to the cyclones associated with the four existing pre-cleaning lines.

Permits S-377-43, ‘-44, ‘-45, and ‘-46 – Fumigation Operations

- Introduce a new Specific Limiting Condition (SLC) for VOC emissions such that the combined annual emissions from all four of these fumigation operations does not exceed 2,556 lb-VOC/year.

Wonderful Pistachios and Almonds received their Title V Permit on August 31, 2001. This modification can be classified as a Title V minor modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). But the facility has not requested that this

project be processed in that manner; therefore, Wonderful Pistachios and Almonds will be required to submit a Title V minor modification application prior to operating under the revised provisions of the ATC(s) issued with this project.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (8/15/19)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (8/15/19)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
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 at 13646 Highway 33 in Lost Hills, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

Facility Location			
Stationary Source	Section	Township	Range
S-377	23	26S	19E

IV. Process Description

Drying and Hulling

Pistachios are harvested and hulled as rapidly as possible during the approximately 45 to 90 day harvest season. Freshly harvested pistachios are extremely prone to damage; therefore, a delay in the hulling and drying operation can results in stained pistachio shells, making them less valuable. Additionally, a delay can cause the pistachios to produce aflatoxin, a toxic byproduct of mold.

The harvested nuts are routed through a pre-cleaning stage to remove small twigs, leaves, and trash. The nuts are extremely moist at this point. The nuts enter the peelers where the outer hull

is removed. Water is used to convey the nuts through various pieces of equipment to determine which nuts do not have any "meat" or product inside the shell. The nuts are routed through wet hullers to remove any remaining hull or skin.

After hulling, the nuts are transferred to column and bed dryers to reduce the moisture content from 30-40% to approximately 10%. After drying, the nuts are conveyed to gravity decks to further separate the blanks prior to storage. The pistachios are then sent to storage in one of the permit exempt storage silos. At this point, handling and storage of the pistachios are not considered a source of air contaminant emissions due to the high moisture content of the materials being processed.

If needed, warm air is provided to the storage silos by permit-exempt indirect, natural gas-fired heaters with a heat input rating of less than 2.0 MMBtu/hr (reference Rule 2020 – Exemptions, Section 6.1) to achieve the optimum moisture content for the stored product. After this initial processing, the pistachio nuts can be stored without sustaining damage prior to finishing operations.

Fumigation

Case goods, tote bins, cardboard packaging, etc. will be loaded into the fumigation chambers. A technician releases the proper amount of fumigant into the room based on the amount and types of materials to be fumigated. At the end of the fumigation cycle, off-gassing commences and is performed inside of the fumigation chamber. A dedicated exhaust fan is turned on and the room is aerated and vented through an exhaust stack to atmosphere. When fumigant levels have fallen to the legal exposure limit or below, the room is opened.

V. Equipment Listing

Pre-Project Equipment Descriptions:

S-377-43-4: METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

S-377-44-4: METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

S-377-45-4: METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

S-377-46-4: METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

S-377-58-1: 400 MMBTU/HR NATURAL GAS-FIRED PISTACHIO HULLING AND DRYING OPERATION #3

Proposed Modifications:

- Install four additional pistachio precleaner and hulling lines, twenty column dryers and sixty permit exempt storage silos.
- Establishing a combined limit of 2,556 lb/year of Methyl Bromide usage for all four fumigation operations.

S-377-43-5: MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): ADD A SPECIFIC LIMITING CONDITION OF 2,556 LB-VOC/YEAR FOR PERMIT UNITS S-377-43, -44, -45, and -46

S-377-44-5: MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): ADD A SPECIFIC LIMITING CONDITION OF 2,556 LB-VOC/YEAR FOR PERMIT UNITS S-377-43, -44, -45, and -46

S-377-45-5: MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): ADD A SPECIFIC LIMITING CONDITION OF 2,556 LB-VOC/YEAR FOR PERMIT UNITS S-377-43, -44, -45, and -46

S-377-46-5: MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): ADD A SPECIFIC LIMITING CONDITION OF 2,556 LB-VOC/YEAR FOR PERMIT UNITS S-377-43, -44, -45, and -46

S-377-58-2: MODIFICATION OF 400 MMBTU/HR NATURAL GAS-FIRED PISTACHIO HULLING AND DRYING OPERATION #3: INSTALL FOUR PRECLEANER LINES, TWENTY 20 MMBTU/HR NATURAL GAS-FIRED COLUMN DRYERS AND SIXTY PERMIT EXEMPT STORAGE SILOS WITH PERMIT EXEMPT NATURAL GAS-FIRED SILO HEATERS, AND VARIOUS PERMIT EXEMPT WET PROCESSING EQUIPMENT

Post-Project Equipment Description:

S-377-43-5: METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

S-377-44-5: METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

S-377-45-5: METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

S-377-46-5: METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

S-377-58-2: 800 MMBTU/HR NATURAL GAS-FIRED PISTACHIO HULLING AND DRYING OPERATION #3. THIS OPERATION WILL ALSO CONSIST OF VARIOUS PERMIT EXEMPT WET PROCESSING EQUIPMENT, PERMIT EXEMPT STORAGE SILOS AND PERMIT EXEMPT NATURAL GAS-FIRED SILO HEATERS

VI. Emission Control Technology Evaluation

S-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations

These fumigation operations emit VOC (methyl bromide) and toxic air contaminants (phosphine, ammonia). All the fumigants are released to the atmosphere at the end of the fumigation cycle. There are no emissions controls.

S-377-58-2: Drying and Hulling Operation

Once the pistachios are brought to the pre-cleaner lines via a truck, the nuts go through the precleaner step and then an aspirator which feeds into the cyclone. Heavier trash such as leafs, twigs and debris are routed to the trash bin, while dust emissions are processed through the cyclone. There will be four new pre-cleaning lines each with an associated cyclone.

The post pre-cleaning processing has a sufficiently high water and moisture content to reduce particulate emissions to negligible levels except from the following: pre-cleaning cyclones and natural gas-fired heaters & dryers.

The column dryers are fired on commercial natural gas. The pollutants of concern are the products of combustion emitted from the natural gas-fired dryers, dryers – NO_x, CO, VOC, PM_{10} and SO_x. PM_{10} is also generated form the pre-cleaning process. The burners used in these units are thermostatically controlled to maintain drying chamber temperature usually in the 170°F to 230°F range. This relatively cool chamber temperature is achieved by introducing a relatively large volume of diluent air, which reduces the peak combustion flame temperature, which inherently produces less NOx than other types of dryers. Paramount Farms has source tested pistachio dryers in the past and has established that pistachio dryers/heaters emit NOx at 0.083 lb NOx/MMBtu. No additional control equipment is proposed. Also, due to the design of pistachio dryers and heaters, no additional control equipment is feasible.

VII. General Calculations

A. Assumptions

S-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations

- Methyl bromide is considered a VOC and 100% is released to the atmosphere

- Daily methyl bromide usage in each fumigation chamber is 3.5 lb/day (per Project S-1030170, no proposed change proposed by the applicant)
- Annual methyl bromide usages in each fumigation chamber is 1,278 lb/year (per PTOs S-377-43-4, '-44-4, '-45-4 and -46-4,)
- The applicant is not proposing any change to the allowable usage of Profume (sulfuryl fluoride), therefore per PTOs S-377-43-4, '-44-4, '-45-4 and -46-4, the pre and post-project usage rates are: 12,000 lb/day or 40,000 lb/year.

S-377-58-2: Drying and Hulling Operation

- The hulling and drying operation typically operates 24 hours per day and 90 days per year
- Prior to this modification, the entire pistachio hulling and drying operation has a fuel usage limits of 9.65 MMscf/day and 300 MMscf/year (per existing PTO S-377-58-1)
- After this modification, the applicant is proposing a fuel use limit increase to 12.0 MMscf/day and 800 MMscf/year for the entire pistachio hulling and drying operation
- Pre-cleaner cyclones have an operation limit of 2,160 hours/year (per PTO S-377-58-1, no proposed changes)
- Pre-cleaner cyclone quantity
  - Pre-Project: 4 cyclones
  - Post-Project: 8 cyclones
- Gravity Decks are not sources of PM_{10} emissions
- Natural Gas Heating Value: 1,000 Btu/scf (District Practice)
- F-Factor for Natural Gas or Propane: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60 Appendix B)
- To streamline emission calculations, PM2.5 emissions are assumed to be equal to PM10 emissions. Only if needed to determine if a project is a Federal major modification for PM2.5 will specific PM2.5 emission calculations be performed.

B. Emission Factors

Cyclone Dust Collector Emission Factor

The proposed new precleaning equipment is similar to the existing pre-cleaning equipment and each new precleaning line will be controlled by a cyclone dust collector. Therefore, the PM_{10} emissions from the new equipment is expected to be identical to the existing operation's equipment. Thus, the pre and post-project emission factor will be identical.

PM_{10}: 0.08 lb PM_{10}/hr per cyclone (per applicant proposal and PTO S-377-58-1)

Natural Gas-fired Dryer Emission Factor

Emission Factors for Natural Gas-Fired Heaters/Dryers for Silos Storing Nuts		
Pollutant	lb/MMBtu	Source
NO_X	0.0832	Current Permit (S-377-58-1)

SO_X	0.00285	District Policy APR 1720
PM_{10}	0.0025	Current Permit (S-377-58-1)
CO	0.021	Current Permit (S-377-58-1)
VOC	0.0038	Current Permit (S-377-58-1)

As stated in Section VI above, Pistachio Column Dryers have been source tested and established that NO_x emissions are 0.0832 lb-NO_x/MMBtu. Additionally since the applicant is proposing to install similar equipment to those already in use, we can conclude that the emission factors from the existing dryers under PTO S-377-58-1 can also apply to the new units.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

S-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations

PE1 for Fumigation Operations					
Permit Unit	Methyl Bromide Usage (lb/day)	Methyl Bromide Usage (lb/year)	Percentage of VOC	Daily VOC PE1 (lb/day)	Annual VOC PE1 (lb/year)
S-377-43-4	3.5	1,278	100%	3.5	1,278
S-377-44-4	3.5	1,278	100%	3.5	1,278
S-377-45-4	3.5	1,278	100%	3.5	1,278
S-377-46-4	3.5	1,278	100%	3.5	1,278

S-377-58-2: Drying and Hulling Operation

The potential to emit for the operation is calculated in the table below:

Daily PE1 (Combustion)					
Pollutant	Emission Factor (lb/MMBtu)	X	Total Combined Proposed fuel Usage (MMBtu/day)	=	PE1 (lb/day)
NO_X	0.0832	X	9,650	=	**802.9**
SO_X	0.00285	X	9,650	=	**27.5**
PM_{10}	0.0025	X	9,650	=	**24.1**
CO	0.021	X	9,650	=	**202.7**
VOC	0.0038	X	9,650	=	**36.7**

Annual PE1 (Combustion)					
Pollutant	Emission Factor (lb/MMBtu)	X	Total Combined Proposed Fuel Usage (MMBtu/yr)	=	PE1 (lb/year)
NO_X	0.0832	X	300,000	=	**24,960**
SO_X	0.00285	X	300,000	=	**855**
PM_{10}	0.0025	X	300,000	=	**750**
CO	0.021	X	300,000	=	**6,300**
VOC	0.0038	X	300,000	=	**1,140**

PE1 (Non-Combustion)							
PM_{10} Emissions Factor(lb/hr)		**Total amount of units**		**Hours of Operation**		**PE1 Each Unit**	**PE1 combined units**
0.08	x	4	x	24	=	1.9 lb/day	7.7 lb/day
				2,160	=	172.8 lb/yr	691 lb/yr

Total Daily PE1					
Pollutant	PE1 (Combustion)	+	PE1 (Non-Combustion)	=	PE1 (lb/day
NO_X	**798.7**	+	0	=	**798.7**
SO_X	**27.4**	+	0	=	**27.4**
PM_{10}	**24.0**	+	13.3	=	**27.3**
CO	**201.6**	+	0	=	**201.6**
VOC	**36.5**	+	0	=	**36.5**

Total Annual PE1					
Pollutant	PE1 (Combustion)	+	PE1 (Non-Combustion)	=	PE1 (lb/day
NO_X	**24,960**	+	0	=	**24,960**
SO_X	**855**	+	0	=	**855**
PM_{10}	**750**	+	691	=	**1,441**
CO	**6,300**	+	0	=	**6,300**
VOC	**1,140**	+	0	=	**1,140**

2. Post-Project Potential to Emit (PE2)

S-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations

PE2 for Fumigation Operations					
Permit Unit	Methyl Bromide Usage (lb/day)	Methyl Bromide Usage (lb/year)	Percentage of VOC	Daily VOC PE2 (lb/day)	Annual VOC PE2 (lb/year)
S-377-43-4	3.5	1,278	100%	3.5	1,278
S-377-44-4	3.5	1,278	100%	3.5	1,278
S-377-45-4	3.5	1,278	100%	3.5	1,278
S-377-46-4	3.5	1,278	100%	3.5	1,278

S-377-58-2: Drying and Hulling Operation

The potential to emit for the operation is calculated in the table below:

Daily PE2 (Combustion)					
Pollutant	Emission Factor (lb/MMBtu)	X	Total Combined Proposed fuel Usage (MMBtu/day)	=	PE2 (lb/day)
NO_X	0.0832	X	12,000	=	**998.4**
SO_X	0.00285	X	12,000	=	**34.2**
PM_{10}	0.0025	X	12,000	=	**30**
CO	0.021	X	12,000	=	**252**
VOC	0.0038	X	12,000	=	**45.6**

Annual PE2 (Combustion)					
Pollutant	Emission Factor (lb/MMBtu)	X	Total Combined Proposed Fuel Usage (MMBtu/yr)	=	PE2 (lb/year)
NO_X	0.0832	X	800,000	=	**66,560**
SO_X	0.00285	X	800,000	=	**2,280**
PM_{10}	0.0025	X	800,000	=	**2,000**
CO	0.021	X	800,000	=	**16,800**
VOC	0.0038	X	800,000	=	**3,040**

PE2 (Non-Combustion)							
PM_{10} Emissions Factor(lb/hr)		**Total amount of units**		**Hours of Operation**		**PE2 Each Unit**	**PE2 combined units**
0.08	x	8	x	24	=	1.9 lb/day	15.4 lb/day
				2,160	=	172.8 lb/yr	1,382 lb/yr

Total Daily PE2					
Pollutant	PE2 (Combustion)	+	PE2 (Non-Combustion)	=	PE2 (lb/day)
NO_X	**998.4**	+	0	=	**998.4**
SO_X	**34**	+	0	=	**34.2**
PM_{10}	**30**	+	15.4	=	**45.4**
CO	**252**	+	0	=	**252**
VOC	**45.6**	+	0	=	**45.6**

Total Annual PE2					
Pollutant	PE2 (Combustion)	+	PE2 (Non-Combustion)	=	PE2 (lb/day
NO_X	**66,560**	+	0	=	**66,560**
SO_X	**2,280**	+	0	=	**2,280**
PM_{10}	**2,000**	+	1,382	=	**3,382**
CO	**16,800**	+	0	=	**16,800**
VOC	**3,040**	+	0	=	**3,040**

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

Pursuant to District Rule 2201, the 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 (AER) that have occurred at the source, and which have not been used on-site.

The SSPE1 values for permit units S-377-43-4, -44-4, -45-4, -46-4, and -58-1 can be found in Section VII.C.1. The SSPE values for permit unit S-377-60-1 is acquired from project S-1194154. The SSPE calculations for the remaining units can be found in Appendix D.

SSPE1 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
*S-377-3-30	34,291	1,175	1,030	8,655	1,566
S-377-9-8	0	0	0	0	782
*S-377-19-34	24,960	3,420	4,061	10,731	1,140
S-377-21-18	416	14	13	105	19
S-377-34-7	1,472	524	920	6,807	515
S-377-35-6	164	0	1	270	2
S-377-37-5	1,800	18	24	604	54
S-377-39-6	499	17	30	126	35
ATC S-377-40-22	4,348	293	479	6,091	461
S-377-41-5	0	0	0	0	0
S-377-43-4	0	0	0	0	1,278
S-377-44-4	0	0	0	0	1,278
S-377-45-4	0	0	0	0	1,278
S-377-46-4	0	0	0	0	1,278
S-377-47-7	832	29	28	210	39
S-377-49-4	0	0	501	0	3,000
S-377-50-7	6,656	228	2,590	688	468
S-377-52-1	0	0	5,621	0	0
S-377-54-2	182	0	4	27	7
*S-377-55-1	0	0	0	0	4,079
S-377-56-1	2	3	1	38	3
*S-377-58-1	24,960	855	1,441	6,300	1,140
S-377-59-1	0	0	2,080	0	680
S-377-60-1	0	0	3	0	0
SSPE1	100,582	6,576	18,827	40,652	19,114

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

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
*S-377-3-30	34,291	1,175	1,030	8,655	1,566
S-377-9-8	0	0	0	0	782
*S-377-19-34	24,960	3,420	4,061	10,731	1,140
S-377-21-18	416	14	13	105	19
S-377-34-7	1,472	524	920	6,807	515
S-377-35-6	164	0	1	270	2
S-377-37-5	1,800	18	24	604	54
S-377-39-6	499	17	30	126	35
ATC S-377-40-22	4,348	293	479	6,091	461
S-377-41-5	0	0	0	0	0
S-377-43-5	0	0	0	0	2,556
S-377-44-5	0	0	0	0	
S-377-45-5	0	0	0	0	
S-377-46-5	0	0	0	0	
S-377-47-7	832	29	28	210	39
S-377-49-4	0	0	501	0	3,000
S-377-50-7	6,656	228	2,590	688	468
S-377-52-1	0	0	5,621	0	0
S-377-54-2	182	0	4	27	7
*S-377-55-1	0	0	0	0	4,079
S-377-56-1	2	3	1	38	3
*ATC S-377-58-2	66,560	2,280	3,382	16,800	3,040
S-377-59-1	0	0	2,080	0	680
S-377-60-1	0	0	3	0	0
SSPE2	142,182	8,001	20,768	51,152	18,458

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source

- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months), pursuant to the Clean Air Act, Title 3, Section 302, US Codes 7602(j) and (z)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 70.2

Since nut hulling and drying operations do not fall under any of the specific source categories specified in 40 CFR 51.165, fugitive emissions are not counted when determining if an agricultural operation is a major source.

Column Dryers (S-377-3-30, '-19-34 and -58-2)

After hulling, nuts are transferred to column dryers to reduce the moisture content from 30-40% to approximately 10%. These column dryers operate by heating air using natural-gas as a fuel. The emissions associated from the combustion of natural gas from these units are NO_x, SO_x, PM_{10}, CO and VOC. The pistachios column dryers are designed to vent horizontally through perforated openings along the sides; therefore it is not possible to capture emissions through a stack. Thus, the emissions from column dryers are fugitive.

Off-Gassing operations (S-377-55-1)

Per project S-1143168, off-gassing occurs after a propylene oxide (PPO) fumigation treatment is completed and the nutmeats are stored in a separate off-gassing area for a period of approximately two days. These off-gassing area cannot viable have a stack since it is an open area and therefore are considered fugitive emissions.

Permit Units -3-30, -19-34, -55-1, and -58-2 all contains fugitive emissions sources and the quantity will be demonstrated below. The total amount of fugitive emissions for each permit unit can be found in Appendix F.

The facility's non-fugitive stationary source potential emissions are summarized in the following table:

Non-Fugitive SSPE1 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
S-377-9-8	0	0	0	0	782
S-377-19-34 (Non-Fugitive)	8,320	2,850	3,561	6,531	380
S-377-21-18	416	14	13	105	19
S-377-34-7	1,472	524	920	6,807	515
S-377-35-6	164	0	1	270	2
S-377-37-5	1,800	18	24	604	54
S-377-39-6	499	17	30	126	35

ATC S-377-40-22	4,348	293	479	6,091	461
S-377-41-5	0	0	0	0	0
S-377-43-4	0	0	0	0	1,278
S-377-44-4	0	0	0	0	1,278
S-377-45-4	0	0	0	0	1,278
S-377-46-4	0	0	0	0	1,278
S-377-47-7	832	29	28	210	39
S-377-49-4	0	0	501	0	3,000
S-377-50-7	6,656	228	2,590	688	468
S-377-52-1	0	0	5,621	0	0
S-377-54-2	182	0	4	27	7
S-377-56-1	2	3	1	38	3
S-377-58-1 (Non-Fugitive)	0	0	691	0	0
S-377-59-1	0	0	2,080	0	680
S-377-60-0	0	0	3	0	0
Non-Fugitive SSPE1	24,691	3,976	16,547	21,497	11,557

This project results in an increase in emissions, therefore non-fugitive SSPE2 is summarized below:

SSPE2 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
S-377-9-8	0	0	0	0	782
S-377-19-34 (Non-Fugitive)	8,320	2,850	3,561	6,531	380
S-377-21-18	416	14	13	105	19
S-377-34-7	1,472	524	920	6,807	515
S-377-35-6	164	0	1	270	2
S-377-37-5	1,800	18	24	604	54
S-377-39-6	499	17	30	126	35
ATC S-377-40-22	4,348	293	479	6,091	461
S-377-41-5	0	0	0	0	0
S-377-43-5	0	0	0	0	2,556

S-377-44-5	0	0	0	0	
S-377-45-5	0	0	0	0	
S-377-46-5	0	0	0	0	
S-377-47-7	832	29	28	210	39
S-377-49-4	0	0	501	0	3,000
S-377-50-7	6,656	228	2,590	688	468
S-377-52-1	0	0	5,621	0	0
S-377-54-2	182	0	4	27	7
S-377-56-1	2	3	1	38	3
S-377-58-2 (Non-Fugitive)	0	0	1,382	0	0
S-377-59-1	0	0	2,080	0	680
S-377-60-1	0	0	3	0	0
Non-Fugitive SSPE2	24,691	3,976	17,238	21,497	9,001

Rule 2201 Major Source Determination (lb/year)						
	NO_X	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**VOC**
SSPE1	24,691	3,976	16,547	15,856	21,497	11,557
SSPE2	24,691	3,976	17,238	15,856	21,497	9,001
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	No	No

Note: PM2.5 assumed to be equal to PM10

As seen in the table above, this source is an existing Major Source for NO_x emissions and will remain a Major Source for NO_x.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO_2	**VOC**	**SO_2**	**CO**	**PM**	**PM_{10}**
Estimated Facility PE before Project Increase	50.3	9.6	3.3	20.3	10.4	10.4

PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	No	No	No	No	No

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

6. Baseline Emissions (BE)

The BE calculation (in lb/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 District Rule 2201, BE = PE1 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 District Rule 2201.

a. BE NO_X

Pursuant to Rule 2201, 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.

Each of the existing column dryers is equipped with a low NO_X burner and is fired on natural gas fuel with an emission factor of 0.0832 lb-NO_X/MMBtu, which meets the requirements for achieved-in-practice BACT (see Appendix C). Therefore, BE=PE1.

BE = PE1 = (0.0832 lb/MMBtu) $*$ (300,000 MMBtu/year)
= 24,960 lb NO_X/year

b. BE SO_X

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

Therefore Baseline Emissions BE=PE1.

BE = PE1 = (0.00285 lb/MMBtu) $*$ (300,000 MMBtu/yr)
= 855 lb SO_X/year

c. BE PM_{10}

As shown in Section VII.C.5 above, the facility is not a major source for PM_{10} emissions.

Therefore BE=PE1.

BE = $PE1_{Column\ Dryers}$ + $PE1_{Cyclones}$

= [(0.0025 lb/MMBtu) ∗ (300,000 MMBtu/yr)] + [(0.08 lb/hr) * (4 units) * (2,160 hr/yr)]

= 1,441 lb PM_{10}/year

d. BE CO

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

Therefore BE=PE1.

BE = PE1 = (0.021 lb/MMBtu) ∗ ∗ (300,000 MMBtu/yr)
= 6,300 lb CO/year

e. BE VOC

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

Therefore BE=PE1.

S-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations

For each permit unit listed above:

BE = 1,278 lb-VOC/yr

S-377-58-2: Drying and Hulling Operation

BE = PE1 = (0.0038 lb/MMBtu) ∗ (300,000 MMBtu/yr)
= 1,140 lb-VOC/year

7. SB 288 Major Modification

40 CFR Part 51.165 defines a SB 288 Major Modification 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 further SB 288 Major Modification calculation is required.

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the SB 288 Major Modification Calculation.

SB 288 Major Modification Calculation and Determination			
Pollutant	**PE2 (lb/year)**	**Thresholds (lb/yr)**	**SB 288 Major Modification?**
NO_x	0	50,000	No
SO_x	0	80,000	No
PM_{10}	1,382	30,000	No
VOC	0	50,000	No

As demonstrated in the preceding table, none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification and no further discussion is required.

8. Federal Major Modification / New Major Source

Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

As defined in 40 CFR 51.165, Section (a)(1)(v) and part D of Title I of the CAA, a Federal Major Modification is 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. The significant net emission increase threshold for each criteria pollutant is included in Rule 2201.

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. In step 1, emission decreases cannot cancel out the increases. Step 2 allows consideration of the project's net emissions increase as described in 40 CFR 51.165 and the Federal Clean Air Act Section 182 (e), as applicable.

NO_X

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Federal Major Modification determination. Since this project only includes increases in fugitive NOx emissions this project does not constitute a Federal Major Modification and no further analysis is required.

SO_X, PM_{10}, CO, and VOC

This facility is currently not a major source for SO_x, PM_{10}, CO, and VOC and therefore cannot trigger a Federal Major Modification for these pollutants.

New Major Source

Pursuant to 40 CFR 51.165 a(1)(iv)(A)(3), emission increases at a non-major source (or at new sources) constitute a New Major Source if the emission increase for a given pollutant is as large as the major source threshold for that pollutant, i.e. the project by itself would result in a net emission increase exceeding the major source threshold.

Since this facility is a major source for NO_x the project's PE2 is compared to the Federal Major Source Thresholds in the following table in order to determine to determine whether the project results in a New Major Source according to 40 CFR 51.165 a(1)(iv)(A)(3).

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Federal Major Source Calculations.

New Major Source Determination (lb/year)						
	NO_X	**SO_X**	**PM_{10}**	**$PM_{2.5}$**	**CO**	**VOC**
Project Emissions Increase	0	0	1,901	1,901	0	0
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
New Major Source?	No	No	No	No	No	No

Note: PM2.5 assumed to be equal to PM10

Since the project emissions increase does not exceed the Major Source thresholds for any pollutant, this facility is not a New Major Source pursuant to 40 CFR 51.165 a(1)(iv)(A)(3) and no further discussion is required.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO_2	**VOC**	**SO_2**	**CO**	**PM**	**PM_{10}**
Total PE from New and Modified Units	20.8	0.95	0.71	5.25	0.97	0.97
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	No	No	No	No	No	No

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. 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 H.

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

Pursuant to District Rule 2201, Section 4.1, BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, 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 Adjusted Increase in Permitted Emissions (AIPE) exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 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

Natural gas-fired Dryer

The daily emissions for each of the new 20 MMBtu/hr dryers are compared to the BACT threshold levels in the following table:

Daily PE2 (Combustion)					
Pollutant	Emission Factor (lb/MMBtu)	X	Daily fuel Usage per column dryer (MMBtu/day)	=	PE2 (lb/day)
NO_X	0.0832	X	480	=	**39.9**
SO_X	0.00285	X	480	=	**1.4**
PM_{10}	0.0025	X	480	=	**1.2**
CO	0.021	X	480	=	**10.1**
VOC	0.0038	X	480	=	**1.8**

As Discussed in Section I above, the applicant is proposing to install twenty new 20.0 MMBtu/hr natural gas-fired dryers. Each proposed natural gas-fired dryers does have a PE greater than 2.0 lb/day for NO_x, and CO. BACT is triggered NO_x, since the PE is greater than 2 lb/day. While PE is greater than 2.0 lb/day for CO, the SSPE is less than 200,000 lb-CO/yr; therefore BACT is not triggered for CO.

Pre-Cleaning Lines Each Served by a Cyclone Dust Collector

As Discussed in Section I above, the applicant is proposing to install a new cyclone dust collector to serve four pre-cleaning lines, the only emissions emitted are PM_{10}. As seen in Section VII.C.2 above, the emissions for PM_{10} do not surpass 2.0 lbs/day from each of the new cyclones. Therefore, BACT is not triggered for any of the new pre-cleaning lines.

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

As discussed in Section I above, the applicant is proposing to introduce an SLC to limit annual VOC emissions for permit units -43-4 through -46-4. This limit will in turn reduce annual VOC emissions. However, daily usage has not been modified and Therefore BACT will not be triggered for VOC.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification for any pollutant. Therefore BACT is not triggered for any pollutant.

2. BACT Guideline

BACT Guideline 1.6.8, applies to the Nut and Seed Column Dryer. (See 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, BACT has been satisfied with the following:

- NO_x: Low NO_x burner and natural gas @ 0.0832 lb-NO_x/MMBtu; or
- Low NO_x burner and LPG @ 0.1248 lb-NO_x/MMBtu for operations with no access to a natural gas fuel source

B. Offsets

1. Offset Applicability

Pursuant to District Rule 2201, Section 4.5, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	142,182	8,001	21,287	51,152	18,458
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	Yes	No	No	No	No

2. Quantity of District Offsets Required

As discussed above, District offsets are triggered and required for NOx under NSR. However, as demonstrated above, this project does not trigger Federal Major Modification or New Major Source requirements for NOx emissions. Therefore, the NOx District offset quantities do not need to be surplus at time of use.

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) = ((∑ [PE2 - BE] + ICCE) x 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 Ration, Determined pursuant to Section 4.8.

For this project the Distance offset ratio is determined based on Table 4-2 in Section 4.8.4. Since the acquired ERC Certificates are from facilities further than 15 miles from the Stationary Source being modified in this project, a distance offset ratio of 1.5 is used.

As calculated in Section VII.C.6 above, the BE from this unit are equal to the PE1 since the unit is a Clean Emissions Unit. since there are no increases in cargo carrier emissions, offsets can be determined as follows:

Offsets Required (lb/year) = ([PE2 – BE] + 0) x 1.5

∑PE2 (NO_x) = 66,560 lb/year
∑BE (NO_x) = 24,960 lb/year
ICCE = 0 lb/year
DOR = 1.5 lb/year

Based on the ERC being proposed to satisfy offset requirements, the offset ratio is 1.5:1, the amount of NO_X ERCs that need to be withdrawn is:

Offset Required (lb/year) = ([66,560 – 24,960] + 0) x 1.5

= 62,400 lb-NO_x/year

Calculating the appropriate quarterly emissions to be offset is as follows:

Quarterly offsets required (lb/qtr) = (62,400 lb-NO_X/year) ÷ (4 quarters/year)
= 15,600 b-NO_X/qtr

3. ERC Withdrawal Calculations

The applicant has indicated that they are proposing to use ERC certificates N-284-2 and N-1325-2 to mitigate the increases of NO_x emissions associated with this project.

The table below details the distribution of each ERC Certificate for this project:

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total
Offsets Required	15,600	15,600	15,600	15,600	62,400
ERC N-284-2	3,670	3,580	3,488	3,488	14,226
ERC N-1325-2	14,475	14,475	14,475	14,475	57,900
Remaining balance of ERC N-1325-2 to be reissued back to facility	2,545	2,455	2,363	2,363	9,726

Additionally, the following conditions will be included to ensure compliance:

- Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter – 15,600 lb, 2nd quarter – 15,600 lb, 3rd quarter – 15,600 lb, and 4th

quarter – 15,600 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERCs specified below. [District Rule 2201]

- ERC Certificate Numbers N-284-2 and N-1325-2 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201]

C. Public Notification

1. Applicability

Pursuant to District Rule 2201, Section 5.4, public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB 288 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,
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant, and/or
e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

As demonstrated in Sections VII.C.7 and VII.C.8, this project does not trigger an SB 288 or a Federal Major Modification and the facility is not a New Major Source. Therefore, public noticing for this project for New Major Source, Federal Major Modification, or SB 288 Major Modification purposes is not required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE 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

Public notification is required if the pre-project Stationary Source Potential to Emit (SSPE1) is increased to a level exceeding the offset threshold levels. The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Thresholds				
Pollutant	**SSPE1 (lb/year)**	**SSPE2 (lb/year)**	**Offset Threshold**	**Public Notice Required?**
NO_X	100,582	142,182	20,000 lb/year	No
SO_X	6,576	8,001	54,750 lb/year	No
PM_{10}	19,344	19,383	29,200 lb/year	No
CO	40,652	51,152	200,000 lb/year	No
VOC	19,114	18,458	20,000 lb/year	No

As demonstrated above, the offset threshold for NO_X had already been surpassed by SSPE1; 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 SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	**SSPE2 (lb/year)**	**SSPE1 (lb/year)**	**SSIPE (lb/year)**	**SSIPE Public Notice Threshold**	**Public Notice Required?**
NO_x	142,182	100,582	41,600	20,000 lb/year	Yes
SO_x	8,001	6,576	1,425	20,000 lb/year	No
PM_{10}	21,287	19,344	1,943	20,000 lb/year	No
CO	51,152	40,652	10,500	20,000 lb/year	No
VOC	18,458	19,114	-656	20,000 lb/year	No

As demonstrated above, the SSIPEs for NO_X is greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project does not constitute a Title V significant modification. Therefore, public noticing for Title V significant modifications is not required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project for NO_X emissions in excess of the SSIPE Public Notice Threshold of 20,000 lb/year. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public

notice will be electronically published on the District's website prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. 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-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations

- Methyl bromide (MeBr) and ProFume (sulfuryl fluoride) shall be the only fumigants used in this fumigation operation. [District Rules 2201 and 4102]

- VOC emissions from the Fumigation Chamber shall not exceed 3.5 pounds per day, equivalent to the use of 3.5 pounds of methyl bromide per day. [District Rule 2201]

The facility has proposed to introduce a Specific Limiting Condition (SLC) for the VOC emissions of permit units listed above. Therefore the following condition will be included:

- Total combined annual VOC emission from permit units -43, -44, -45, and -46, calculated on a twelve month rolling basis, shall not exceed the following limit: VOC – 2,556 lb/year. [District Rule 2201]

S-377-58-2: Drying and Hulling Operation

- There shall be no visible emissions in excess of 5% opacity at elevators, augers, conveyors, conveyor transfer points. [District Rule 2201]

- Dryers may only be fired on PUC-regulated natural gas. [District Rule 2201]

- There shall be no visible emissions at dryers, conveyors, or aspirators cyclones exhausts. [District Rule 2201]

- Visible emissions at precleaner cyclones shall be inspected quarterly during operation. If visible emissions are observed to be in excess of 5% opacity, corrective action shall be taken to reduce opacity. [District Rules 2201 and 2520]

- Maximum emission rate of PM10 from each of the 44-inch high-efficiency precleaning cyclones listed above shall not exceed 0.08 lb/hr. [District Rule 2201]

- Maximum combined natural gas consumption rate for all dryers shall not exceed the following limits: 12.0 MMscf/day or 800 MMscf/year. [District Rule 2201]

- Emission rates from each dryer shall not exceed any of the following limits: NOx (as NO2): 0.0832 lb/MMBtu;, SOx (as SO2): 0.00285 lb/MMBtu; PM10: 0.0025 lb/MMBtu; CO: 0.021 lb/MMBtu VOC: 0.0038 lb/MMBtu; or VOC: 0.0038 lb/MMBtu. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

Based on current PTO S-377-58-1, if it is determined that excess visible emissions have been present, source testing will be required within 60 days of the Districts determination. Therefore, the following condition will be included:

- If excess visible emissions are detected from any of the cyclones serving the precleaning lines, source testing for particulate emissions shall be performed within 60 days of the determination of excess visible emissions. [District Rules 1081 and 2201]

- Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

- Source testing to measure the concentration of particulate matters shall be conducted using EPA Method 5. [District Rules 2201]

- Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. [District Rule 1081]

- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. The following condition(s) are listed on the permit to operate:

S-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations

- Accurate records of Methyl Bromide or Profume fumigants used in this operation shall be maintained. Records shall include the daily and annual amount and type of fumigant used, location, and the date of fumigation. [District Rule 2201]

- All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201]

S-377-58-2: Drying and Hulling Operation

- Permittee shall maintain records of the daily and annual volumes of fuel used. [District Rules 1070 and 2201]

- Permittee shall maintain records of hours of operation of the precleaning cyclones. [District Rules 1070 and 2201]

- Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2201]

- All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

5. Additional Conditions

S-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations

- Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010]

S-377-58-2: Drying and Hulling Operation

- Operation shall be equipped with an operational totalizing fuel flow meter serving column type dryers. [District Rule 2201]

- Operation shall be equipped with forty 20.0 MMBtu/hr natural gas-fired column type pistachio dryers. [District Rule 2201]

- Operation shall be equipped with eight precleaning leaf blowers, each with a 44-inch high-efficiency cyclone, trash discharge conveyor, sampler, and nut discharge conveyor. [District Rule 2201]

- Operation shall be equipped with eight receiving pits, each with metering conveyors and precleaner feed conveyor. [District Rule 2201]

- Operation may be equipped with the following permit exempt wet processing equipment: pistachio huller/peelers, wash decks, float tanks, gravity decks and classifying decks each with a high efficiency cyclone, size graders, detwiggers, product reclaimer line, wet aspirators with cyclones and/or expansion boxes, electric air compressors, electric compressed air dryers, and associated conveyors, hoppers, and elevators. [District Rule 2010]

- Precleaning operation shall not operate more than 2,160 hours per year. [District Rule 2201]

F. Ambient Air Quality Analysis (AAQA)

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 of District Rule 2201 requires that an 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 District's Technical Services Division conducted the required analysis. Refer to Appendix D of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_X, CO, and SO_X. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_X, CO, or SO_X.

The proposed location is in a non-attainment area for the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII.C.9 above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, Minor Permit Modifications are permit modifications that:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;

2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
   a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
   b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements;
7. Do not grant or modify a permit shield.

Additionally, Section 11.4 requires a description of the proposed change, the emissions resulting from the change, any new applicable requirements that will apply if the change occurs, suggested draft permits, compliance certification and an EPA 45-day review period of the proposed permit modification (or a shorter period if EPA has notified the District that EPA will not object to issuance of the permit modification, whichever is first).

As discussed above, the facility has not applied for a Certificate of Conformity (COC). Therefore, the facility must apply to modify their Title V permit with a minor modification, prior to operating with the proposed modifications. Upon receipt of the minor modification application, the District will forward to EPA, for a 45-day review period, the proposed modified Title V permit, the ATCs issued in this project, a compliance certification form, and a copy of this evaluation, which demonstrates compliance with the minor permit modification requirements in Section 11.4. The facility may construct/operate under the ATC upon submittal of the Title V minor modification application.

To ensure continuous compliance the following condition will be included:

- Visible emissions at elevators, augers, conveyors, conveyor transfer points shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520]

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 gas-fired nut drying, or nut flavoring operations.

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 gas-fired nut drying, or nut flavoring operations.

Rule 4101 Visible Emissions

Rule 4101 states that 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 pre-cleaning lines proposed in this project will have PM_{10} emission of 0.08 lb/hr; therefore, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity and continued compliance with the requirements of this rule is expected.

The following condition ensures compliance with District Rule 4101:

- {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] N

A similar condition is already included in facility wide permit S-377-0-4 as condition 22 and does not need to be included into any of the ATCs associated with this project.

Rule 4102 Nuisance

Rule 4102 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, compliance with this rule is expected.

The following condition ensures compliance with District Rule 4102:

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

The condition above is already included in facility wide permit S-377-0-4 as condition 41 and does not need to be included into any of the ATCs associated with this project.

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.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification of an existing source shall not result in an increase in cancer risk greater than the District's significance level (20 in a million) and shall not result in acute and/or chronic risk indices greater than 1.

S-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations

As demonstrated above, there are no increases in emissions associated with the permit units listed above, therefore a health risk assessment is not necessary and no further risk analysis is required.

S-377-58-2: Drying and Hulling Operation

According to the Technical Services Memo for this project, the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project.

The resulting prioritization score, acute hazard index, chronic hazard index, and cancer risk for this project is shown below.

Health Risk Assessment Summary	
	Worst Case Potential
Prioritization Score	>1
Cancer Risk	3.08E-08
Acute Hazard Index	0.00
Chronic Hazard Index	0.00
T-BACT Required?	No

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

In accordance with District policy APR 1905, no further analysis is required, and compliance with District Rule 4102 requirements is expected.

See Appendix D: Health Risk Assessment Summary

The following conditions is from PTO S-377-58-1 and will be carried over to the new ATC to ensure continuous compliance:

- Disposal of solid and liquid wastes shall not result in odors nor constitute a nuisance. [District Rule 4102]

The following conditions will be included to ensure continuous compliance:

- The exhaust stack for the cyclones shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]

Rule 4201 Particulate Matter Concentration

S-377-58-2: Drying and Hulling Operation

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.

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

PM_{10} emission rate = 21.1 lb/day. Assuming 100% of PM is PM_{10}
Exhaust Gas Flow = 19,150 scfm

PM Conc. (gr/scf) = [(21.1 lb/day) ∗ (7,000 gr/lb)] ÷ [(6,300 ft^3/min) ∗ (60 min/hr) ∗ (24 hr/day)]
PM Conc. = 0.016 gr/scf

The particulate matter for the cyclone dust collectors is less than 0.1 grains per cubic foot. To ensure continuous compliance the following condition will be included:

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

Rule 4202 Particulate Matter Emission Rate

The purpose of this rule is to limit particulate matter emissions by establishing allowable emission rates.

The pre-cleaning lines handle nuts recently removed from the trees and are expected to have PM_{10} emissions; therefore, in order to ensure continuous compliance the following condition will be carried over from the previous PTO to the ATC:

- Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation E=3.59xP^0.62 if P is less than or equal to 30 tons per hour, or E=17.31xP^0.16 if P is greater than 30 tons per hour. [District Rule 4202]

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 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 process are direct heat transfer units; therefore, the requirements of this rule are not applicable to this permit unit.

Rule 4309 Dryers, Dehydrators, and Ovens

The purpose of this rule is to limit emissions of oxides of nitrogen (NOx) and carbon monoxide (CO) from dryers, dehydrators, and ovens. Section 4.1.1 exempts column-type or tower dryers used to dry grains or tree nuts. The dryers associated with this operation at the WPA facility are column-type dryers used to dry pistachios. Therefore, the dryers are not subject to the requirements of this rule.

Rule 4801 Sulfur Compounds

The purpose of this rule is to limit the emissions of sulfur compounds. A maximum concentration and test method are specified. The provisions of this rule shall apply to any discharge to the atmosphere of sulfur compounds, which would exist as a liquid or a gas at standard conditions.

Section 3.1 states that a person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: two-tenths (0.2) percent by volume calculated as sulfur dioxide (SO2), on a dry basis averaged over 15 consecutive minutes.

Using the ideal gas equation and the emission factors presented in Section VII, the sulfur compound emissions are calculated as follows:

Volume $SO_2 = \frac{nRT}{P}$

Where:

n = moles SO_2

R (Universal Gas Constant) = $\frac{10.73\,\text{psi}\cdot\text{ft}^3}{\text{lb}\cdot\text{mol}\cdot{}^\circ\text{R}}$

T (Standard Temperature) = 60°F = 520°R

P (Standard Pressure) = 14.7 psi

EPA F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68°F

$$Corrected\ F-factor = \left(\frac{8{,}710 dscf}{MMBtu}\right)\times\left(\frac{60^o F + 459.6}{68^o F + 459.6}\right) = 8{,}578\frac{dscf}{MMBtu}\ at\ 60^o F$$

$$\frac{0.00285\,lb-SOx}{MMBtu}\times\frac{MMBtu}{8{,}578\,dscf}\times\frac{1lb\cdot mol}{64\,lb}\times\frac{10.73\,psi\cdot\,ft^3}{lb\cdot mol\cdot{}^\circ R}\times\frac{520^\circ R}{14.7\,psi}\times\frac{1{,}000{,}000\cdot\,parts}{million}=1.97\,\frac{parts}{million}$$

$$SulfurConcentration=1.97\,\frac{parts}{million}$$ < 2,000 ppmv (or 0.2%)

Therefore, compliance with District Rule 4801 requirements is expected. To ensure continuous compliance the following condition will be included:

- Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. Compliance with this requirement is assured by only using PUC regulated natural gas. [Kern County Rule 407 and District Rule 4801]

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)

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 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 prepared or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency,* for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with

AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

The GHG emissions increases associated with this project result from the combustion of fossil fuel(s), other than jet fuel, delivered from suppliers subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005 and APR 2025, the District concludes that the GHG emissions increases associated with this project would have a less than significant individual and cumulative impact on global climate change.

District CEQA Findings

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the project will not have a significant effect on the environment. The District finds that the project is exempt per the common sense exemption that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATCs S-377-43-5, -44-5, 45-5, -46-5, and -58-2 subject to the permit conditions on the attached draft ATCs in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
S-377-43-5	3020-01-A	3 hp (electric motor)	$107
S-377-44-5	3020-01-A	3 hp (electric motor)	$107
S-377-45-5	3020-01-A	3 hp (electric motor)	$107
S-377-46-5	3020-01-A	3 hp (electric motor)	$107
S-377-58-2	3020-02-H	800 MMBtu/hr	$1,238

Appendixes

A: Draft ATCs
B: Current PTOs
C: BACT Guideline and BACT Analysis
D: HRA Summary and AAQA
E: SSPE Calculations
F: Fugitive Emission Calculations
G: Quarterly Net Emissions Change

APPENDIX A
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-377-43-5 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: WONDERFUL PISTACHIOS & ALMONDS
MAILING ADDRESS: 13646 HIGHWAY 33
LOST HILLS, CA 93249

LOCATION: 3.5 MILES NORTH OF HWY 46 ON HWY 33
LOST HILLS, CA

EQUIPMENT DESCRIPTION:
MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): ADD A SPECIFIC LIMITING CONDITION OF 2,556 LB-VOC/YEAR FOR PERMIT UNITS S-377-43, -44, -45, AND -46

CONDITIONS

1. Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
3. Methyl bromide (MeBr) and ProFume (sulfuryl fluoride) shall be the only fumigants used in this fumigation chamber. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
4. VOC emissions from the fumigation chamber shall not exceed 3.5 lb/day, equivalent to the use of 3.5 lb-methyl bromide/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Profume (sulfuryl fluoride) usage shall not exceed either of the following limits: 12,000 lb/day or 40,000 lb/year. [District Rule 4102]
6. Total combined annual VOC emission from permit units -43, -44, -45, and -46, calculated on a twelve month rolling basis, shall not exceed the following limit: VOC - 2,556 lb/year, equivalent to the use of 2,556 lb-methyl bromide/yr. [District Rule 2201]
7. Accurate records of Methyl Bromide or Profume fumigants used in this operation shall be maintained. Records shall include the daily and annual amount and type of fumigant used, location, and the date of fumigation. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-377-44-5 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: WONDERFUL PISTACHIOS & ALMONDS
MAILING ADDRESS: 13646 HIGHWAY 33
LOST HILLS, CA 93249

LOCATION: 3.5 MILES NORTH OF HWY 46 ON HWY 33
LOST HILLS, CA

EQUIPMENT DESCRIPTION:
MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): ADD A SPECIFIC LIMITING CONDITION OF 2,556 LB-VOC/YEAR FOR PERMIT UNITS S-377-43, -44, -45, AND -46

CONDITIONS

1. Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
3. Methyl bromide (MeBr) and ProFume (sulfuryl fluoride) shall be the only fumigants used in this fumigation chamber. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
4. VOC emissions from the fumigation chamber shall not exceed 3.5 lb/day, equivalent to the use of 3.5 lb-methyl bromide/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Profume (sulfuryl fluoride) usage shall not exceed either of the following limits: 12,000 lb/day or 40,000 lb/year. [District Rule 4102]
6. Total combined annual VOC emission from permit units -43, -44, -45, and -46, calculated on a twelve month rolling basis, shall not exceed the following limit: VOC - 2,556 lb/year, equivalent to the use of 2,556 lb-methyl bromide/yr. [District Rule 2201]
7. Accurate records of Methyl Bromide or Profume fumigants used in this operation shall be maintained. Records shall include the daily and annual amount and type of fumigant used, location, and the date of fumigation. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

S-377-44-5 : Jul 13 2022 8:45AM -- PINEDAE : Joint Inspection NOT Required

8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-377-45-5 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: WONDERFUL PISTACHIOS & ALMONDS
MAILING ADDRESS: 13646 HIGHWAY 33
LOST HILLS, CA 93249

LOCATION: 3.5 MILES NORTH OF HWY 46 ON HWY 33
LOST HILLS, CA

EQUIPMENT DESCRIPTION:
MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): ADD A SPECIFIC LIMITING CONDITION OF 2,556 LB-VOC/YEAR FOR PERMIT UNITS S-377-43, -44, -45, AND -46

CONDITIONS

1. Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
3. Methyl bromide (MeBr) and ProFume (sulfuryl fluoride) shall be the only fumigants used in this fumigation chamber. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
4. VOC emissions from the fumigation chamber shall not exceed 3.5 lb/day, equivalent to the use of 3.5 lb-methyl bromide/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Profume (sulfuryl fluoride) usage shall not exceed either of the following limits: 12,000 lb/day or 40,000 lb/year. [District Rule 4102]
6. Total combined annual VOC emission from permit units -43, -44, -45, and -46, calculated on a twelve month rolling basis, shall not exceed the following limit: VOC - 2,556 lb/year, equivalent to the use of 2,556 lb-methyl bromide/yr. [District Rule 2201]
7. Accurate records of Methyl Bromide or Profume fumigants used in this operation shall be maintained. Records shall include the daily and annual amount and type of fumigant used, location, and the date of fumigation. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

S-377-45-5 : Jul 13 2022 8:45AM -- PINEDAE : Joint Inspection NOT Required

8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-377-46-5 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: WONDERFUL PISTACHIOS & ALMONDS
MAILING ADDRESS: 13646 HIGHWAY 33
LOST HILLS, CA 93249

LOCATION: 3.5 MILES NORTH OF HWY 46 ON HWY 33
LOST HILLS, CA

EQUIPMENT DESCRIPTION:
MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): ADD A SPECIFIC LIMITING CONDITION OF 2,556 LB-VOC/YEAR FOR PERMIT UNITS S-377-43, -44, -45, AND -46

CONDITIONS

1. Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
3. Methyl bromide (MeBr) and ProFume (sulfuryl fluoride) shall be the only fumigants used in this fumigation chamber. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
4. VOC emissions from the fumigation chamber shall not exceed 3.5 lb/day, equivalent to the use of 3.5 lb-methyl bromide/day. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Profume (sulfuryl fluoride) usage shall not exceed either of the following limits: 12,000 lb/day or 40,000 lb/year. [District Rule 4102]
6. Total combined annual VOC emission from permit units -43, -44, -45, and -46, calculated on a twelve month rolling basis, shall not exceed the following limit: VOC - 2,556 lb/year, equivalent to the use of 2,556 lb-methyl bromide/yr. [District Rule 2201]
7. Accurate records of Methyl Bromide or Profume fumigants used in this operation shall be maintained. Records shall include the daily and annual amount and type of fumigant used, location, and the date of fumigation. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

8. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-377-58-2 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: WONDERFUL PISTACHIOS & ALMONDS
MAILING ADDRESS: 13646 HIGHWAY 33
LOST HILLS, CA 93249

LOCATION: 3.5 MILES NORTH OF HWY 46 ON HWY 33
LOST HILLS, CA

EQUIPMENT DESCRIPTION:
MODIFICATION OF 400 MMBTU/HR NATURAL GAS-FIRED PISTACHIO HULLING AND DRYING OPERATION #3: INSTALL FOUR PRECLEANER LINES, TWENTY 20 MMBTU/HR NATURAL GAS-FIRED COLUMN DRYERS AND SIXTY PERMIT EXEMPT STORAGE SILOS WITH PERMIT EXEMPT NATURAL GAS-FIRED SILO HEATERS, AND VARIOUS PERMIT EXEMPT WET PROCESSING EQUIPMENT

CONDITIONS

1. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter - 15,600 lb, 2nd quarter - 15,600 lb, 3rd quarter - 15,600 lb, and 4th quarter - 15,600 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 8/15/19) for the ERC specified below. [District Rule 2201] Federally Enforceable Through Title V Permit
2. ERC Certificate Numbers N-284-2 and N-1325-2 (or certificates split from these certificates) shall be used to supply the required offsets, unless a revised offsetting proposal is received and approved by the District, upon which this Authority to Construct shall be reissued, administratively specifying the new offsetting proposal. Original public noticing requirements, if any, shall be duplicated prior to reissuance of this Authority to Construct. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Operation shall be equipped with eight receiving pits, each with metering conveyors and precleaner feed conveyor. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Operation shall be equipped with eight precleaning leaf blowers, each with a 44-inch high-efficiency cyclone, trash discharge conveyor, sampler, and nut discharge conveyor. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Operation shall be equipped with forty 20.0 MMBtu/hr natural gas-fired column type pistachio dryers. [District Rule 2201] Federally Enforceable Through Title V Permit

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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

Southern Regional Office • 34946 Flyover Court • Bakersfield, CA 93308 • (661) 392-5500 • Fax (661) 392-5585

6. Operation may be equipped with the following permit exempt wet processing equipment: pistachio huller/peelers, wash decks, float tanks, gravity decks and classifing decks each with a high efficiency cyclone, size graders, detwiggers, product reclaimer line, wet aspirators with cyclones and/or expansion boxes, electric air compressors, electric compressed air dryers, and associated conveyors, hoppers, and elevators. [District Rule 2010] Federally Enforceable Through Title V Permit
7. There shall be no visible emissions in excess of 5% opacity at elevators, augers, conveyors, conveyor transfer points. [District Rule 2201] Federally Enforceable Through Title V Permit
8. There shall be no visible emissions at dryers, conveyors, or aspirators cyclones exhausts. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
10. Dryers may only be fired on PUC-regulated natural gas. [District Rule 2520] Federally Enforceable Through Title V Permit
11. Maximum combined natural gas consumption rate for all dryers shall not exceed the following limits: 12.0 MMscf/day or 800 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Emission rates from each dryer shall not exceed any of the following limits: NOx (as NO2): 0.0832 lb/MMBtu;, SOx (as SO2): 0.00285 lb/MMBtu; PM10: 0.0025 lb/MMBtu; CO: 0.021 lb/MMBtu VOC: 0.0038 lb/MMBtu; or VOC: 0.0038 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Operation shall be equipped with an operational totalizing fuel flow meter serving column type dryers. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Maximum emission rate of PM10 from each of the 44-inch high-efficiency precleaning cyclones shall not exceed 0.08 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Precleaning operation shall not operate more than 2,160 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Visible emissions at precleaner cyclones shall be inspected quarterly during operation. If visible emissions are observed to be in excess of 5% opacity, corrective action shall be taken to reduce opacity. [District Rules 2201 and 2520] Federally Enforceable Through Title V Permit
17. Disposal of solid and liquid wastes shall not result in odors nor constitute a nuisance. [District Rule 4102]
18. If excess visible emissions are detected from any of the cyclones serving the precleaning lines, source testing for particulate emissions shall be performed within 60 days of the determination of excess visible emissions. [District Rule 1081 and 2201] Federally Enforceable Through Title V Permit
19. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source testing to measure the concentration of particulate matters shall be conducted using EPA Method 5. [District Rules 2201] Federally Enforceable Through Title V Permit
21. Compliance demonstration (source testing) shall be District witnessed, or authorized and samples shall be collected by a California Air Resources Board certified testing laboratory. [District Rule 1081] Federally Enforceable Through Title V Permit
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Visible emissions at elevators, augers, conveyors, conveyor transfer points shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

24. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation E=3.59xP^0.62 if P is less than or equal to 30 tons per hour, or E=17.31xP^0.16 if P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
25. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. Compliance with this requirement is assured by only using PUC regulated natural gas. [Kern County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
26. Permittee shall maintain records of the daily and annual volumes of fuel used. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
27. Permittee shall maintain records of hours of operation of the precleaning cyclones. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
28. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520] Federally Enforceable Through Title V Permit
29. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

APPENDIX B
Current PTOs

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-377-43-4 **EXPIRATION DATE:** 10/31/2022

EQUIPMENT DESCRIPTION:
METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

PERMIT UNIT REQUIREMENTS

1. Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
3. Profume (sulfuryl fluoride) usage shall not exceed either of the following limits: 12,000 lb/day or 40,000 lb/year. [District Rule 4102]
4. Permittee shall maintain accurate records of fumigations. Records shall include the amount and type of fumigant used, location, and the date of fumigation. Records shall be retained for a period of at least five years and provided to the District upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. Facility compliance with AB 2588 (Air Toxics "Hot Spots" Information and Assessment Act) is required once OEHHA adopts a REL Value for Sulfuryl Fluoride. [District Rule 4102]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-377-43-4 **EXPIRATION DATE:** 10/31/2022

EQUIPMENT DESCRIPTION:
METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

PERMIT UNIT REQUIREMENTS

1. Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
3. Profume (sulfuryl fluoride) usage shall not exceed either of the following limits: 12,000 lb/day or 40,000 lb/year. [District Rule 4102]
4. Permittee shall maintain accurate records of fumigations. Records shall include the amount and type of fumigant used, location, and the date of fumigation. Records shall be retained for a period of at least five years and provided to the District upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. Facility compliance with AB 2588 (Air Toxics "Hot Spots" Information and Assessment Act) is required once OEHHA adopts a REL Value for Sulfuryl Fluoride. [District Rule 4102]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-377-44-4 **EXPIRATION DATE:** 10/31/2022

EQUIPMENT DESCRIPTION:
METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

PERMIT UNIT REQUIREMENTS

1. Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
3. Profume (sulfuryl fluoride) usage shall not exceed either of the following limits: 12,000 lb/day or 40,000 lb/year. [District Rule 4102]
4. Permittee shall maintain accurate records of fumigations. Records shall include the amount and type of fumigant used, location, and the date of fumigation. Records shall be retained for a period of at least five years and provided to the District upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. Facility compliance with AB 2588 (Air Toxics "Hot Spots" Information and Assessment Act) is required once OEHHA adopts a REL Value for Sulfuryl Fluoride. [District Rule 4102]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-377-45-4 **EXPIRATION DATE:** 10/31/2022

EQUIPMENT DESCRIPTION:
METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

PERMIT UNIT REQUIREMENTS

1. Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
3. Profume (sulfuryl fluoride) usage shall not exceed either of the following limits: 12,000 lb/day or 40,000 lb/year. [District Rule 4102]
4. Permittee shall maintain accurate records of fumigations. Records shall include the amount and type of fumigant used, location, and the date of fumigation. Records shall be retained for a period of at least five years and provided to the District upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. Facility compliance with AB 2588 (Air Toxics "Hot Spots" Information and Assessment Act) is required once OEHHA adopts a REL Value for Sulfuryl Fluoride. [District Rule 4102]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-377-46-4 **EXPIRATION DATE:** 10/31/2022

EQUIPMENT DESCRIPTION:
METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS)

PERMIT UNIT REQUIREMENTS

1. Fumigation chamber is authorized to operate only at the following facilities: S-377 (Lost Hills location) and S-713 (King location). [District Rule 2010] Federally Enforceable Through Title V Permit
2. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
3. Profume (sulfuryl fluoride) usage shall not exceed either of the following limits: 12,000 lb/day or 40,000 lb/year. [District Rule 4102]
4. Permittee shall maintain accurate records of fumigations. Records shall include the amount and type of fumigant used, location, and the date of fumigation. Records shall be retained for a period of at least five years and provided to the District upon request. [District Rule 1070] Federally Enforceable Through Title V Permit
5. Facility compliance with AB 2588 (Air Toxics "Hot Spots" Information and Assessment Act) is required once OEHHA adopts a REL Value for Sulfuryl Fluoride. [District Rule 4102]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: S-377-58-1 **EXPIRATION DATE:** 10/31/2022

EQUIPMENT DESCRIPTION:
400 MMBTU/HR NATURAL GAS-FIRED PISTACHIO HULLING AND DRYING OPERATION #3

PERMIT UNIT REQUIREMENTS

1. Operation shall be equipped with four receiving pits, each with metering conveyors and precleaner feed conveyor. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Operation shall be equipped with four precleaning leaf blowers, each with a 44-inch high-efficiency cyclone, trash discharge conveyor, sampler, and nut discharge conveyor. [District Rule 2201] Federally Enforceable Through Title V Permit
3. Operation may be equipped with the following permit exempt wet processing equipment: pistachio huller/peelers, wash decks, float tanks, gravity decks and classifing decks each with a high efficiency cyclone, size graders, detwiggers, product reclaimer line, wet aspirators with cyclones and/or expansion boxes, electric air compressors, electric compressed air dryers, and associated conveyors, hoppers, and elevators. [District Rule 2010] Federally Enforceable Through Title V Permit
4. There shall be no visible emissions in excess of 5% opacity at elevators, augers, conveyors, conveyor transfer points. [District Rule 2201] Federally Enforceable Through Title V Permit
5. Units may only be fired on PUC regulated natural gas. [District Rule 2520] Federally Enforceable Through Title V Permit
6. Annual natural gas consumption for the twenty 20 MMBtu/hr column dryers shall not exceed 300 MMscf/year. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Emission rates from dryers listed above shall not exceed any of the following limits: PM10: 0.0025 lb/MMBtu, SOx (as SO2): 0.00285 lb/MMBtu, NOx (as NO2): 0.0832 lb/MMBtu, VOC: 0.0038 lb/MMBtu, or CO: 0.021 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
8. Daily natural gas consumption shall not exceed 9.65 MMscf/day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Operation shall be equipped with an operational totalizing fuel flow meter serving column type dryers listed above. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Maximum emission rate of PM10 from each of the 44-inch high-efficiency precleaning cyclones listed above shall not exceed 0.08 lb/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Precleaning operation shall not operate more than 2,160 hours per year. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Visible emissions at precleaner cyclones shall be inspected quarterly during operation. If visible emissions are observed to be in excess of 5% opacity, corrective action shall be taken to reduce opacity. [District Rules 2201 and 2520] Federally Enforceable Through Title V Permit
13. Disposal of solid and liquid wastes shall not result in odors nor constitute a nuisance. [District Rule 4102]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

14. Source with non-combustion particulate emission sampling limit shall be demonstrated by District witnessed sample collection by independent testing laboratory if precleaner cyclones exhibit visible emissions in excess of 5% opacity. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
15. Source testing for particulate emissions shall be performed within 60 days of District determination of excess visible emissions, test results shall be submitted to the District within 60 days thereafter. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
16. Source testing to measure the concentration of particulate matters shall be conducted using EPA Method 5. [District Rules 2201 and 4201] Federally Enforceable Through Title V Permit
17. Particulate matter emissions shall not exceed 0.1 gr/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
18. Visible emissions at elevators, augers, conveyors, conveyor transfer points shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520] Federally Enforceable Through Title V Permit
19. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation E=3.59xP^0.62 if P is less than or equal to 30 tons per hour, or E=17.31xP^0.16 if P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
20. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. Compliance with this requirement is assured by only using PUC regulated natural gas. [Kern County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
21. Permittee shall maintain records of the volume of fuel used each day and each year. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
22. Permittee shall maintain records of hours of operation of the precleaning cyclones. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
23. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520] Federally Enforceable Through Title V Permit
24. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

APPENDIX C
BACT Guideline and BACT Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 1.6.8*

Last Update: 3/13/2015

Nut and Seed Column Dryer

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1) Natural gas, or 2) LPG for operations with no access to a natural gas fuel source		
SOx	1) PUC quality natural gas, or 2) LPG for operations with no access to a PUC quality natural gas fuel source		
PM10	1) Natural gas, or 2) LPG for operations with no access to a natural gas fuel source		
NOx	1) Low NOx burner and natural gas @ 0.0832 lb-NOx/MMBtu, or 2) Low NOx burner and LPG @ 0.1248 lb-NOx/MMBtu for operations with no access to a natural gas fuel source		

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**

Top Down BACT Analysis for Nut and Seed Column Dryers

This application was deemed complete on September 23, 2021. Therefore, BACT Guideline 1.6.8 (March 13, 2015) was in effect at the time the project was deemed complete and will be used for the nut and seed column dryers. In accordance with the District BACT policy, information from that guideline will be utilized without further analysis.

BACT Analysis for NO_x Emissions:

Step 1 - Identify All Possible NOx Control Technologies

Low NOx burner and natural gas fuel @ 0.0832 lb-NO_x/MMBtu - Achieved in Practice

Low NOx burner and LPG @ 0.1248 lb-NO_x/MMBtu for operations with no access to a natural gas fuel source – Achieved in Practice

Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible, options.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

1. Low NOx burner and natural gas fuel @ 0.0832 lb-NO_x - Achieved in Practice
2. Low NOx burner and LPG @ 0.1248 lb-NO_x/MMBtu for operations with no access to a natural gas fuel source – Achieved in Practice

Step 4 - Cost Effectiveness Analysis

A cost effective analysis must be performed for all, control options in the list from Step 3 in the order of their ranking to determine the cost effective option with the lowest emissions.

The only control technology alternatives in the ranking list from Step 3 has been achieved in practice. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for NOx emissions is a Low NOx burner and natural gas fuel @ 0.0832 lb-NO_x. The facility has proposed a Low NOx burner and natural gas fuel @ 0.0832 lb-NO_x; therefore, BACT is satisfied.

APPENDIX D
SSPE1 Calculations

S-377-3-30: Pistachio Hulling and Drying Operation

Assumptions:

- column dryers annual fuel usage limit: 375+37.15 = 412.15 MMscf/yr = 412,150 MMBtu/yr

Emission Factors:

Pollutant	Emission Factor (lb/MMBtu)
NO_X	0.0832
SO_X	0.00285
PM_{10}	0.0025
CO	0.021
VOC	0.0038

Emissions Calculations:

Annual PE (Combustion)					
Pollutant	Emission Factor (lb/MMBtu)	X	Total Combined Proposed Fuel Usage (MMBtu/yr)	=	PE1 (lb/year)
NO_X	0.0832	X	412,500	=	**34,320**
SO_X	0.00285	X	412,500	=	**1,176**
PM_{10}	0.0025	X	412,500	=	**1,031**
CO	0.021	X	412,500	=	**8,663**
VOC	0.0038	X	412,500	=	**1,568**

The total emission from this permit unit are considered fugitive

S-377-9-8: Propylene oxide fumigation operation

PTO S-377-9-8 includes the following annual emission limit for VOC, which is the only pollutant emitted by this emission unit:

Annual VOC = 782 lb/year

S-377-34-7: 21 MMBtu/hr natural gas-fired boiler

Assumptions:

Per current PTO this operation may operate 8,760 hr/year.

Emission Factors:

Per current PTO the emission factors for this operation are

Pollutant	Emission Factor (MMBtu/hr)
NOx	0.008
SOx	0.00285
PM10	0.005
CO	0.037
VOC	0.0028

Emissions Calculations:

Annual PE							
Pollutant	**Emission Factor (lb/MMBtu)**	**x**	**Total Heat Input (MMBtu/hr)**	**x**	**Operating Schedule (hr/year)**	**=**	**PE2 (lb/year)**
NOx	0.008	x	21	x	8,760	=	1,472
SOx	0.00285	x	21	x	8,760	=	524
PM_{10}	0.005	x	21	x	8,760	=	920
CO	0.037	x	21	x	8,760	=	6,807
VOC	0.0028	x	21	x	8,760	=	515

S-377-35-6: 99.5 bhp natural gas-fired emergency standby engine

Assumptions:

- Per current PTO this engine may operate up to 100 hr/year for non-emergency purposes.

Emission Factors:

Pollutant	Emission Factor (g/bhp-hr)	Source
NO_x	7.48	PTO S-377-35-6
SO_x	0.009	Mass Balance Equation Below

PM_{10}	0.63	PTO S-377-35-6
CO	12.3	PTO S-377-35-6
VOC	0.099	PTO S-377-35-6

$$0.00285 \quad \frac{lb-SO_x}{MMBtu} \times \frac{1\,MMBtu}{1{,}000{,}000\,Btu} \times \frac{2{,}542.5\,Btu}{bhp-hr} \times \frac{1\,bhp\,input}{0.35\,bhp\,out} \times \frac{453.6\,g}{lb} = \quad 0.0094 \quad \frac{g-SO_x}{bhp-hr}$$

Emissions Calculations:

Annual PE				
Pollutant	**Emissions Factor (g/bhp-hr)**	**Rating (bhp)**	**Annual Hours of Operation (hrs/year)**	**Annual PE (lb/yr)**
NO_x	7.48	99.5	100	**164**
SO_x	0.009	99.5	100	**0**
PM_{10}	0.63	99.5	100	**0**
CO	12.3	99.5	100	**270**
VOC	0.099	99.5	100	**2**

S-377-37-5: 188 bhp diesel-fired emergency standby IC engine powering a fire water pump

Assumptions:

Per current PTO this engine may operate up to 100 hr/year for non-emergency purposes.

Emission Factors:

Pollutant	Emission Factor (g/bhp-hr)	Source
NO_x	17.3	PTO S-377-37-5
SO_x	0.0051	Mass Balance Equation Below
PM_{10}	0.24	PTO S-377-37-5
CO	5.8	PTO S-377-37-5
VOC	0.52	PTO S-377-37-5

$$\frac{0.000015\,lb-S}{lb-fuel} \times \frac{7.1\,lb-fuel}{gallon} \times \frac{2\,lb-SO_2}{1\,lb-S} \times \frac{1\,gal}{137{,}000\,Btu} \times \frac{1\,bhp\,input}{0.35\,bhp\,out} \times \frac{2{,}542.5\,Btu}{bhp-hr} \times \frac{453.6\,g}{lb} = \quad 0.0051 \quad \frac{g-SO_x}{bhp-hr}$$

Calculations:

Annual PE Calculations				
Pollutant	**Emissions Factor (g/bhp-hr)**	**Rating (bhp)**	**Annual Hours of Operation (hrs/year)**	**Annual PE (lb/yr)**
NO_x	17.3	188	100	**717**
SO_x	0.0051	188	100	**0**
PM_{10}	0.24	188	100	**10**
CO	5.8	188	100	**240**
VOC	0.52	188	100	**22**

S-377-39-6: 3.2 MMBtu/hr natural gas-fired sample drying operation with four modular dryers each equipped with a 0.8 MMBtu/hr burner

Assumptions:

Per current PTO this operation shall not exceed 6.0 MMscf/year.

Emission Factors:

Per current PTO the emission factors for this operation are

Pollutant	Emission Factor (lb/MMscf)
NOx	83.20
SOx	2.85
PM10	5.0
CO	21.0
VOC	5.8

Calculations:

Pollutant	Emission Factor (lb/MMscf)	Annual Fuel Usage (MMscf/yr)	Annual PE (lb/yr)
NOx	83.20	6.0	499
SOx	2.85	6.0	17
PM10	5.0	6.0	30
CO	21.0	6.0	126
VOC	5.8	6.0	35

S-377-41-5: Hydrogen phosphide and sulfuryl fluoride fumigation operation

The emissions from this operation are phosphine gas and sulfuryl fluoride. Phosphine gas and sulfuryl fluoride are HAPs and are not considered criteria pollutants. Therefore, the emissions for SSPE calculations are zero.

S-377-47-7: 3.0 MMBtu/hr natural gas-fired artificial pistachio opening operation

Assumptions:

Per current PTO this operation shall not exceed 10.0 MMscf/year

Emission Factors:

Emission FactorPollutant	Emission Factor (lb/MMscf)
NOx	83.2
SOx	2.85
PM10	2.8
CO	21.0
VOC	3.8

Calculations:

Pollutant	Emission Factor (lb/MMscf)	Annual Fuel Usage (MMscf/yr)	Annual PE (lb/yr)
NOx	83.2	10	832
SOx	2.85	10	29
PM10	2.8	10	28
CO	21.0	10	210
VOC	3.8	10	38

S-377-49-5: Coating Operation

Based on PTO S-377-49-5 the unit has the following annual emission limits:

VOC = 3,000 lb/yr

PM_{10} = 501 lb/year

S-377-52-1: Pistachio shelling operation

Assumptions:

Per current permit, this operation shall not exceed 15.4 lb-PM10/day.
For worst case assumptions this operation may operate 365 day/year.

Calculations:

Annual PE = 15.4 lb-PM10/day x 365 day/year

= 5,621 lb-PM10/year

S-377-54-2: 305 bhp diesel-fired emergency standby IC engine powering a fire water pump

Assumptions:

Per current PTO this engine may operate up to 100 hr/year for non-emergency purposes.

Emission Factors:

Pollutant	Emission Factor (g/bhp-hr)	Source
NO_x	2.7	PTO 377-54-2
SO_x	0.0051	Mass Balance Equation Below
PM_{10}	0.06	PTO 377-54-2
CO	0.4	PTO 377-54-2
VOC	0.1	PTO 377-54-2

$$\frac{0.000015\,lb-S}{lb-fuel}\times\frac{7.1\,lb-fuel}{gallon}\times\frac{2\,lb-SO_2}{1\,lb-S}\times\frac{1\,gal}{137{,}000\,Btu}\times\frac{1\,bhp\,input}{0.35\,bhp\,out}\times\frac{2{,}542.5\,Btu}{bhp-hr}\times\frac{453.6\,g}{lb}=\quad 0.0051\quad\frac{g-SO_x}{bhp-hr}$$

Calculations:

Annual PE Calculations				
Pollutant	**Emissions Factor (g/bhp-hr)**	**Rating (bhp)**	**Annual Hours of Operation (hrs/year)**	**Annual PE2(lb/yr)**
NO_x	2.7	305	100	**182**
SO_x	0.0051	305	100	**0**
PM_{10}	0.06	305	100	**4**
CO	0.4	305	100	**27**
VOC	0.1	305	100	**7**

S-377-55-1: Propylene oxide fumigation operation

The emissions from this operation are propylene oxide. Propylene oxide in gaseous form is 100% VOC

A. Assumptions

- PPO (in gaseous form) is 100% VOC.
- VOC is the only air contaminant emitted from this sterilization operation.
- Condition 5 of PTO states that fumigated nuts transferred in any one day cannot exceed 50 tons.
- Condition 6 states that nuts store in the warehouse for off-gassing shall not exceed 10,324,104 lbs in one calendar year.

Emission Factors

Per condition 7 of PTO S-377-55-1:

VOC (PPO) daily limit = 39.6 lb-VOC/day

Calculations

Maximum days of operation = (10,324,104 lb-nuts/yr) / (50 tons-fumigated nuts x 2,000 lb/ton)
= 103 days-operation/year

Annual PE = Days-operation/yr x VOC daily limit
= 103 days-operation/yr x 39.6 lb-VOC/day
= 4,079 lb-VOC/yr

S-377-56-1: 189 bhp natural gas-fired emergency standby engine

Assumptions:

Per current PTO this engine may operate up to 100 hr/year for non-emergency purposes.

Emissions Factors

Pollutant	Emission Factor (g/bhp-hr)	Source
NO_x	0.05	PTO S-377-56-1
SO_x	0.009	Mass Balancing Equation Below
PM_{10}	0.022	PTO S-377-56-1
CO	0.92	PTO S-377-56-1
VOC	0.06	PTO S-377-56-1

SO_X is calculated as follows:

$$0.00285 \quad \frac{lb - SO_x}{MMBtu} \times \frac{1\,MMBtu}{1{,}000{,}000\,Btu} \times \frac{2{,}542.5\,Btu}{bhp - hr} \times \frac{1\,bhp\,input}{0.35\,bhp\,out} \times \frac{453.6\,g}{lb} = \quad 0.0094 \quad \frac{g - SO_x}{bhp - hr}$$

Annual PE				
Pollutant	**Emissions Factor (g/bhp-hr)**	**Rating (bhp)**	**Annual Hours of Operation (hrs/year)**	**Annual PE (lb/yr)**
NO_x	0.05	189	100	**2**
SO_x	0.009	189	100	**0**
PM_{10}	0.022	189	100	**1**
CO	0.92	189	100	**38**
VOC	0.06	189	100	**3**

S-377-59-1: Nut Roasting Operation

Assumptions

- PM10 and VOC are the only pollutants of concern.
- Maximum annual throughput of the oil roaster is 8,000 tons-nuts.

Emission Factors

Per PTO S-377-59-1:

PM10 EF = 0.26 lb-PM_{10}/ton
VOC EF = 0.085 lb-VOC/ton

Calculations

Pollutant	Emission Factor (lb/ton)	Throughput (tons-nuts/year)	Annual PE (lb/yr)
PM_{10}	0.26	8,000	2,080
VOC	0.085		680

The total SSPE1 is summarized in the table below. Emissions for units S-377-19-33, -21-17, -50-6 are taken from recent project S-1180541 and listed above. ATC S-377-40-22 may have emissions less than the corresponding current PTOs. However, the ATC has been implemented and the facility is operating under this permit. Therefore, the ATC will be used to calculate the SSPE.

Emissions for S-377-43-4, -44-4, -45-4, -46-4, and -58-1 can be found above in Section VII.C.2

SSPE1 (lb/year)					
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**CO**	**VOC**
S-377-3-30	34291	1175	1030	8655	1566
S-377-9-8	0	0	0	0	782
S-377-19-34	24960	3420	4061	10731	1140
S-377-21-18	416	14	13	105	19
S-377-34-7	1472	524	920	6807	515
S-377-35-6	164	0	1	270	2
S-377-37-5	1800	18	24	604	54
S-377-39-6	499	17	30	126	35
ATC S-377-40-22	4348	293	479	6091	461
S-377-41-5	0	0	0	0	0
S-377-43-4	0	0	0	0	1278
S-377-44-4	0	0	0	0	1278
S-377-45-4	0	0	0	0	1278
S-377-46-4	0	0	0	0	1278
S-377-47-7	832	29	28	210	38
S-377-49-4	0	0	501	0	3000
S-377-50-7	6656	228	2590	688	468
S-377-52-1	0	0	5621	0	0
S-377-54-2	182	0	4	27	7
S-377-55-1	0	0	0	0	4091
S-377-56-1	2	3	1	38	3
S-377-58-1	24,960	855	1,961	6300	1,140
S-377-59-1	0	0	2080	0	680
S-377-60-1	0	0	3	0	0
SSPE1	100,582	6,576	19,344	40,652	19,114

APPENDIX E
HRA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review and Ambient Air Quality Analysis

To:	Entor Pineda – Permit Services
From:	Michael Scott – Technical Services
Date:	June 21, 2022
Facility Name:	WONDERFUL PISTACHIOS & ALMONDS
Location:	3.5 MILES NORTH OF HWY 46 ON HWY 33, LOST HILLS
Application #(s):	S-377-43-5, -44-5, -45-5, -46-5, -58-2
Project #:	S-1213018

1. Summary

1.1 Risk Management Review (RMR)

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
43-5	NA[1]	NA[1]	NA[1]	NA[1]	No	No
44-4	NA[1]	NA[1]	NA[1]	NA[1]	No	No
45-5	NA[1]	NA[1]	NA[1]	NA[1]	No	No
46-5	NA[1]	NA[1]	NA[1]	NA[1]	No	No
58-2	0.00	0.00	0.00	3.08E-08	No	No
Project Totals	0.00	0.00	0.00	3.08E-08		
Facility Totals	>1	0.87	0.67	8.47E-07		

Notes:
1. There are no increases in emissions associated with Units 43-5, 44-4, 45-5, and 46-5.

1.2 Ambient Air Quality Analysis (AAQA)

Pollutant	Air Quality Standard (State/Federal)				
	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass		Pass		
NO_x	Fail[1]				Pass
SO_x	Pass	Pass		Pass	Pass
PM10				Pass	Pass
PM2.5				Pass	Pass

Notes:
1. The facility will provide offsets for NO_x emissions for project S-1213018.
2. Results were taken from the attached AAQA Report.
3. The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2) unless otherwise noted below.
4. Modeled PM10 concentrations were below the District SIL for non-fugitive sources of 5 $\mu g/m^3$ for the 24-hour average concentration and 1 $\mu g/m^3$ for the annual concentration.
5. Modeled PM2.5 concentrations were below the District SIL for non-fugitive sources of 1.2 $\mu g/m^3$ for the 24-hour average concentration and 0.2 $\mu g/m^3$ for the annual concentration.

To ensure that human health risks will not exceed District allowable levels; the following shall be included as requirements for:

Unit # 58-2

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.

2. Project Description

Technical Services received a request on June 09, 2022 to perform a Risk Management Review (RMR) and Ambient Air Quality Analysis (AAQA) for the following:

Unit -43-5: MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): LIMIT METHYL BROMIDE USAGE TO 639 LB/YEAR

Unit -44-5: MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): LIMIT METHYL BROMIDE USAGE TO 639 LB/YEAR

Unit -45-5: MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): LIMIT METHYL BROMIDE USAGE TO 639 LB/YEAR

Unit -46-5: MODIFICATION OF METHYL BROMIDE AND SULFURYL FLUORIDE (PROFUME GAS) FUMIGATION CHAMBER (OPERATED AT VARIOUS SPECIFIED LOCATIONS): LIMIT METHYL BROMIDE USAGE TO 639 LB/YEAR

Unit -58-2: MODIFICATION OF 400 MMBTU/HR NATURAL GAS-FIRED PISTACHIO HULLING AND DRYING OPERATION #3: ADD FOUR PRECLEANER LINES, TWENTY COLUMN DRYERS AND 60 PERMIT EXEMPT STORAGE SILOS.

3. RMR Report

3.1 Analysis

The District performed an analysis pursuant to the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015) to determine the possible cancer and non-cancer health impact to the nearest resident or worksite. This policy requires that an assessment be performed on a unit by unit basis, project basis, and on a facility-wide basis. If a preliminary prioritization analysis demonstrates that:

- A unit's prioritization score is less than the District's significance threshold and;
- The project's prioritization score is less than the District's significance threshold and;
- The facility's total prioritization score is less than the District's significance threshold

Then, generally no further analysis is required.

The District's significant prioritization score threshold is defined as being equal to or greater than 1.0. If a preliminary analysis demonstrates that either the units', the project's or the facility's total prioritization score is greater than the District threshold, a screening or a refined assessment is required.

If a refined assessment is greater than one in a million but less than 20 in a million for carcinogenic impacts (cancer risk) and less than 1.0 for the acute and chronic hazard indices (non-

carcinogenic) on a unit by unit basis, project basis and on a facility-wide basis the proposed application is considered less than significant. For units that exceed a cancer risk of one in a million, Toxic Best Available Control Technology (TBACT) must be implemented.

Toxic emissions for this project were calculated using the following methods:

Particulate matter emissions from this proposed operation were provided by the Permit Engineer. These emissions were speciated into toxic air contaminants using emission factors derived from a 1997 soil profile "Composite of three almond orchards" in EPA's Speciation program from Central Valley CA Almond Growers test data.

Natural gas usage rates for the proposed operation were provided by the Permit Engineer. These usage rates were speciated into toxic air contaminants using emission factors derived from the table, "Natural Gas Fired External Combustion Equipment", in the 2001 report, Ventura County Air Pollution Control District AB 2588 Combustion Emission Factors.

These emissions were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy, risks from the proposed unit's toxic emissions were prioritized using the procedure in the 2016 CAPCOA Facility Prioritization Guidelines. The prioritization score for this proposed facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required.

The AERMOD model was used, with the parameters outlined below and meteorological data for 07-11 from Wasco (rural dispersion coefficient selected) to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Source Process Rates					
Unit ID	**Process ID**	**Process Material**	**Process Units**	**Hourly Process Rate**	**Annual Process Rate**
58-2	1 (Pre-cleaner Lines)	PM_{10}	Lbs.	0.325	690
58-2	2 (Column Dryers)	NG	MMscf	0.0979	500

Point Source Parameters						
Unit ID	**Unit Description**	**Release Height (m)**	**Temp. (°K)**	**Exit Velocity (m/sec)**	**Stack Diameter (m)**	**Vertical/ Horizontal/ Capped**
58-2	1 (Pre-cleaner Lines)	15.62	294.11	0.26	5.486	Vertical
58-2	2 (Column Dryers)	7.89	323.92	0.003	2.652	Vertical

4. AAQA Report

The District modeled the impact of the proposed project on the National Ambient Air Quality Standard (NAAQS) and/or California Ambient Air Quality Standard (CAAQS) in accordance with District Policy APR-1925 (Policy for District Rule 2201 AAQA Modeling) and EPA's Guideline for Air Quality Modeling (Appendix W of 40 CFR Part 51). The District uses a progressive three level

approach to perform AAQAs. The first level (Level 1) uses a very conservative approach. If this analysis indicates a likely exceedance of an AAQS or Significant Impact Level (SIL), the analysis proceeds to the second level (Level 2) which implements a more refined approach. For the 1-hour NO_2 standard, there is also a third level that can be implemented if the Level 2 analysis indicates a likely exceedance of an AAQS or SIL.

The modeling analyses predicts the maximum air quality impacts using the appropriate emissions for each standard's averaging period. Required model inputs for a refined AAQA include background ambient air quality data, land characteristics, meteorological inputs, a receptor grid, and source parameters including emissions. These inputs are described in the sections that follow.

Ambient air concentrations of criteria pollutants are recorded at monitoring stations throughout the San Joaquin Valley. Monitoring stations may not measure all necessary pollutants, so background data may need to be collected from multiple sources. The following stations were used for this evaluation:

Monitoring Stations				
Pollutant	**Station Name**	**County**	**City**	**Measurement Year**
CO	Bakersfield-Muni	Kern	Bakersfield	2018
NOx	Bakersfield-California	Kern	Bakersfield	2018
PM10	Bakersfield-Golden/M St	Kern	Bakersfield	2018
PM2.5	Bakersfield-Airport (Planz)	Kern	Bakersfield	2018
SOx	Fresno - Garland	Fresno	Fresno	2018

Technical Services performed modeling for directly emitted criteria pollutants with the emission rates below:

Emission Rates (lbs/hour)						
Unit ID	**Process**	**NOx**	**SOx**	**CO**	**PM10**	**PM2.5**
58-2	1 (Pre-cleaner Lines)	0	0	0	0.33	0.33
58-2	2 (Column Dryers)	8.32	0.28	2.10	0.25	0.25

Emission Rates (lbs/year)						
Unit ID	**Process**	**NOx**	**SOx**	**CO**	**PM10**	**PM2.5**
58-2	1 (Pre-cleaner Lines)	0	0	0	690	690
58-2	2 (Column Dryers)	41,600	1,425	10,500	1,250	1,250

The AERMOD model was used to determine if emissions from the project would cause or contribute to an exceedance of any state of federal air quality standard. The parameters outlined below and meteorological data for 07-11 from Wasco (rural dispersion coefficient selected) were used for the analysis:

The following parameters were used for the review:

Point Source Parameters						
Unit ID	**Unit Description**	**Release Height (m)**	**Temp. (°K)**	**Exit Velocity (m/sec)**	**Stack Diameter (m)**	**Vertical/ Horizontal/ Capped**
58-2	1 (Pre-cleaner Lines)	15.62	294.11	0.26	5.486	Vertical
58-2	2 (Column Dryers)	7.89	323.92	0.003	2.652	Vertical

5. Conclusion

5.1 RMR

The cumulative acute and chronic indices for this facility, including this project, are below 1.0; and the cumulative cancer risk for this facility, including this project, is less than 20 in a million. In addition, the cancer risk for each unit in this project is less than 1.0 in a million. **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 requirements 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.

5.2 AAQA

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

6. Attachments

A. Modeling request from the project engineer

B. Additional information from the applicant/project engineer

C. Prioritization score w/ toxic emissions summary

D. Facility Summary

E. AAQA results

APPENDIX F
Fugitive Emissions Calculations

Fugitive Emissions for SSPE1						
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**PM**	**CO**	**VOC**
-3-30	31,200	1,069	938	938	7,875	1,425
-19-34	16,640	570	500	500	4200	760
-58-1	24,960	855	1,961	1,961	6,300	1,140
Total	**72,800**	**2,494**	**3,399**	**3,399**	**18,375**	**3,325**

Fugitive Emissions for SSPE2						
Permit Unit	**NO_X**	**SO_X**	**PM_{10}**	**PM**	**CO**	**VOC**
-3-30	31,200	1,069	938	938	7,875	1,425
-19-34	16,640	570	500	500	4200	760
-58-2	66,560	2,280	11,501	11,501	16,800	4,000
Total	**114,400**	**3,919**	**12,939**	**12,939**	**28,875**	**6,185**

APPENDIX G
Quarterly Net Emissions Change (QNEC)

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.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

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

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

Quarterly NEC [QNEC] S-377-43-5, -44-5, -45-5, -46-5: Fumigation Operations			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	0	0	0
SO_X	0	0	0
PM_{10}	0	0	0
CO	0	0	0
VOC	319.5	319.5	0

Quarterly NEC [QNEC] S-377-58-2: Drying and Hulling Operation			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NO_X	16,640	6,240	10,400
SO_X	570	213.75	356.25
PM_{10}	845.5	360.25	485.25
CO	4,200	1,575	2,625
VOC	760	285	475