



July 27, 2023

Larry Lowder
Dry Ranch LLC
1625 Howard Rd,
#255
Madera, CA 93637

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: C-9840
Project Number: C-1231446

Dear Mr. Lowder:

Enclosed for your review and comment is the District's analysis of Dry Ranch LLC's application for an Authority to Construct for pistachio hulling and drying operations, at 13559 Firebaugh Blvd, Madera.

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. Matthew Robinson of Permit Services at (209) 557-6454.

Sincerely,



Brian Clements
Director of Permit Services

BC:mr

Enclosures

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

Samir Sheikh
Executive Director/Air Pollution Control Officer

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San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Pistachio Processing Facility

Facility Name: Dry Ranch LLC Date: July 26, 2023
Mailing Address: 1625 Howard Road, #255 Engineer: Matthew Robinson
Madera, CA 93637 Lead Engineer: James Harader
Contact Person: Larry Lowder - Dry Ranch and Wes Younger - Trinity Consultants, Inc.
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Application #(s): C-9840-1-1, -13-0
Project #: C-1231446
Deemed Complete: May 18, 2023

I. Proposal

Dry Ranch, LLC has requested Authority to Construct (ATC) permits for the following modifications to their pistachio processing facility:

- Modifications to the “Phase 1” equipment of permit unit C-9840-1. The existing ATC (C-9840-1-0) cannot be fully implemented and, therefore, will be reissued (as C-9840-1-1).
 - correct inaccuracy in the equipment description – the number of silo heaters had been specified as 40; the actual number of silo heaters is 24
 - incorporate heat input limitation applicable to silo heaters and sample dryer (non-fugitive sources) to 50 billion Btu/year
 - identify emissions from column dryers as fugitive emissions
- The installation of new “Phase 2” pistachio hulling, drying, and storage operations (permit C-9840-13-0). The Phase 2 equipment will be nearly identical to the “Phase 1” equipment installed in project C-1203822, in a mirror image configuration, with the intent of doubling the plant’s processing capacity. The facility will also be installing additional permit-exempt sorting, sizing, grading, and packaging operations in support of the doubled capacity.

The following condition will be included on C-9840-1-1 to ensure it replaces C-9840-1-0.

C-9840-1-1:

- This permit cancels and replaces ATC C-9840-1-0. [District Rule 2201]

Draft ATC C-9840-1-1 and ATC C-9840-13-0 are included in Appendix A. Prior ATC C-9840-1-0 is included in Appendix B.

II. Applicable Rules

Rule 2020	Exemptions
Rule 2201	New and Modified Stationary Source Review Rule (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 13559 Firebaugh Boulevard, east of Firebaugh in Madera County. 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.

IV. Process Description

Pistachio Hulling, Drying and Storage Operation (Existing Unit '-1 and Proposed Unit '-13):

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

The facility does not have access to natural gas. All combustion equipment is fired with on-site liquid propane tanks. Liquid propane is heated on demand in permit-exempt gasifiers to manage the endothermic phase change and prevent freeze-up of the plant-wide gaseous propane supply.

Receiving and Precleaning Operation

Field harvested pistachios will be manually dumped from bottom dump trailers into openings in the top of the receiving pits. The drop distance from trailer to receiving pit opening is small and choke feeding, where the pistachios are dispensed in a controlled sliding manner rather than free fall, is utilized. Due to the cleanliness of the arriving pistachios and the gentle method of transfer emissions at the receiving pit are expected to be negligible. From the pits, the nuts will be conveyed through the precleaning and prehulling equipment to remove large pieces of debris such as leaves, twigs, blanks, and loose hulls prior to the hulling

process. Precleaning equipment will include: stickreels, aspirators, outfall tanks controlled by high efficiency cyclones and various conveyors and augers.

Nut Drying Operation

From the precleaning operation, the nuts will be routed through traditional wet hullers. After hulling, the nuts will be transferred to float/sink tanks to separate product streams and then to propane-fired column dryers, which reduce the moisture content to approximately 7%. The column dryers are large horizontal perforated cylinders with a burner and fan at each end. The heated air, including combustion products, is forced through pistachios within the cylinder and escapes through the perforations. 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 with high rates of excess air. PUC quality natural gas is not currently available at the facility. The facility proposes to use propane until such time that a gas distribution pipeline is constructed within a reasonable distance from the facility.

Storage/Processing Silos

Twelve storage silos and eight processing silos will be used for storage, processing, and drying. Twenty-four silo heaters, each with a 4.2 MMBtu/hr propane-fired burner and 40 hp fan, are used to maintain ideal storage temperature and prevent condensation when weather is cold and humid. The silo heaters are an auxiliary drying mechanism and are not expected to operate during the harvest season. Fumigation may occur in the processing silos under permit C-9840-2-0 which authorizes fumigation in “various unspecified locations within the stationary source”. The previous evaluation of the fumigation permit (project N-1203822) considered fumigation within silos. This project does not increase fumigant throughput or modify the existing fumigation operation permit.

Permit Exempt Operations

Operations that receive, sort, size, shell, and package clean nuts are permit-exempt. The cleaned pistachios are understood to be free of fine particulate with potential for entrainment in air (i.e. soil). The cyclones and fabric filters will be used as needed to separate and capture pieces of nut and shell chaff greater than 10 microns for sanitation control and quality assurance; therefore, the cyclones and fabric filters are not emissions control devices that require a permit per Rule 2010. The removal of this material assists in maintaining the quality of the product being packaged, prohibits obstructions during package sealing and helps eliminate attractants for vectors such as insects and rodents.

V. Equipment Listing

Pre-Project Equipment Description:

C-9840-1-0: PISTACHIO HULLING, DRYING AND STORAGE OPERATION WITH TWO RECEIVING PITS, TWO ASPIRATORS, EACH SERVED BY A DONALDSON HIGH EFFICIENCY CYCLONE, SEVEN 27 MMBTU/HR GSI MODEL 2426X PROPANE-FIRED COLUMN DRYERS, ONE 1.4 MMBTU/HR PROPANE-FIRED SAMPLE DRYER, TWELVE STORAGE SILOS AND EIGHT PROCESSING SILOS, EACH WITH TWO 4.2 MMBTU/HR GSI PROPANE-FIRED SILO HEATERS

Proposed Modification:

Codify an additional fuel usage limit, clarify equipment description, and enumerate permit-exempt equipment in an additional condition to prevent confusion. Because the existing ATC cannot be fully implemented, this evaluation considers this as a new operation.

C-9840-1-1: "PHASE 1" PISTACHIO HULLING, DRYING AND STORAGE OPERATION WITH: TWO RECEIVING CHUTES LEADING TO A COMMON PIT; TWO ASPIRATORS, EACH SERVED BY A DONALDSON HIGH EFFICIENCY CYCLONE; SEVEN 27 MMBTU/HR GSI MODEL 2426X PROPANE-FIRED COLUMN DRYERS; ONE 1.4 MMBTU/HR PROPANE-FIRED SAMPLE DRYER; TWELVE STORAGE SILOS, EACH WITH TWO 4.2 MMBTU/HR GSI PROPANE-FIRED TRANSPORTABLE SILO HEATERS; AND EIGHT PROCESSING SILOS

Post-Project Equipment Description:

C-9840-1-1: "PHASE 1" PISTACHIO HULLING, DRYING AND STORAGE OPERATION WITH: TWO RECEIVING CHUTES LEADING TO A COMMON PIT; TWO ASPIRATORS, EACH SERVED BY A DONALDSON HIGH EFFICIENCY CYCLONE; SEVEN 27 MMBTU/HR GSI MODEL 2426X PROPANE-FIRED COLUMN DRYERS; ONE 1.4 MMBTU/HR PROPANE-FIRED SAMPLE DRYER; TWELVE STORAGE SILOS, EACH WITH TWO 4.2 MMBTU/HR GSI PROPANE-FIRED TRANSPORTABLE SILO HEATERS; AND EIGHT PROCESSING SILOS

C-9840-13-0: "PHASE 2" PISTACHIO HULLING, DRYING AND STORAGE OPERATION WITH: TWO RECEIVING CHUTES LEADING TO A COMMON PIT; TWO ASPIRATORS, EACH SERVED BY A DONALDSON HIGH EFFICIENCY CYCLONE; EIGHT 27 MMBTU/HR GSI MODEL 2426X PROPANE-FIRED COLUMN DRYERS; ONE 1.4 MMBTU/HR PROPANE-FIRED SAMPLE DRYER; TWELVE STORAGE SILOS, EACH WITH TWO 2.03 MMBTU (DERATED FROM 4.2 MMBTU/HR) GSI PROPANE-FIRED TRANSPORTABLE SILO HEATERS; AND EIGHT PROCESSING SILOS

Summary Proposed Combustion Equipment Subject to Permitting

Equipment	Burner Rating (MMBtu/hr)	Quantity	Total Burner Rating
“PHASE 1” C-9840-1-1			
GSI Model 2426X Column Dryers	27.0	7	189 MMBtu/hr (fugitive*)
GSI Model CHD-DI-N Portable Silo Heaters	4.2	24	100.8 MMBtu/hr
STD 40 Cell Sample Dryer	1.4	1	1.4 MMBtu/hr
	Total Fugitive		189 MMBtu/hr
	Total Non-Fugitive		102.2 MMBtu/hr
	TOTAL C-9840-1-1		291.2 MMBtu/hr
“PHASE 2” C-9840-13-0			
GSI Model 2426X Column Dryers	27.0	8	216 MMBtu/hr (fugitive*)
GSI Model CHD-DI-N Portable Silo Heaters	4.2	24	100.8 MMBtu/hr
STD 40 Cell Sample Dryer	1.4	1	1.4 MMBtu/hr
	Total Fugitive		216 MMBtu/hr
	Total Non-Fugitive		102.2 MMBtu/hr
	TOTAL C-9840-13-0		318.2 MMBtu/hr
	PLANT-WIDE TOTAL		609.4 MMBtu/hr

*See Appendix C for discussion of fugitive and non-fugitive emissions units.

The applicant has proposed that the column dryers shall not be operated on the same day as the silo heaters. Additionally, the applicant has proposed daily heat input limitations for column dryers and silo heaters of each permit unit. Permit conditions to enforce these limitations are included in the Rule 2201 discussion in section VIII of this evaluation.

Significant portions of these operations include permit-exempt equipment that is identical to or resembles equipment that requires permitting in other applications. To prevent future confusion regarding this exempt equipment, the applicant has requested inclusion of a clarifying permit condition in the ‘-1 and ‘-13 permits noting that the equipment has been accepted as permit-exempt. The following condition will be included in both permits:

- The operation includes permit exempt equipment for sorting, sizing, grading, and handling of clean nuts. Permit exempt equipment may be served by a permit exempt Donaldson model 196-FTD-10 dust collector with a 100 hp fan. [District Rule 2201] N

VI. Emission Control Technology Evaluation

Precleaning Operation Cyclones:

Aspirators followed by an expansion box and then a high efficiency (HE) cyclone serving the precleaning system have been demonstrated as the most efficient method of removing large pieces of debris such as leaves, twigs, blanks, and orchard dirt from the nuts prior to the wet

hulling process. The facility will also use an aspirator followed by an expansion box and then an HE cyclone serving the prehulling system to remove loose hulls prior to wet hulling. The use of HE cyclones represents the best method of collecting these large pieces of debris.

Permit Exempt Air/Material Separation Equipment:

Permit-exempt aspirators and cyclones will be used in conjunction with the pistachio dryers to remove unwanted pieces of hull, shell, twigs, etc. (larger than 10 microns) that make it through the wet hulling process. As this material dries it can accumulate in the process equipment posing a fire hazard and potentially attracting rodents and insects.

Dryers:

The dryers and heaters will be fired on propane. The small 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 with high rates of excess air, which also acts as a diluent that reduces burner temperature and, in turn, results in less thermal NO_x formation. Please note that the NO_x emissions factor for pistachio dryers, 0.083 lb NO_x/MMBtu when fired on natural gas, is taken from AP-42, and is the basis for BACT Guideline 1.6.8. The LPG emission factor in this BACT guideline was calculated from this value by applying a multiplier of 150% per AP-42 Section 1.5. However, the AP-42 emission factors in Section 1.5 are based on older processing equipment and do not have a very high quality rating. The proposed dryers will be tuned to operate with propane; therefore, the District will determine a more appropriate emission factor for propane combustion in the proposed dryers based on a SCAQMD document/rule titled “Default Combustion Emission Factors” (2022)¹, which indicates that a propane combustion emission factor is approximately 8% higher than a natural gas combustion emission factor. This calculation is discussed in more detail in Section VII.B., below. No additional control equipment is proposed.

VII. General Calculations

A. Assumptions

C-9840-1-1 and -13-0:

Receiving and Precleaning:

- The hulling operation is seasonal and may operate up to 24 hours per day and 1,440 hours/year (per applicant).
- Each permit unit includes two receiving chutes leading to a shared pit and one precleaning line served by two cyclones (per applicant).
- Post precleaning process equipment, including wet and dry hullers, bin dumpers, conveyors, aspirators with cyclones and/or expansion boxes, decks, sizing, sorting, and packaging equipment, are not sources of PM₁₀ emissions (previous projects).

Fuel Combustion Equipment:

- Dryers and silo heaters will combust propane (per applicant).

¹ <https://www.aqmd.gov/docs/default-source/planning/annual-emission-reporting/default-combustion-emission-factors.pdf?sfvrsn=6>

- Maximum daily operation of each dryer and each silo heater can be up to 24 hr/day (per applicant).
- Column dryers and silo heaters will not operate on the same day (per applicant).
- Maximum annual heat input of the sample dryer and silo heaters, for each permit unit, is limited to 50 billion Btu/year (per applicant).
- Maximum annual heat input of the each permit unit is limited to 150 billion Btu/year (per applicant).
- Maximum daily heat input for each group of column dryers (per applicant)
 - N-9840-1-1: 2,900 MMBtu/day
 - N-9840-13-0: 3,300 MMBtu/day
- Maximum daily heat input for each group of silo heaters (per applicant)
 - N-9840-1-1 and -13-0: 1,169.3 MMBtu/day
- Propane Heating Value: 91.5 MMBtu/10³ gallons (AP-42 Section 1.5)
- F-Factor for Propane: 8,710 dscf/MMBtu at 68°F (40 CFR 60)

B. Emission Factors

C-9840-1-1 and -13-0:

Precleaning Operations:

C-9840-1 and C-9840-13 Precleaner Emission Factor		
	lb/hr/cyclone	Source
PM ₁₀	0.08	Projects C-1120254, N-1141444, C-1203822

Fuel Combustion Equipment:

C-9840-1 and C-9840-13 Propane Emission Factors		
	lb/MMBtu	Source
NO _x	0.0899	Source Specific ²
SO _x	0.0164	AP-42 (7/08) Table 1.5-1
PM ₁₀	0.003	SCAQMD Default Combustion Emission Factors (2022) ³
CO	0.082	AP-42 (7/08) Table 1.5-1
VOC	0.011	AP-42 (7/08) Table 1.5-1

² Emission factor based on source test result of similar equipment fired on NG (0.0832 lb/MMBtu) has been extrapolated to the value expected for LPG with ratios derived from South Coast Air Quality Management District's (SCAQMD) 2022 Default Combustion Emission Factors which lists external combustion emission factors of 130 lb per million standard cubic feet for NG and 12.8 pounds per thousand gallons for LPG. These emission factors are converted to equivalent units as follows:

12.8 lb/Mgal-LPG × 1 Mgal-LPG/91.500 MMBtu = 0.14 lb-NO_x/MMBtu-LPG

130 lb-NO_x/MMscf-NG × 1 scf-NG/1,000 MMBtu = 0.13 lb-NO_x/MMBtu-NG

The ratio of LPG:NG emission factors is 1.08 (0.14 / 0.13 = 1.08). Therefore, the expected emission factor for LPG in this application is 0.0832 * 1.08 = 0.0899 lb-NO_x/MMBtu

The reduced NO_x emission factor in this application, relative to the SCAQMD default, is due to the high excess air and resultant low flame temperature.

³ Emission factor from South Coast Air Quality Management District's 2022 Default Combustion Emission Factors which lists the emission factor for external combustion of LPG as 0.28 lb-PM / 1000 gal. This emission factor is

C. Calculations

1. Pre-Project Potential to Emit (PE1)

C-9840-1-1:

This permit unit is evaluated as a new unit. Therefore, PE1 = 0 for all pollutants.

C-9840-13-0:

Since this is a new permit unit, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

C-9840-1-1:

Phase 1 Pre-cleaning operation:

The pre-cleaning operation only has the potential to emit PM₁₀.

$$\begin{aligned}\text{Daily PE} &= \text{EF (lb/hr/cyclone)} \times \text{Operating Schedule (hr/day)} \times \text{No. of Cyclones} \\ &= (0.08 \text{ lb-PM}_{10}/\text{hr/cyclone}) \times (24 \text{ hr/day}) \times (2 \text{ cyclones}) \\ &= \mathbf{3.8 \text{ lb-PM}_{10}/\text{day}}\end{aligned}$$

$$\begin{aligned}\text{Annual PE} &= \text{EF (lb/hr/cyclone)} \times \text{Operating Schedule (hr/year)} \times \text{No. of Cyclones} \\ &= (0.08 \text{ lb-PM}_{10}/\text{hr/cyclone}) \times (1,440 \text{ hr/year}) \times (2 \text{ cyclones}) \\ &= \mathbf{230 \text{ lb-PM}_{10}/\text{year}}\end{aligned}$$

Phase 1 Drying Operation:

The same emissions factors for all criteria pollutants are used for all burners in the drying operation (column dryers, sample dryer and silo heaters). Therefore, potential emissions can be calculated based on total heat input. The applicant has proposed that column dryers and silo heaters will not be operated on the same day. Therefore, the maximum daily heat input is achieved on days when only the column dryers and sample dryers operate. The applicant has proposed a maximum daily heat input for the column dryers of this permit unit of 2,900 MMBtu/day. The maximum daily heat input for the sample dryer is based on heat input rating and full time operation (1.4 MMBtu/hr × 24 hr/day = 33.6 MMBtu/day). Therefore, the maximum daily heat input is 2,933.6 MMBtu/day. Calculations are shown in the tables below.

Pollutant	Daily Post-Project Potential to Emit (PE2)		
	Emission Factors	Daily Max Heat input	Daily PE2
NO_x	0.0899 (lb-NO _x /MMBtu) x	2,933.6 (MMBtu/day)	= 263.7 (lb-NO _x /day)
SO_x	0.01640 (lb-SO _x /MMBtu) x	2,933.6 (MMBtu/day)	= 48.1 (lb-SO _x /day)
PM₁₀	0.0030 (lb-PM ₁₀ /MMBtu) x	2,933.6 (MMBtu/day)	= 8.8 (lb-PM ₁₀ /day)
CO	0.0820 (lb-CO/MMBtu) x	2,933.6 (MMBtu/day)	= 240.6 (lb-CO/day)
VOC	0.0110 (lb-VOC/MMBtu) x	2,933.6 (MMBtu/day)	= 32.3 (lb-VOC/day)

Pollutant	Annual Post-Project Potential to Emit (PE2)		
	Emission Factors	Annual Max Heat input	Annual PE2
NO_x	0.0899 (lb-NO _x /MMBtu) x	150,000 (MMBtu/year)	= 13,485 (lb-NO _x /year)
SO_x	0.01640 (lb-SO _x /MMBtu) x	150,000 (MMBtu/year)	= 2,460 (lb-SO _x /year)
PM₁₀	0.0030 (lb-PM ₁₀ /MMBtu) x	150,000 (MMBtu/year)	= 450 (lb-PM ₁₀ /year)
CO	0.0820 (lb-CO/MMBtu) x	150,000 (MMBtu/year)	= 12,300 (lb-CO/year)
VOC	0.0110 (lb-VOC/MMBtu) x	150,000 (MMBtu/year)	= 1,650 (lb-VOC/year)

Phase 1 Combined Emissions:

C-9840-1-1 Total Daily PE2			
	Daily Precleaning Emissions (lb/daily)	Daily Combustion Emissions (lb/day)	Total Daily PE2 (lb/day)
NO _x	0	263.7	263.7
SO _x	0	48.1	48.1
PM ₁₀	3.8	8.8	12.6
CO	0	240.6	240.6
VOC	0	32.3	32.3

C-9840-1-1 Total Annual PE2			
	Annual Precleaning Emissions (lb/year)	Daily Combustion Emissions (lb/year)	Total Annual PE2 (lb/year)
NO _x	0	13,485	13,485
SO _x	0	2,460	2,460
PM ₁₀	230	450	680
CO	0	12,300	12,300
VOC	0	1,650	1,650

C-9840-13-0:

Precleaning Operations:

The precleaning operation only has the potential to emit PM₁₀ and is identical to the calculations above for permit unit 1. The resultant potential emission of PM₁₀ is 3.8 lb-PM₁₀/day and 230 lb-PM₁₀/year.

Drying Operations:

The same emissions factors for all criteria pollutants are used for all burners in the drying operation (column dryers, sample dryer and silo heaters). Therefore, potential emissions can be calculated based on total heat input. The applicant has proposed that column dryers and silo heaters will not be operated on the same day. Therefore, the maximum daily heat input is achieved on days when only the column dryers and sample dryers operate. The applicant has proposed a maximum daily heat input for the column dryers of this permit unit of 3,300 MMBtu/day. The maximum daily heat input for the sample dryer is based on heat input rating and full time operation (1.4 MMBtu/hr × 24 hr/day = 33.6 MMBtu/day). Therefore, the maximum daily heat input is 3,333.6 MMBtu/day. Calculations are shown in the tables below.

Pollutant	Daily Post-Project Potential to Emit (PE2)				
	Emission Factors	Daily Max Heat input			Daily PE2
NO_x	0.0899 (lb-NO _x /MMBtu)	x	3,333.6 (billion Btu/day)	=	299.7 (lb-NO _x /day)
SO_x	0.01640 (lb-SO _x /MMBtu)	x	3,333.6 (billion Btu/day)	=	54.7 (lb-SO _x /day)
PM₁₀	0.0030 (lb-PM ₁₀ /MMBtu)	x	3,333.6 (billion Btu/day)	=	10.0 (lb-PM ₁₀ /day)
CO	0.0820 (lb-CO/MMBtu)	x	3,333.6 (billion Btu/day)	=	273.4 (lb-CO/day)
VOC	0.0110 (lb-VOC/MMBtu)	x	3,333.6 (billion Btu/day)	=	36.7 (lb-VOC/day)

Pollutant	Annual Post-Project Potential to Emit (PE2)				
	Emission Factors	Annual Max Heat input			Annual PE2
NO_x	0.0899 (lb-NO _x /MMBtu)	x	150,000 (billion Btu/year)	=	13,485 (lb-NO _x /year)
SO_x	0.01640 (lb-SO _x /MMBtu)	x	150,000 (billion Btu/year)	=	2,460 (lb-SO _x /year)
PM₁₀	0.0030 (lb-PM ₁₀ /MMBtu)	x	150,000 (billion Btu/year)	=	450 (lb-PM ₁₀ /year)
CO	0.0820 (lb-CO/MMBtu)	x	150,000 (billion Btu/year)	=	12,300 (lb-CO/year)
VOC	0.0110 (lb-VOC/MMBtu)	x	150,000 (billion Btu/year)	=	1,650 (lb-VOC/year)

Phase 2 Combined Emissions:

C-9840-13-0 Total Daily PE2			
	Daily Precleaning Emissions (lb/daily)	Daily Combustion Emissions (lb/day)	Total Daily PE2 (lb/day)
NO _x	0	299.7	299.7
SO _x	0	54.7	54.7
PM ₁₀	3.8	10.0	13.8
CO	0	273.4	273.4
VOC	0	36.7	36.7

C-9840-13-0 Total Annual PE2			
	Annual Precleaning Emissions (lb/year)	Annual Combustion Emissions (lb/year)	Total Annual PE2 (lb/year)
NO _x	0	13,485	13,485
SO _x	0	2,460	2,460
PM ₁₀	230	450	680
CO	0	12,300	12,300
VOC	0	1,650	1,650

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

Pursuant to District Rule 2201, the SSPE1 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.

SSPE1 (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
C-9840-1-0*	0	0	0	0	0
C-9840-2-0	0	0	0	0	0
SSPE1	0	0	0	0	0

*Since ATC C-9840-1-0 cannot be fully implemented, the emissions from this unit are considered to be 0.

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
C-9840-1-1	13,485	2,460	680	12,300	1,650
C-9840-2-0	0	0	0	0	0
C-9840-13-0	13,485	2,460	680	12,300	1,650
SSPE2	26,970	4,920	1,360	24,600	3,300

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)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

As discussed in Appendix C, the combustion emissions from pistachio column dryers are considered fugitive emissions. Therefore, the emissions from the column dryers will not factor into the major source determination. See Appendix C for Non-fugitive SSPE calculations.

Rule 2201 Major Source Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Non-Fugitive SSPE1	0	0	0	0	0
Non-Fugitive SSPE2	8,990	1,640	760	8,200	1,100
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No

As seen in the table above, the facility is not an existing Major Source and is not becoming a Major Source as a result of this project.

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)(i). Therefore, the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)						
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
Estimated Facility PE before Project Increase	0	0	0	0	0	0
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	N	N	N	N	N	N

As shown above, the facility is not an existing major source for PSD for at least one pollutant. Therefore the facility is not an existing major source for PSD.

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.

As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant.

Therefore BE = PE1.

C-9840-1-1:

These emissions units are being evaluated as new. Therefore, BE = PE1 = 0 for all pollutants.

C-9840-13-0:

Since these are new emissions units, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

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

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

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.

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM₁₀ (140,000 lb/year), it is not a major source for PM_{2.5} (200,000 lb/year).

New Major Source

Per section VII.C.5, above, this facility is not becoming a Major Source as a result of this project, therefore, this facility is not a New Major Source pursuant to 40 CFR 51.165 a(1)(iv)(A)(3).

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

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

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

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

In the case the facility is new source, the second step of the PSD evaluation is to determine if this new facility will become a new PSD major Source as a result of the project and if so, to determine which pollutant will result in a PSD significant increase.

I. Potential to Emit for New or Modified Emission Units vs PSD Major Source Thresholds

As a screening tool, the project potential to emit from all new and modified units is compared to the PSD major source threshold, and if total project potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

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)(i). Therefore, the following PSD Major Source thresholds are applicable, and fugitive emissions are excluded.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Total PE from New and Modified Units	4.5	0.6	0.8	4.1	0.4	0.4
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

As shown in the table above, the project potential to emit, by itself, does not exceed any of the PSD major source thresholds. Therefore Rule 2410 is not applicable and no further discussion 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 D.

11. PM2.5 Federal Offset Sanctions

As of June 27, 2023, the District is in nonattainment new source review (NNSR) offset sanctions pursuant to CAA 179(a) for PM2.5. Therefore, any New Major Source or Federal Major Modification for PM2.5 (including increases of its precursors NOx, VOC, and SOx), must supply any required federal offsets at a 2:1 ratio.

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

PM2.5 Federal Major Source Determination (lb/year)				
	NO_x*	SO_x*	PM_{2.5}	VOC*
SSPE1	0	0	0	0
SSPE2	26,970	4,920	1,360	3,300
PM2.5 Federal Major Source Threshold**	140,000	140,000	140,000	140,000
Pre or Post-Project PM2.5 Federal Major Source?	No	No	No	No

* PM2.5 Precursors

** Pursuant to 40 CFR 51.165(a)(1)(iv)(A)

As shown in the table above, this facility is not an existing or becoming a Major Source for PM2.5, NO_x, SO_x, or VOC, as a result of this project; therefore, the 2:1 federal offset sanctions are not applicable.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- Any new emissions unit with a potential to emit exceeding two pounds per day,
- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- 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.

- New emissions units – PE > 2 lb/day

C-9840-1-1 and -13-0:

Precleaning Operations:

As shown in Section VII.C., each precleaning operation has PE2 of 3.8 lb-PM10/day. Therefore, BACT is triggered for PM10.

Drying Operations:

The proposed pistachio drying operations in this project contains multiple emissions units as shown in the Equipment Description Section of this evaluation. While the potential emissions of each group of equipment are calculated in aggregate in section VII, for BACT purposes the daily PE from each emission unit is calculated based on rated heat input and maximum operation. Potential emissions from each emission unit is calculated and shown in the tables below, with results over 2 lb/day indicated in bold:

Sample Calculation:

$$\text{Daily PE}_{\text{NO}_x} = (0.0899 \text{ lb/MMBtu}) \times (27.0 \text{ MMBtu/hr}) \times (24 \text{ hr/day})$$

$$= \mathbf{58.3 \text{ lb-NO}_x/\text{day}}$$

27.0 MMBtu/hr Column Dryers:

Daily PE			
	EF (lb/MMBtu)	Burner Rating (MMBtu/hr)	Daily PE (lb/day)
NO _x	0.0899	27.0	58.3
SO _x	0.0164	27.0	10.6
PM ₁₀	0.003	27.0	1.9
CO	0.082	27.0	51.8
VOC	0.011	27.0	7.1

4.2 MMBtu/hr Silo Heaters:

Daily PE			
	EF (lb/MMBtu)	Burner Rating (MMBtu/day)	Daily PE (lb/day)
NO _x	0.0899	4.2	9.1
SO _x	0.0164	4.2	1.7
PM ₁₀	0.003	4.2	0.3
CO	0.082	4.2	8.3
VOC	0.011	4.2	1.1

1.4 MMBtu/hr Sample Dryer:

Daily PE			
	EF (lb/MMBtu)	Burner Rating (MMBtu/hr)	Daily PE (lb/day)
NO _x	0.0899	1.4	3.0
SO _x	0.0164	1.4	0.6
PM ₁₀	0.003	1.4	0.1
CO	0.082	1.4	2.8
VOC	0.011	1.4	0.4

As seen in Section VII.C.2 and the tables above, the applicant is proposing to install new pistachio processing equipment with PEs greater than 2 lb/day. BACT will not be triggered for CO since the SSPE2 for CO is not greater than 200,000 lbs/year, as demonstrated in Section VII.C.5 above.

Summary of Emission Units Triggering BACT (Units -1-1 and -13-0):

- BACT is triggered for PM₁₀ from the pistachio precleaning operation.
- BACT is triggered for NO_x, SO_x, and VOC from the 27.0 MMBtu/hr Column Dryers.
- BACT is triggered for NO_x from the 4.2 MMBtu/hr Silo Heaters and 1.4 MMBtu/hr sample dryer.

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, there are no modified emissions units associated with this project. Therefore, BACT is not triggered.

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 emissions. Therefore, BACT is not triggered for any pollutant.

2. BACT Guideline

The emissions units in this project are subject to the following BACT Guidelines.

C-9840-1-1 and -13-0:

BACT Guideline 1.6.8 (11/1/2022) applies to the pistachio nut column dryers, silo heaters rated at less than 5 MMBtu/hr, and sample dryers rated at less than 5 MMBtu/hr. (See **Appendix E**)

BACT Guideline 5.2.3 (11/1/2022), applies to the pistachio precleaning operation. (See **Appendix E**)

3. Top-Down BACT Analysis

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

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

C-9840-1-1 and -13-0:

Precleaning Operation:

PM₁₀: high efficiency cyclone

Pistachio Dryers:

NO_x: Low NO_x burner and LPG at <0.1248 lb-NO_x/MMBtu for operations with no access to a natural gas fuel source.

SO_x: LPG for operations with no access to a PUC quality natural gas fuel source

VOC: LPG for operations with no access to a natural gas fuel source

B. Offsets

1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals to 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	26,970	4,920	1,360	24,600	3,300
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	No	No	No	No

2. Quantity of Offsets Required

As demonstrated above, for NO_x, the SSPE1 (Section VII.C.3) is below the offset threshold while the SSPE2 is greater than the offset thresholds for that pollutant. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for NO_x is calculated as follows for sources with an SSPE1 less than the offset threshold levels before implementing the project being evaluated. As the potential to emit is constant throughout the year, the offset requirement is calculated in pounds per year and allocated evenly. Although there is an element of seasonality to its operation, the source does not appear to meet the Rule 2201 definition of a “seasonal source”, so the offsets are allocated evenly across quarters.

$$\text{Offsets Required (lb/year)} = [(\text{SSPE2} - \text{ROT} + \text{ICCE}) \times \text{DOR}]$$

Where,

SSPE2 = Post-Project Stationary Source Potential to Emit
ROT = Respective Offset Threshold, for the respective pollutant
ICCE = Increase in Cargo Carrier Emissions
DOR = Distance Offset Ratio, determined pursuant to Section 4.8

Offsets Required (lb/year) = $[(26,970 - 20,000 + 0) \times 1.5] = 10,455$

Therefore the appropriate quarterly emissions to be offset are as follows:

<u>1st Quarter</u>	<u>2nd Quarter</u>	<u>3rd Quarter</u>	<u>4th Quarter</u>	<u>Total Annual</u>
2,613	2,614	2,614	2,614	10,455

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 and no federal offset quantities are required for this pollutant. Therefore, the NOx District offset quantities do not need to be surplus at time of use.

3. ERC Withdrawal Calculations

The applicant must identify the ERC Certificate(s) to be used to offset the increase of NOx emissions for the project. As indicated in previous section, the applicant is proposing to use credits split from ERC certificate N-1626-2 to mitigate the increases of NOx emissions associated with this project. See Appendix G for detailed ERC Withdrawal Calculations.

Proposed Rule 2201 Offset Permit Conditions

Permit unit C-9840-1-1 would not have triggered offsets on its own, therefore the offset requirement is applied entirely to permit C-9840-13-0. The following permit conditions will be added to the Authority to Construct:

C-9840-13-0:

- {GC# 4447 - edited} Prior to operating equipment under this Authority to Construct, permittee shall surrender NOx emission reduction credits for the following quantity of emissions: 1st quarter – 2,613 lb, 2nd quarter – 2,614 lb, 3rd quarter – 2,614 lb, and fourth quarter – 2,614 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]
- {GC# 1983} ERC Certificate Number N-1626-2 (or a certificate split from this certificate) 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

Public noticing is required for:

- New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- Any project which results in the offset thresholds being surpassed,
- Any project with an SSPE of greater than 20,000 lb/year for any pollutant, and/or
- Any project which results in a Title V significant permit modification

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

As shown in Section VII.C.5 above, this existing minor source facility is not becoming a Major Source as a result of this project. Therefore, this facility is not a New Major Source and this project does not constitute an SB 288 or a Federal Major Modification. Consequently, 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 Sections VII.C.2 and VIII.A.1 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	0	26,970	20,000 lb/year	Yes
SO _x	0	4,920	54,750 lb/year	No
PM ₁₀	0	1,360	29,200 lb/year	No
CO	0	24,600	200,000 lb/year	No
VOC	0	3,300	20,000 lb/year	No

As demonstrated above, the offset threshold is surpassed for NO_x with this project; therefore public noticing is 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	26,970	0	26,970	20,000 lb/year	Yes
SO _x	4,920	0	4,920	20,000 lb/year	No
PM ₁₀	2,740	0	2,740	20,000 lb/year	No
CO	24,600	0	24,600	20,000 lb/year	Yes
VOC	3,300	0	3,300	20,000 lb/year	No

As demonstrated above, the SSIPEs for NO_x and CO exceed 20,000 lb/year; therefore, public noticing for SSIPE purposes is required.

e. Title V Significant Permit Modification

Since this facility does not have a Title V operating permit, this change is not a Title V significant Modification, and therefore public noticing is not required.

2. Public Notice Action

As discussed above, public noticing is required for this project for NO_x emissions exceeding the offset threshold as well as SSIPE for NO_x and CO in excess of the public notice threshold. 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. The emissions units in this project are evaluated as operating at maximum capacity up to 24 hours per day, therefore no further restrictions on daily throughput are required.

Proposed Rule 2201 (DEL) Conditions:

C-9840-1-1 and -13-0:

- Maximum emission rate of PM₁₀ from each of the high-efficiency precleaning cyclones shall not exceed 0.08 lb/hr. [District Rule 2201]
- Precleaning operation shall not operate more than 1,440 hours per year. [District Rule 2201]
- Dryers and heaters shall only be fired on propane. [District Rule 2201]
- The column dryers and portable silo heaters shall not be operated on the same day. [District Rule 2201]
- Emission rates for the dryers and heaters shall not exceed any of the following: NO_x (as NO₂): 0.0899 lb/MMBtu, SO_x (as SO₂): 0.0164 lb/MMBtu, PM₁₀: 0.003 lb/MMBtu, CO: 0.082 lb/MMBtu, or VOC: 0.011 lb/MMBtu. [District Rule 2201]
- Combined annual heat input for column dryers, silo heaters, and sample dryer shall not exceed 150 billion Btu/yr. [District Rule 2201]
- Combined annual heat input for silo heaters and sample dryer shall not exceed 50 billion Btu/yr. [District Rule 2201]
- Combined daily heat input for silo heaters shall not exceed 1,169.3 MMBtu/day. [District Rule 2201]

C-9840-1-1:

- Combined daily heat input for column dryers shall not exceed 2,900 MMBtu/day. [District Rule 2201]

C-9840-13-0:

- Combined daily heat input for column dryers shall not exceed 3,300 MMBtu/day. [District Rule 2201]

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

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:

C-9840-1-1 and -13-0:

- Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 1070]
- Permittee shall maintain records of annual amounts of propane combusted by the column dryers, sample dryer, and silo heaters. [District Rules 1070 and 2201]
- Permittee shall maintain records of annual amounts of propane combusted by the silo heaters and sample dryers. [District Rules 1070 and 2201]
- On days the column heaters operate, permittee shall maintain records of the daily amount of propane combusted by the column dryers. [District Rules 1070 and 2201]
- On days the silo heaters operate, permittee shall maintain records of the daily amount of propane combusted by the silo heaters. [District Rules 1070 and 2201]
- Permittee shall maintain records of the annual hours of operation of the precleaning operation. [District Rules 1070 and 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.

F. Ambient Air Quality Analysis (AAQA)

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 H 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 PM₁₀ 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 PM₁₀ and PM_{2.5}.

The following condition will be included on the permit to ensure compliance with the scenario modeled for AAQA:

C-9840-13-0:

- Pistachio receiving, pre-cleaning, and drying operations may only operate August thru November. [District Rule 2201]

Rule 2520 Federally Mandated Operating Permits

Emissions from column dryers are considered as fugitive, and the facility is not on the List of 28 source categories included in the major source definition in 40 CFR 70.2. Since this facility's potential point source (non-fugitive) emissions do not exceed any major source thresholds of Rule 2201, this facility is not a major source, and Rule 2520 does not apply.

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 the emissions units proposed in this project.

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 the emissions units proposed in this project.

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). Based on past experiences with similar types of equipment, visible emissions from all units in this project are not expected to exceed Ringelmann 1 or 20% opacity. In addition, annual inspections of the facility will demonstrate continued compliance. The following condition will be added to the new permit to ensure compliance with this rule.

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

Rule 4102 Nuisance

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 will be added to the new permit to ensure compliance with this rule.

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

California Health & Safety Code 41700 (Health Risk Assessment)

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

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project, the total facility prioritization score including this project was less than or equal to one.

The resulting prioritization score for this project is shown below.

Health Risk Assessment Summary	
	Worst Case Potential
Prioritization Score	0.12

In accordance with District policy APR 1905, no further analysis is required to determine the impact from this project and compliance with the District's Risk Management Policy is expected.

Compliance with District Rule 4102 requirements is expected.

See Attachment H: Health Risk Assessment Summary

Rule 4201 Particulate Matter Concentration

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

Precleaning Operation:

The following equation will be used to calculate the PM concentration of the cyclones serving the precleaning operation:

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

PM Concentration			
Cyclone	PM ₁₀ Emission Rate (lb/day)	Exhaust Flow Rate (cfm)	PM Conc. (gr/scf)
Donaldson DCI #60 LHE	1.9	12,000	0.001
Donaldson DCI #84 LHE	1.9	18,000	0.001

Propane Combustion from Proposed Burners:

F-Factor for Propane: 8,710 dscf/MMBtu at 60 °F

PM₁₀ Emission Factor: 0.0076 lb-PM₁₀/MMBtu

Percentage of PM as PM₁₀ in Exhaust: 100%

Exhaust Oxygen (O₂) Concentration: 3%

$$\text{Excess Air Correction to F Factor} = \frac{20.9}{(20.9 - 3)} = 1.17$$

$$GL = \left(\frac{0.0076 \text{ lb-PM}}{\text{MMBtu}} \times \frac{7,000 \text{ grain}}{\text{lb-PM}} \right) / \left(\frac{8,710 \text{ ft}^3}{\text{MMBtu}} \times 1.17 \right)$$

$$GL = 0.0052 \text{ grain/dscf} < 0.1 \text{ grain/dscf}$$

Therefore, compliance with District Rule 4201 requirements is expected and a permit condition will be listed on new permit as follows:

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

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO₂, NO₂, and combustion contaminants for “fuel burning equipment”, defined as equipment that burns fuel “for the primary purpose of producing heat or power by indirect heat transfer.” The proposed equipment uses direct heat transfer exclusively (there are no heat exchangers). Therefore, Rule 4301 does not apply.

Rule 4309 Dryers, Dehydrators and Ovens

This rule applies to any dryer, dehydrator, or oven that is fired on gaseous fuel, liquid fuel, or is fired on gaseous and liquid fuel sequentially, and the total rated heat input for the unit is 5.0 million British thermal units per hour (5.0 MMBtu/hr) or greater.

C-9840-1-1 and -13-0:

The column dryers in this project each include four natural gas-fired burners with a heat input rating equal to 6.75 MMBtu/hr; therefore, these units are potentially subject to this rule. However, Section 4.1.1 states that the requirements of this rule shall not apply to “column-type or tower dryers used to dry grains or tree nuts. This exemption does not apply to tunnel dryers, belt

dryers, or tray dryers.” The applicant has indicated that the 27.0 MMBtu/hr pistachio dryers are column-type dryers and are therefore not subject the requirements of this rule.

The 1.4 MMBtu/hr sample dryer and 4.2 MMBtu/hr silo heaters in this project are below the 5.0 MMBtu/hr applicability threshold of this rule. Therefore, they are not subject to the requirements of this rule.

Rule 4801 Sulfur Compounds

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: 0.2 % by volume calculated as 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:

Propane Combustion:

F-Factor for Propane: 8,710 dscf/MMBtu at 68 °F, equivalent to

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

$$\frac{0.0164 \text{ lb} - \text{SO}_x}{\text{MMBtu}} \times \frac{\text{MMBtu}}{8,578 \text{ dscf}} \times \frac{1 \text{ lb} \cdot \text{mol}}{64 \text{ lb}} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot ^\circ R} \times \frac{520^\circ R}{14.7 \text{ psi}} \times \frac{1,000,000 \cdot \text{parts}}{\text{million}} = 11 \frac{\text{parts}}{\text{million}}$$

$$\text{Sulfur Concentration} = 11 \frac{\text{parts}}{\text{million}} < 2,000 \text{ ppmv (or 0.2\%)}$$

Therefore, compliance with District Rule 4801 requirements is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

The County of Madera (County) is the public agency having principal responsibility for approving the project. As such, the County served as the Lead Agency (CCR §15367). In approving the project, the Lead Agency prepared and adopted a Mitigated Negative Declaration. The Lead agency prepared a Notice of Determination, stating that the environmental document was adopted pursuant to the provisions of CEQA and concluding that the project would not have a significant effect on the environment.

The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CCR §15381). As a Responsible Agency the District complies with CEQA by considering the environmental document prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project (CCR §15096).

The District has considered the Lead Agency's environmental document. Furthermore, the District has conducted an engineering evaluation of the project, this document, which demonstrates that Stationary Source emissions from the project would be below the District's thresholds of significance for criteria pollutants. Thus, the District finds that through a combination of project design elements, compliance with applicable District rules and regulations, and compliance with District air permit conditions, project specific stationary source emissions will have a less than significant impact on air quality. The District does not have authority over any of the other project impacts and has, therefore, determined that no additional findings are required (CEQA Guidelines §15096(h)).

Indemnification Agreement

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. Issue ATCs C-9840-1-1 and C-9840-13-0 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
C-9840-1-1	3020-02-H	291.2 MMBtu/hr heat input	\$1,238.00
C-9840-13-0	3020-02-H	318.2 MMBtu/hr heat input	\$1,238.00

Appendices

- A: Draft ATCs
- B: Prior ATC
- C: Non-Fugitive Emission Calculations
- D: Quarterly Net Emissions Change
- E: BACT Guidelines
- F: BACT Analysis
- G: ERC Withdrawal Calculations
- H: RMR Summary and AAQA

APPENDIX A

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-9840-1-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: DRY RANCH LLC
MAILING ADDRESS: 1625 HOWARD ROAD #280
MADERA, CA 93637

LOCATION: 13559 FIREBAUGH BLVD
MADERA, CA 93637

EQUIPMENT DESCRIPTION:

"PHASE 1" PISTACHIO HULLING, DRYING AND STORAGE OPERATION WITH: TWO RECEIVING CHUTES LEADING TO A COMMON PIT; TWO ASPIRATORS, EACH SERVED BY A DONALDSON HIGH EFFICIENCY CYCLONE; SEVEN 27 MMBTU/HR GSI MODEL 2426X PROPANE-FIRED COLUMN DRYERS; ONE 1.4 MMBTU/HR PROPANE-FIRED SAMPLE DRYER; TWELVE STORAGE SILOS, EACH WITH TWO TRANSPORTABLE 4.2 MMBTU/HR GSI PROPANE-FIRED SILO HEATERS; AND EIGHT PROCESSING SILOS

CONDITIONS

1. This permit cancels and replaces ATC C-9840-1-0. [District Rule 2201]
2. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. {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]
5. Dryers and heaters shall only be fired on propane. [District Rule 2201]
6. The column dryers and portable silo heaters shall not be operated on the same day. [District Rule 2201]
7. Precleaning operation shall not operate more than 1,440 hours per year. [District Rule 2201]
8. Combined annual heat input for column dryers, silo heaters, and sample dryer shall not exceed 150 billion Btu/yr. [District Rule 2201]
9. Combined annual heat input for silo heaters and sample dryer shall not exceed 50 billion Btu/yr. [District Rule 2201]
10. Combined daily heat input for column dryers shall not exceed 2,900 MMBtu/day. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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

C-9840-1-1 : Jul 27 2023 7:27AM - ROBINSON : Joint Inspection NOT Required

11. Combined daily heat input for silo heaters shall not exceed 1,169.3 MMBtu/day [District Rule 2201]
12. Maximum emission rate of PM10 from each of the high-efficiency precleaning cyclones shall not exceed 0.08 lb/hr. [District Rule 2201]
13. Emission rates for the dryers and heaters shall not exceed any of the following: NOX (as NO2): 0.0899lb/MMBtu, SOX (as SO2): 0.0164 lb/MMBtu, PM10: 0.003 lb/MMBtu, CO: 0.082 lb/MMBtu, or VOC: 0.011 lb/MMBtu. [District Rule 2201]
14. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 1070]
15. Permittee shall maintain records of annual amounts of propane combusted by the column dryers, sample dryers, and silo heaters. [District Rules 1070 and 2201]
16. Permittee shall maintain records of annual amounts of propane combusted by the sample dryers and silo heaters. [District Rules 1070 and 2201]
17. On days the column heaters operate, permittee shall maintain records of the daily amount of propane combusted by the column dryers. [District Rules 1070 and 2201]
18. On days the silo heaters operate, permittee shall maintain records of the daily amount of propane combusted by the silo heaters. [District Rules 1070 and 2201]
19. Permittee shall maintain records of the annual hours of operation of the precleaning operation. [District Rules 1070 and 2201]
20. 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 Rule 1070]
21. The operation includes permit exempt equipment for sorting, sizing, grading, and handling of clean nuts. Permit exempt equipment may be served by a permit exempt Donaldson model 196-FTD-10 dust collector with a 100 hp fan. [District Rule 2201]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: C-9840-13-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: DRY RANCH LLC
MAILING ADDRESS: 1625 HOWARD ROAD #280
MADERA, CA 93637

LOCATION: 13559 FIREBAUGH BLVD
MADERA, CA 93637

EQUIPMENT DESCRIPTION:

"PHASE 2" PISTACHIO HULLING, DRYING AND STORAGE OPERATION WITH: TWO RECEIVING CHUTES LEADING TO A COMMON PIT; TWO ASPIRATORS, EACH SERVED BY A DONALDSON HIGH EFFICIENCY CYCLONE; EIGHT 27 MMBTU/HR GSI MODEL 2426X PROPANE-FIRED COLUMN DRYERS; ONE 1.4 MMBTU/HR PROPANE-FIRED SAMPLE DRYER; TWELVE STORAGE SILOS, EACH WITH TWO TRANSPORTABLE 4.2 MMBTU/HR GSI PROPANE-FIRED SILO HEATERS; AND EIGHT PROCESSING SILOS

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. Dryers and heaters shall only be fired on propane. [District Rule 2201]
5. Pistachio receiving, pre-cleaning, and drying operations may only operate August thru November. [District Rule 2201]
6. The column dryers and portable silo heaters shall not be operated on the same day. [District Rule 2201]
7. Precleaning operation shall not operate more than 1,440 hours per year. [District Rule 2201]
8. Combined annual heat input for column dryers, silo heaters, and sample dryer shall not exceed 150 billion Btu/yr. [District Rule 2201]
9. Combined annual heat input for silo heaters and sample dryer shall not exceed 50 billion Btu/yr. [District Rule 2201]
10. Combined daily heat input for column dryers shall not exceed 3,300 MMBtu/day. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 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

C-9840-13-0 : Jul 27 2023 7:27AM - ROBINSOM : Joint Inspection NOT Required

11. Combined daily heat input for silo heaters shall not exceed 1,169.3 MMBtu/day [District Rule 2201]
12. Maximum emission rate of PM10 from each of the high-efficiency precleaning cyclones shall not exceed 0.08 lb/hr. [District Rule 2201]
13. Emission rates for the dryers and heaters shall not exceed any of the following: NOX (as NO2): 0.0899 lb/MMBtu, SOX (as SO2): 0.0164 lb/MMBtu, PM10: 0.003 lb/MMBtu, CO: 0.082 lb/MMBtu, or VOC: 0.011 lb/MMBtu. [District Rule 2201]
14. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 1070]
15. Permittee shall maintain records of annual amounts of propane combusted by the column dryers, sample dryers, and silo heaters. [District Rules 1070 and 2201]
16. Permittee shall maintain records of annual amounts of propane combusted by the sample dryers and silo heaters. [District Rules 1070 and 2201]
17. On days the column heaters operate, permittee shall maintain records of the daily amount of propane combusted by the column dryers. [District Rules 1070 and 2201]
18. On days the silo heaters operate, permittee shall maintain records of the daily amount of propane combusted by the silo heaters. [District Rules 1070 and 2201]
19. Permittee shall maintain records of the annual hours of operation of the precleaning operation. [District Rules 1070 and 2201]
20. 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 Rule 1070]
21. The operation includes permit exempt equipment for sorting, sizing, grading, and handling of clean nuts. Permit exempt equipment may be served by a permit exempt Donaldson model 196-FTD-10 dust collector with a 100 hp fan. [District Rule 2201]
22. Prior to operating equipment under this Authority to Construct, permittee shall surrender NOX emission reduction credits for the following quantity of emissions: 1st quarter - 2,613 lb, 2nd quarter - 2,614 lb, 3rd quarter - 2,614 lb, and fourth quarter - 2,614 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]
23. ERC Certificate Number N-1626-2 (or a certificate split from this certificate) 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]

DRAFT

APPENDIX B

Prior ATC

AUTHORITY TO CONSTRUCT

PERMIT NO: C-9840-1-0

ISSUANCE DATE: 12/26/2020

LEGAL OWNER OR OPERATOR: DRY RANCH LLC
MAILING ADDRESS: 1625 HOWARD ROAD #280
MADERA, CA 93637

LOCATION: 13559 FIREBAUGH BLVD
MADERA, CA 93637

EQUIPMENT DESCRIPTION:

PISTACHIO HULLING, DRYING AND STORAGE OPERATION WITH TWO RECEIVING PITS, TWO ASPIRATORS, EACH SERVED BY A DONALDSON HIGH EFFICIENCY CYCLONE, SEVEN 27 MMBTU/HR GSI MODEL 2426X PROPANE-FIRED COLUMN DRYERS, ONE 1.4 MMBTU/HR PROPANE-FIRED SAMPLE DRYER, TWELVE STORAGE SILOS AND EIGHT PROCESSING SILOS, EACH WITH TWO 4.2 MMBTU/HR GSI PROPANE-FIRED SILO HEATERS

CONDITIONS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
4. Dryers and heaters shall only be fired on propane. [District Rule 2201]
5. Precleaning operation shall not operate more than 1,440 hours per year. [District Rule 2201]
6. Combined annual heat input for column dryers, silo heaters, and sample dryer shall not exceed 150 billion Btu/yr. [District Rule 2201]
7. Maximum emission rate of PM10 from each of the high-efficiency precleaning cyclones shall not exceed 0.08 lb/hr. [District Rule 2201]
8. Emission rates for the dryers and heaters shall not exceed any of the following: NOX (as NO2): 0.1248 lb/MMBtu, SOX (as SO2): 0.0164 lb/MMBtu, PM10: 0.0076 lb/MMBtu, CO: 0.082 lb/MMBtu, or VOC: 0.011 lb/MMBtu. [District Rule 2201]
9. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 1070]

CONDITIONS CONTINUE ON NEXT PAGE

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Samir Sheik, Executive Director / APCO

Brian Clements, Director of Permit Services

C-9840-1-0 : Jul 21 2023 10:55AM -- ROBINSOM : Joint Inspection NOT Required

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

10. Permittee shall maintain records of annual amounts of propane combusted by the dryers and heaters. [District Rules 1070 and 2201]
11. Permittee shall maintain records of the annual hours of operation of the precleaning operation. [District Rules 1070 and 2201]
12. 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 Rule 1070]

APPENDIX C

Non-Fugitive Emission Calculations

Emissions from this type of column dryer have been determined to be fugitive in nature. Emissions from the column dryers are considered to be fugitive emissions due to equipment configuration and the challenge routing these emissions through a stack would pose. The column dryers are large horizontal perforated cylinders with a burner and fan at each end. The combustion emissions are forced through pistachios within the cylinder and escape through the perforations. The entire column dryer cylinder would have to be contained within a larger enclosure to route emissions to a stack. The applicant has proposed that such a configuration would impair the facilities ability for cleaning and inspection, and thus would create a fire hazard if pistachio debris were to accumulate. As the emissions could not reasonably pass through a vent, chimney, stack, or other functionally equivalent opening, the emissions from the column dryer are fugitive. This determination was originally made by SJVAPCD and CARB during the evaluation of project S-1220200.

Illustration of a GSI column dryer:



In this representative image of a GSI 1226X column dryer. Exhaust escapes through small perforations, which are too small to be seen in the photo, covering the sides and top of the column dryer.

Emissions from the silo heaters and sample dryers are non-fugitive. The applicant has proposed that, for each permit unit, the annual heat input to the silo heaters and sample dryers shall be limited to 50 billion Btu/year. The PM₁₀ emissions from the precleaning operation are also non-fugitive. Therefore, non-fugitive PE is calculated as shown below.

C-9840-1-1 and -13-0:

Pre-Cleaning Operations:

$$\begin{aligned} \text{Annual PE} &= \text{EF (lb/hr/cyclone)} \times \text{Operating Schedule (hr/year)} \times \text{No. of Cyclones} \\ &= (0.08 \text{ lb-PM}_{10}\text{/hr/cyclone}) \times (1,440 \text{ hr/year}) \times (2 \text{ cyclones}) \\ &= \mathbf{230 \text{ lb-PM}_{10}\text{/year}} \end{aligned}$$

Drying Operations:

Pollutant	Annual Post-Project Non-Fugitive Potential to Emit			
	Emission Factors	Annual Max Heat input		Annual PE2
NO_x	0.0899 (lb-NO _x /MMBtu) x	50,000 (MMBtu/year)	=	4,495 (lb-NO _x /year)
SO_x	0.01640 (lb-SO _x /MMBtu) x	50,000 (MMBtu/year)	=	820 (lb-SO _x /year)
PM₁₀	0.0030 (lb-PM ₁₀ /MMBtu) x	50,000 (MMBtu/year)	=	150 (lb-PM ₁₀ /year)
CO	0.0820 (lb-CO/MMBtu) x	50,000 (MMBtu/year)	=	4,100 (lb-CO/year)
VOC	0.0110 (lb-VOC/MMBtu) x	50,000 (MMBtu/year)	=	550 (lb-VOC/year)

Total Non-Fugitive Emissions:

Non-Fugitive Emissions					
	N-9840-1-1 Precleaning Emissions (lb/year)	N-9840-1-1 Combustion Emissions (lb/year)	N-9840-13-0 Precleaning Emissions (lb/year)	N-9840-13-0 Combustion Emissions (lb/year)	Total Non- Fugitive PE2 (lb/year)
NO _x	0	4,495	0	4,495	8,990
SO _x	0	820	0	820	1,640
PM ₁₀	230	150	230	150	760
CO	0	4,100	0	4,100	8,200
VOC	0	550	0	550	1,100

APPENDIX D

Quarterly Net Emissions Change

Quarterly Net Emissions Change (QNEC)

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

$QNEC = PE2 - PE1$, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.

PE2 = Post-Project Potential to Emit for each emissions unit, lb/qtr.

PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

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

C-9840-1-1 and -13-0:

$$\begin{aligned} PE2_{\text{quarterly}} &= PE2_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 13,480 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 3,371.25 \text{ lb NO}_x/\text{qtr} \end{aligned}$$

$$\begin{aligned} PE1_{\text{quarterly}} &= PE1_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 0 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 0 \text{ lb NO}_x/\text{qtr} \end{aligned}$$

Quarterly NEC [QNEC]					
	NO _x (lb/qtr)	SO _x (lb/qtr)	PM ₁₀ (lb/qtr)	CO (lb/qtr)	VOC (lb/qtr)
PE2	3,371.25	615	170	3,075	412.5
PE1	0	0	0	0	0
QNEC	3,371.25	615	170	3,075	412.5

APPENDIX E

BACT Guidelines

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 1.6.8*

Last Update: 11/1/2022

Pistachio Nut Column Dryer (including Silo Heaters and Sample Dryers rated < 5
MMBtu/hr)

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	Low NOx burner and natural gas @ 0.024 lb-NOx/MMBtu	

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

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 5.2.3*

Last Update: 11/1/2022

Pistachio Nut Processing - Precleaning Operations, >= 375 tons/day in-hull
pistachios

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	1D-3D cyclone, high- efficiency cyclone, or equivalent achieving at least 80% control		

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**

APPENDIX F

BACT Analysis

C-9840-1-1 and -13-0:

PM₁₀ Emissions - Precleaning Operation

Step 1 - Identify All Possible PM₁₀ Control Technologies

The SJVAPCD BACT Clearinghouse Guideline 5.2.3 (11/1/2022) identifies achieved in practice and technologically feasible BACT for pistachio precleaning operations as follows:

- 1D-3D cyclone, high efficiency cyclone, or equivalent achieving at least 80% control

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

- 1D-3D cyclone, high efficiency cyclone, or equivalent achieving at least 80% control

Step 4 - Cost Effectiveness Analysis

The applicant has proposed to control PM₁₀ emissions from the pistachio precleaning operation using high efficiency cyclones. High efficiency cyclones can achieve the same control efficiencies as 1D-3D cyclones. Therefore, the use of high efficiency cyclones is considered equivalent to 1D-3D cyclones. Since the applicant has chosen the most effective control technology in step 3, a cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for PM₁₀ emissions from the pistachio precleaning operation are high efficiency cyclones.

C-9840-1-1 and -13-0:

NOx Emissions – All Dryers and Heaters

Step 1 - Identify All Possible NOx Control Technologies

The SJVAPCD BACT Clearinghouse Guideline 1.6.8, 11/1/2022, identifies achieved in practice and technologically feasible BACT for pistachio nut column dryers (including silo heaters and sample dryers rated <5 MMBtu/hr).

- 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- Achieved in Practice
- Low NOx burner and natural gas @ 0.024 lb-NOx/MMBtu – Technologically Feasible

Step 2 - Eliminate Technologically Infeasible Options

The facility is not currently equipped with natural gas service. Therefore, the following BACT options will be removed from consideration:

- Low NOX burner and natural gas @ 0.0832 lb-NOX/MMBtu - Achieved in Practice
- Low NOx burner and natural gas @ 0.024 lb-NOx/MMBtu – Technologically Feasible

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

- Low NOx burner and LPG @ 0.1248 lb/MM Btu for operations with no access to a natural gas 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 alternative in the ranking list from Step 3 has been achieved in practice. Therefore, per District BACT policy, the cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for NOx emissions is a low NOx burner at 0.1248 lb-NOx/MMBtu and propane fuel. The facility has proposed a low NOx burner at <0.1248 lb-NOx/MMBtu and propane fuel. Therefore, BACT is satisfied.

C-9840-1-1 and -13-0:

SOx Emissions - GSI 2426x Dryers Only

Step 1 - Identify All Possible SOx Control Technologies

The SJVAPCD BACT Clearinghouse Guideline 1.6.8, 11/1/2022, identifies achieved in practice BACT for pistachio nut column dryers

- 1) Natural gas fuel or 2) LPG for operations with no access to a natural gas fuel source
– Achieved in Practice

Step 2 - Eliminate Technologically Infeasible Options

The facility is not currently equipped with natural gas service. Therefore, the following BACT options will be removed from consideration:

- Natural gas fuel – Achieved in Practice

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

- LPG for operations with no access to a natural gas fuel source

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 alternative 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 SOx emissions is LPG for operations with no access to a natural gas fuel source, which the facility has proposed; therefore, BACT is satisfied.

C-9840-1-1 and -13-0:

PM₁₀ Emissions - GSI 2426x Dryers Only

Step 1 - Identify All Possible PM₁₀ Control Technologies

The SJVAPCD BACT Clearinghouse Guideline 1.6.8, 11/1/2022, identifies achieved in practice BACT for pistachio nut column dryers

- 1) Natural gas fuel or 2) LPG for operations with no access to a natural gas fuel source
– Achieved in Practice

Step 2 - Eliminate Technologically Infeasible Options

The facility is not currently equipped with natural gas service. Therefore, the following BACT options will be removed from consideration:

- Natural gas fuel – Achieved in Practice

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

- LPG for operations with no access to a natural gas fuel source

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 alternative 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 PM₁₀ emissions is LPG for operations with no access to a natural gas fuel source, which the facility has proposed; therefore, BACT is satisfied.

C-9840-1-1 and -13-0:

VOC Emissions - GSI 2426x Dryers Only

Step 1 - Identify All Possible VOC Control Technologies

The SJVAPCD BACT Clearinghouse Guideline 1.6.8, 11/1/2022, identifies achieved in practice BACT for pistachio nut column dryers

- 1) Natural gas fuel or 2) LPG for operations with no access to a natural gas fuel source
– Achieved in Practice

Step 2 - Eliminate Technologically Infeasible Options

The facility is not currently equipped with natural gas service. Therefore, the following BACT options will be removed from consideration:

- Natural gas fuel – Achieved in Practice

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

- LPG for operations with no access to a natural gas fuel source

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 alternative 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 VOC emissions is LPG for operations with no access to a natural gas fuel source, which the facility has proposed; therefore, BACT is satisfied.

APPENDIX G

ERC Withdrawal Calculations

ERC Withdrawal Calculations

District Rule 2201 defines Seasonal Source as “any stationary source with more than 90% of its annual emissions occurring within a 120-day period.” The pistachio harvest and processing operation is a time sensitive seasonal operation, however, the facility has confirmed that they do not anticipate exceeding 90% of annual NOx emissions within a 120-day period. More than 10% of annual NOx emissions are anticipated to result from use of the silo heaters outside of the harvesting and processing season. The silo heaters are used, as needed, to prevent condensation within silos of stockpiled processed nuts. The silo heaters are expected to be required mainly during the coldest times of the year, outside of the harvesting and processing season. Additionally, the draft permit conditions do not impose seasonal restrictions on when the facility may or may not operate.

Therefore, this facility is not considered to be a seasonal source and the ERC requirement is distributed evenly throughout the year.

NO _x	1 st Quarter (lb)	2 nd Quarter (lb)	3 rd Quarter (lb)	4 th Quarter (lb)
ERC N-1626-2	8,050	8,050	8,050	8,050
Offsets Required (Includes distance offset ratio)	2,613	2,614	2,614	2,614
Amount Remaining	5,437	5,436	5,436	5,436
Credits to be reissued under ERC N-YYYY-2	5,437	5,436	5,436	5,436

APPENDIX H

Health Risk Assessment Summary and Ambient Air Quality Analysis

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

To: Matthew J Robinson – Permit Services
From: Will Worthley – Technical Services
Date: July 26, 2023
Facility Name: DRY RANCH LLC
Location: 13559 FIREBAUGH BLVD, MADERA
Application #(s): C-9840-1-1, -13-0
Project #: C-1231446

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
1	N/A ¹	N/A	N/A	N/A	No	No
13	0.12	N/A ²	N/A ²	N/A ²	No	Yes
Project Totals	0.12	N/A ²	N/A ²	N/A ²		
Facility Totals	<1	0.00	0.00	0.00		

Notes:

- Unit 1 health risk had previously been reviewed in a previous project.
- The project passed with a total facility prioritization score less than 1; therefore, no further analysis was required.

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	Pass				Pass
SO _x	Pass	Pass		Pass	Pass
PM10				Pass	Pass
PM2.5				Pass	Pass

Notes:

- Results were taken from the attached AAQA Report.
- The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2) unless otherwise noted below.
- Pursuant to District Policy APR-1925, a Tier 2 analysis using the Ozone Limiting Method (OLM) method was performed to demonstrate compliance with the 1-hour NO₂ standard.
- Modeled PM10 concentrations were below the District SIL for non-fugitive sources of 5 µg/m³ for the 24-hour average concentration and 1 µg/m³ for the annual concentration.
- Modeled PM2.5 concentrations were below the District SIL for non-fugitive sources of 1.2 µg/m³ for the 24-hour average concentration and 0.2 µg/m³ for the annual concentration.

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

Unit # 13-0

1. Pistachio receiving, pre-cleaning, and drying operations may only operate August thru November.

2. Project Description

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

- Unit -1-1: "PHASE 1" PISTACHIO HULLING, DRYING AND STORAGE OPERATION WITH: TWO RECEIVING CHUTES LEADING TO A COMMON PIT; TWO ASPIRATORS, EACH SERVED BY A DONALDSON HIGH EFFICIENCY CYCLONE; SEVEN 27 MMBTU/HR GSI MODEL 2426X PROPANE-FIRED COLUMN DRYERS; ONE 1.4 MMBTU/HR PROPANE-FIRED SAMPLE DRYER; TWELVE STORAGE SILOS, EACH WITH TWO 4.2 MMBTU/HR GSI PROPANE-FIRED SILO HEATERS; AND EIGHT PROCESSING SILOS
- Unit -13-0: "PHASE 2" PISTACHIO HULLING, DRYING AND STORAGE OPERATION WITH: TWO RECEIVING CHUTES LEADING TO A COMMON PIT; TWO ASPIRATORS, EACH SERVED BY A DONALDSON HIGH EFFICIENCY CYCLONE; EIGHT 27 MMBTU/HR GSI MODEL 2426X PROPANE-FIRED COLUMN DRYERS; ONE 1.4 MMBTU/HR PROPANE-FIRED SAMPLE DRYER; TWELVE STORAGE SILOS, EACH WITH TWO 2.03 MMBTU (DERATED FROM 4.2 MMBTU/HR) GSI PROPANE-FIRED SILO HEATERS; AND EIGHT PROCESSING 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.

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

- Propane (LPG) usage rates for the proposed operation were provided by the Permit Engineer. These usage rates were speciated into air toxics 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. Emission factors were then converted from Natural Gas to LPG, using District approved conversion factors.
- 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.

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 unit was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary.

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
13	1*	24 Silo Heaters LPG Gas	1000 gallons	1.07	532
13	2*	8 Column Dryers LPG Gas	1000 gallons	2.3	1,596
13	3	Sample Dryer	1000 gallons	0.119	42.89
13	4	Pre-Cleaning PM10	Lbs	0.16	230

*LPG Gas is listed as a total usage to be divided by equally by the number of emission units

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 NO₂ 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:

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Monitoring Stations				
Pollutant	Station Name	County	City	Measurement Year
CO	Fresno-Foundry	Fresno	Fresno	2021
NOx	Madera-Pump Yard	Madera	Madera	2021
PM10	Madera-City	Madera	Madera	2021
PM2.5	Madera-City	Madera	Madera	2021
SOx	Fresno - Garland	Fresno	Fresno	2021
Ozone (for OLM)	Madera- Pump Yard	Madera	Madera	2016

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
13	1 (Silo Heaters)	4.38	0.8	4.00	0.15	0.15
13	2 (Column Dryers)	14.52	2.65	13.25	0.48	0.48
13	3 (Sample Dryer)	0.13	0.02	0.12	0.004	0.004
13	4 (Pre Cleaner 1&2)	0.00	0.00	0.00	0.16	0.1

*Criteria emissions are totals to be divided by equally by the number of emission units

Emission Rates (lbs/year)						
Unit ID	Process	NOx	SOx	CO	PM10	PM2.5
13	1 (Silo Heaters)	4,367	797	3,985	146	146
13	2 (Column Dryers)	13,478	2,460	12,300	450	450
13	3 (Sample Dryer)	126	22.9	114.5	4.19	4.19
13	4 (Pre Cleaner 1&2)	0.00	0.00	0.00	230	139.7

*Criteria emissions are totals to be divided by equally by the number of emission units

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 2007-2011 from Mendota (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
13	Silo Heaters Combined Usage	16.15	322	0.31	10.66	Horizontal
13	Column Dryers Combined Usage	7.89	324	8.00	2.65	Capped
13	Pre Cleaner 1	5.49	294	18.63	0.76	Horizontal
13	Pre Cleaner 2	5.49	294	6.34	1.07	Horizontal

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Volume Source Parameters					
Unit ID	Unit Description	Release Height (m)	Side Length (m)	Initial Lateral Dimension (m)	Initial Vertical Dimension (m)
13	Sample Dryer	1.22	1.83	0.43	0.00

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