



SEP 3 0 2013

Paul Bement Franzia Winery LLC 1887 N. Mooney Blvd. Tulare, CA 93274

Re:

Notice of Preliminary Decision - Authority to Construct

Facility Number: S-1201 Project Number: S-1133409

Dear Mr. Bement:

Enclosed for your review and comment is the District's analysis of Franzia Winery LLC's application for an Authority to Construct for increasing the allowed combined annual throughput of two distilled spirits storage tanks, at 1887 N. Mooney, Tulare, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice and 45-day EPA notice comment periods, 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. Dennis Roberts of Permit Services at (559) 230- 5919.

Sincerely,

David Warner

Director of Permit Services

DW:dr

Enclosures

cc: Mike Tollstrup, CARB (w/ enclosure) via email

cc: Gerardo C. Rios, EPA (w/ enclosuré) via email

Seyed Sadredin Executive Director/Air Pollution Control Officer

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Unified Air Pollution Control District solicits public comment on the proposed issuance of Authority to Construct to Franzia Winery LLC for increasing the allowed combined annual throughput of two distilled spirits storage tanks, at 1887 N. Mooney, Tulare, CA.

The analysis of the regulatory basis for this proposed action, Project #S-1133409, is available for public inspection at

http://www.valleyair.org/notices/public_notices_idx.htm and at any District office. For additional information, please contact the District at (559) 230-6000. Written comments on this project must be submitted by November 4, 2013 to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Spirits Storage Tank

Facility Name: Franzia Winery LLC Date: December 4, 2012

Mailing Address: 1887 N. Mooney Blvd. Engineer: Dennis Roberts

Tulare, CA 93274 Lead Engineer: Martin Keast

Contact Person: Paul Bement

Telephone: (209) 253-5206

E-Mail: Paul.Bement@thewinegroup.com

Application #s: S-1201-46-2 and -56-2

Project #: S-1133409

Deemed Complete: September 3, 2013

I. Proposal

Franzia Winery LLC has requested an Authority to Construct (ATC) permit for the modification of two distilled spirits storage tanks (units S-1201-46 and -56). The facility is proposing to increase the allowed combined annual throughput of these tanks to 1.5 million gallons per year.

This facility is a major source and will remain a major source as a result of this project. However, this facility meets the requirements of District Rule 2530, *Federally Enforceable Potential to Emit*. By meeting the requirements of District Rule 2530 this facility is not a Title V Facility.

Current Permits to Operate C-1201-46-1 and '-56-1 are located in Appendix A.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 2530	Federally Enforceable Potential to Emit (12/18/08)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4102	Nuisance (12/17/92)
Rule 4623	Storage of Organic Liquids (5/19/05)
Rule 4694	Wine Fermentation and Storage Tanks (12/15/05)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	S 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 1887 N. Mooney Blvd. in Tulare, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Franzia Winery LLC operates a wine fermentation and storage facility. Distilled spirits, typically called high-proof are also produced at the facility and are stored for purposes of supplementing the ethanol content of produced wines or for export.

V. Equipment Listing

Pre-Project Equipment Description:

- S-1201-46-1: 42,330 GALLON STEEL DISTILLED SPIRITS STORAGE TANK (TANK #99) WITH PRESSURE/VACUUM VALVE AND INSULATION
- S-1201-56-1: 25,430 GALLON STEEL DISTILLED SPIRITS STORAGE TANK (TANK #109)
 WITH PRESSURE/VACUUM VALVE AND INSULATION

Proposed Modification:

- S-1201-46-2: MODIFICATION OF 42,330 GALLON STEEL DISTILLED SPIRITS STORAGE TANK (TANK #99) WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD A SPECIFIC LIMITING CONDITION TO INCREASE ANNUAL THROUGHPUT
- S-1201-56-2: MODIFICATION OF 25,430 GALLON STEEL DISTILLED SPIRITS STORAGE TANK (TANK #109) WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD A SPECIFIC LIMITING CONDITION TO INCREASE ANNUAL THROUGHPUT

Post Project Equipment Description:

- S-1201-46-2: 42,330 GALLON STEEL DISTILLED SPIRITS STORAGE TANK (TANK #99) WITH PRESSURE/VACUUM VALVE AND INSULATION
- S-1201-56-2: 25,430 GALLON STEEL DISTILLED SPIRITS STORAGE TANK (TANK #109) WITH PRESSURE/VACUUM VALVE AND INSULATION

VI. Emission Control Technology Evaluation

Emissions from the distilled spirits storage tanks are controlled by operating with a pressure/vacuum valve and insulation on the tank. The combination of insulation and pressure/vacuum valve serves to minimize VOC emissions which might result from tank breathing losses. The valve will not let vapor escape from the tank or air to enter the tank until the tank pressure is within 10% of the maximum allowable pressure or vacuum for the tank. Insulation minimizes heating of the tank due to ambient conditions and sunlight.

VII. General Calculations

A. Assumptions

- The maximum operating schedule for this facility is 24 hours/day and 365 days/year.
- Per District FYI-114, breathing losses are assumed to be negligible from the storage operations since all storage tank emissions units are insulated and equipped with a pressure/vacuum relief valve.

Pre-Project:

- The maximum ethanol content of the distilled spirits stored in each tank is 98% (current permit).
- The maximum daily distilled spirits throughput is 21,000 gallons for unit S-1201-46, and 14,000 gallons for unit S-1201-56. (current permit).
- The maximum annual distilled spirits throughput is 500,000 gallons for unit S-1201-46, and 150,000 gallons for unit S-1201-56. (current permit)

Post Project

- The maximum ethanol content of the distilled spirits stored in each tank is 98% (current permit).
- The maximum daily distilled spirits throughput is 42,330 gallons for unit S-1201-46, and 25,430 gallons for unit S-1201-56. (Per Applicant).
- The maximum annual distilled spirits throughput is 1.5 million gallons combined for both S-1201-46-2 and '-56-2. (Per Applicant).

B. Emission Factors

Since both tanks are insulated, equipped with pressure vacuum valves and operate at ambient temperature, the tabular emission factor of FYI-114 for 98% ethanol is applicable. Per FYI-114 for tanks in the southern region of the District holding spirits with 98% ethanol content:

Daily Emission Factor = 1.409 lb-VOC/1000 gallons throughput

Annual Emission Factor = 0.786 lb-VOC/1000 gallons throughput

C. Calculations

1. Pre-Project Potential to Emit (PE1)

 PE_1 = Emission Factor x Throughput

Daily:

S-1201-46-1:

PE₁ = 1.409 lb-VOC/1000 gallons x 21,000 gallons/day = **29.6 lb-VOC/day**

S-1201-56-1:

PE₁ = 1.409 lb-VOC/1000 gallons x 14,000 gallons/day = **19.8 lb-VOC/day**

Annual:

S-1201-46-1:

PE₁ = 0.786 lb-VOC/1000 gallons x 500,000 gallons/year = **393 lb-VOC/year**

S-1201-56-1:

PE₁ = 0.786 lb-VOC/1000 gallons x 150,000 gallons/year = **118 lb-VOC/year**

2. Post Project Potential to Emit (PE2)

Daily:

S-1201-46-1:

 $PE_2 = 1.409 \text{ lb-VOC/1000 gallons x } 43,330 \text{ gallons/day}$ = **61.1 lb-VOC/day**

S-1201-56-1:

PE₂ = 1.409 lb-VOC/1000 gallons x 25,430 gallons/day = **35.8 lb-VOC/day**

Annual:

Post-project, the combined throughput is limited to 1.5 million gallons per year. Therefore the combined PE is:

PE₂ = 0.786 lb-VOC/1000 gallons x 1,500,000 gallons/year = **1,179 lb-VOC/year**

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

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

SSPE1 calculations for units -3-0 through -63-0 were taken from project S-1074245. Emissions for unit -64 are calculated in Appendix B.

SSPE1 (lb/year)							
Permit Unit	NO _X	SO _X	PM ₁₀	CO	VOC		
S-1201-3-0 through -45- 0, 47-0 through -55-0, and -57-0 through -63-0	0	0	0	0	46,092		
S-1201-46-1	0	0	0	0	393		
S-1201-56-1	0	0	0	0	118		
S-1201-64-0	0	0	0	0	40		
SSPE1	0	0	0	0	46,643		

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

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

SSPE2 (lb/year)						
Permit Unit	NO _X	SO _X	PM ₁₀	CO	VOC	
S-1201-3-0 through -45- 0, 47-0 through -55-0, and -57-0 through -63-0	0	0	0	0	46,092	
S-1201-46-2 and 56-2	0	0	0	0	1,179	
S-1201-64-0	0	0	0	0	40	
SSPE2	0	0	0	0	47,311	

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. However, for the purposes of determining major source status, the SSPE2 shall not include 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."

Major Source Determination (lb/year)							
NO _X SO _X PM ₁₀ CO VOC							
SSPE1	0	0	0	0	46,643		
SSPE2	0	0	0	0	47,311		
Major Source Threshold	20,000	140,000	140,000	200,000	20,000		
Major Source?	No	No	No	No	Yes		

As seen in the table above, the facility is 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)							
NO2 VOC SO2 CO PM PM10 CO2e						CO2e	
Estimated Facility PE before Project Increase	0	23.3	0	0	0	0	5,564*
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	N	N	N	N	N	N	N

^{*} See Appendix C

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

Pursuant to 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.

BE VOC

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

All existing tanks in this project meet the District's current achieved-in-practice BACT for storage tanks by being equipped with a PV valve and insulation. Therefore all existing tank emission units are *Clean Emissions Units* pursuant to District Rule 2201 and BE = PE1.

Tank	BE (lb-VOC/yr)
S-1201-46-1	393
S-1201-56-1	118
Total	511

7. SB 288 Major Modification

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

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

SB 288 Major Modification Thresholds						
Pollutant	SB 288 Major Modification Calculation Required?					
VOC	1,179	50,000	No			

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

8. Federal Major Modification

For existing emissions units, the increase in emissions is calculated as follows.

Emission Increase = PAE - BAE

Where: PAE = Projected Actual Emissions, and

BAE = Baseline Actual Emissions

If there is no increase in design capacity or potential to emit, the PAE is equal to the annual emission rate at which the unit is projected to emit in any one year, selected by the operator, within 5 years after the unit resumes normal operation (10 years for existing units with an increase in design capacity or potential to ernit). Since detailed PAE have not been provided, the PAE is equal to the PE2 for each permit unit.

The BAE is calculated based on historical emissions and operating records for any 24 month period, selected by the operator, within the previous 10 year period (5 years for electric utility steam generating units). The BAE must be adjusted to exclude any non-compliant operation emissions and emissions that are no longer allowed due to lower applicable emission limits that were in effect when this application was deemed complete. The BAE calculation is presented in Appendix D.

BAE = 489 lb-VOC per year (see Appendix D)

Emission Increase = PE2 - BAE

Emission Increase = 1,179 - 489 = 690 lb-VOC/year

This project only involves VOC emissions for which the Major Modification Threshold is 0 lb/year. Since there is an increase in VOC emissions, this project constitutes a Federal Major Modification.

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
- Greenhouse gases (GHG): CO2, N2O, CH4, HFCs, PFCs, and SF6

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 <u>Modified</u> 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 futher 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.

PSD Major Source Determination: Potential to Emit (tons/year)							
NO2 VOC SO2 CO PM PM10 CO2e							
Total PE from New and Modified Units	0	0.59	0	0	0	0	0
PSD Major Source threshold	250	250	250	250	250	250	100,000
New PSD Major Source?	N	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 E.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

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

As discussed in Section I above, there are no new emissions units associated with this project. Therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

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

```
AIPE = PE2 - HAPE
```

Where,

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

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

HAPE = Historically Adjusted Potential to Emit, (lb/day)

 $HAPE = PE1 \times (EF2/EF1)$

Where.

^{*}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.

- PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)
- EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1
- EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

As demonstrated above, the AIPE is greater than 2.0 lb/day for VOC emissions for both tanks. Therefore BACT is triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project does constitute a Federal Major Modification. Therefore BACT is also triggered by a Federal Major Modification.

2. BACT Guideline

BACT Guideline 5.4.15, applies to Distilled Spirits Storage (See Appendix F)

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 G**), BACT has been satisfied with the following:

VOC: Insulated tank with Pressure Vacuum Relief Valve (PVRV) set within 10% of the maximum allowable working pressure of the tank, and "gas-tight" tank operation

Each of the distilled spirits storage tanks is insulated, equipped with a PVRV set to within 10% of the maximum allowable working pressure of the tank; and operates in a

gas-tight condition. Therefore, the proposed distilled spirits storage tanks meet the BACT requirements for this class and category of operation.

The following conditions will be included on the ATC's to ensure continued compliance with the BACT requirements:

- This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rule 2201]
- The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rule 2201] Y

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	0	0	0	0	47,311		
Offset Thresholds	20,000	54,750	29,200	200,000	20,000		
Offsets triggered?	No	No	No	No	Yes		

2. Quantity of Offsets Required

As seen above, the SSPE2 is greater than the offset thresholds for VOC only. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for VOC is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

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

Where.

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

BE = Baseline Emissions, (lb/year)

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

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = 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 = HAE

There are no increases in cargo carrier emissions; Assuming an offset ratio of 1.5:1, the amount of VOC ERCs that need to be withdrawn is:

Offsets Required (lb/year) = (PE2_{SLC} – Σ BE_{S-1201-46-1, '-56-1} + ICCE) x DOR

PE2_{SLC} = 1,179 lb/year ΣBE_{S-1201-46-1, '-56-1} = 511 lb/year ICCE = 0 lb/year

Offsets Required (lb/year) = (1,179 – 511 + 0) x DOR = 668 x 1.5 = 1,002 lb-VOC/year

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

1st Quarter2nd Quarter3rd Quarter4th Quarter250250251251

The applicant has stated that the facility plans to use ERC certificate S-3842-1 to offset the increases in VOC emissions associated with this project. The above certificate has available quarterly VOC credits as follows:

As seen above, the facility has sufficient credits to fully offset the quarterly VOC emissions increases associated with this project.

Proposed Rule 2201 (offset) Conditions:

 Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter - 250 lb, 2nd quarter - 250 lb, 3rd quarter - 251 lb, and fourth quarter - 251 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]

 ERC Certificate Number S-3842-1 (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:

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

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

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

As demonstrated in VII.C.7, this project is not an SB 288 but is a Federal Major Modification for VOC. Therefore, public noticing for SB 288 or Federal Major Modification purposes is required.

b. PE > 100 lb/day

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

c. Offset Threshold

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	0	20,000 lb/year	No				
SO _X	0	0	54,750 lb/year	No				
PM ₁₀	0	0	29,200 lb/year	No				
CO	0	0	200,000 lb/year	No				
VOC	46,643	47,311	20,000 lb/year	No				

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

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a 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	SSPE1	SSIPE	SSIPE Public	Public Notice		
Politiani	(lb/year)	(lb/year)	(lb/year)	Notice Threshold	Required?		
NO _x	0	0	0	20,000 lb/year	No		
SO _x	0	0	0	20,000 lb/year	No		
PM ₁₀	0	0	0	20,000 lb/year	No		
CO	0	0	0	20,000 lb/year	No		
VOC	47,311	46,643	668	20,000 lb/year	No		

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

2. Public Notice Action

As discussed above, public noticing is required for this project for Federal Major Modification for VOC. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB), EPA, and a public notice will be published in a local newspaper of general circulation 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.

S-1201-46-2 Proposed Rule 2201 (DEL) Conditions:

- Daily tank throughput shall not exceed 42,330 gallons per day. [District Rule 2201]
- Combined annual throughput of permit units S-1201-46 and S-1201-56 shall not exceed 1,500,000 gallons per year. [District Rule 2201]
- Ethanol content of the distilled spirits stored in this tank shall not exceed 98%. [District Rule 2201]

S-1201-56-2 Proposed Rule 2201 (DEL) Conditions:

- Daily tank throughput shall not exceed 25,430 gallons per day. [District Rule 2201]
- Combined annual throughput of permit units S-1201-46 and S-1201-56 shall not exceed 1,500,000 gallons per year. [District Rule 2201]
- Ethanol content of the distilled spirits stored in this tank shall not exceed 98% by volume. [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:

 Daily throughput records, including records of filling and emptying operations, the dates of such operations, the maximum temperature of the stored distilled spirits, the volume percent ethanol in the batch, and the volume of spirits transferred, shall be maintained. [District Rule 2201] All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 1070]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. However, since this project involves only VOC and no ambient air quality standard exists for VOC, an AAQA is not required for this project.

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a new major source and this project does constitute a Title I modification, therefore this requirement is applicable. Franzia-Tulare compliance certification is included in Appendix H.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to convert two wine fermentation and storage tanks to distilled spirits storage tanks.

Since the project will allow distilled spirits to be stored in existing tanks at the existing site, the existing site will result in the least possible impact from the project. Alternative sites would involve the redevelopment of the site to accommodate new or relocated tanks and construction of various support structures, and would therefore result in a much greater impact.

Rule 2520 Federally Mandated Operating Permits

Since this facility's emissions exceed the major source thresholds of District Rule 2201, this facility is a major source. However, this facility has elected to comply with Rule 2530, exempts it from the requirements of Rule 2520.

Rule 2530 Federally Enforceable Potential to Emit

The purpose of this rule is to restrict the emissions of a stationary source so that the source may elect to be exempt from the requirements of Rule 2520. Pursuant to Rule 2530, since this

facility has elected exemption from the requirements of Rule 2520 by ensuring actual emissions from the stationary source in every 12-month periods to not exceed the following: ½ the major source thresholds for NOx, VOCs, CO, and PM₁₀; 50 tons per year SO2; 5 tons per year of a single HAP; 12.5 tons per year of any combination of HAPs; 50 percent of any lesser threshold for a single HAP as the EPA may establish by rule; and 50 percent of the major source threshold for any other regulated air pollutant not listed in Rule 2530.

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 distilled spirits storage tank operations.

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

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

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.

Ethanol is not a HAP as defined by Section 44321 of the California Health and Safety Code. Therefore, there are no increases in HAP emissions associated with any emission units in this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

Rule 4623 Storage of Organic Liquids

The purpose of this rule is to limit volatile organic compound (VOC) emissions from the storage of organic liquids. This rule applies to any tank with a capacity of 1,100 gallons or greater in which any organic liquid is placed, held, or stored.

However, Section 4.1.4 provides an exemption for tanks used to store fermentation products, byproducts or spirits. The tanks in this project are storage tanks used to store distilled spirits.

Therefore, the requirements of this rule are not applicable to this project.

District Rule 4694 Wine Fermentation and Storage Tanks

The purpose of this rule is to reduce emissions of volatile organic compounds (VOC) from the fermentation and bulk storage of wine, or achieve equivalent reductions from alternative emission sources. This rule is applicable to any winery fermenting wine and/or storing wine in bulk containers.

The storage tanks in this project store distilled spirits. Therefore, the requirements of this rule are not applicable to this project.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project. The District's has determined that distilled spirits storage tanks will not produce any project specific greenhouse gas emissions since, greenhouse gas emissions are only emitted during wine fermentation which is no longer conducted in these tanks. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering

Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue ATC S-1201-46-2 and -56-2 subject to the permit conditions on the attached draft ATC in **Appendix I.**

X. Billing Information

Annual Permit Fees					
Permit Number	Fee Schedule	Fee Description	Annual Fee		
S-1201-46-2	3020-05-C	42,350 gallons	\$135.00		
S-1201-56-2	3020-05-C	24,430 gallons	\$135.00		

Appendixes

- A: Current PTOs
- B. Emission Calculation for S-1201-64
- C. GHG Emission Calculation
- D. BAE Calculation
- E: Quarterly Net Emissions Change
- F: BACT Guideline
- G: BACT Analysis
- H: Compliance Certification
- I: Draft ATCs

APPENDIX ACurrent PTOs

APPENDIX B

Emission Calculation for S-1201-64

Potential to Emit for Wastewater Sump, Unit S-1201-64-1

Throughput: (per applicant):

March –July (153 days): 75,000 gallons per day August-October (92 days): 300,000 gallons per day November-February (120 days): 150,000 gallons per day

Total Annual: 57.1 MMGal/year

Emission Factor 0.691 lb-VOC/Mmgal (per District analysis based on EPA

WATER9 software)

Annual Emissions:

57.1 MMgal/year x 0.691 lb/MMgal = 40 lb-VOC/year

APPENDIX CGHG Emission Calculation

CO2 Emissions from Fermentation for S-1201:

Basis:

- S-1201 has an annual potential wine production of 11,001,000 gallons (per District project S-1074245).
- Maximum practical ethanol content for wine fermentation is 16 volume percent (higher concentrations have a negative impact on yeast reproduction with death of the yeast occurring at around 18%)
- Molecular weight of ethanol and CO2 are 46 and 44 lb/mole respectively.
- The fermentation reaction produces one mole of carbon dioxide for each mole of ethanol produced.
- Liquid density for ethanol is 6.61 lb/gal at 60 F.

Calculation:

Maximum Annual

Ethanol = 11,001,000 gal x 16% ethanol x 6.61 <u>lb-ethanol</u> production year gallon

Maximum Annual

Ethanol = 11,634,658 lb-ethanol per year Production

Maximum Annual CO2 Production = 11,634,658 | Ib x | 1 mole x | CO2 | x | 44 | Ib | CO2 | x | mole | CO2 | x | mole | CO2 | ethanol | ethanol | ethanol | co2 | co2 | co2 | co2 | co3 | co3

Maximum Annual CO2 Production = 11,128,803 lb-CO2 per year

Maximum Annual = 5,564 ton-CO2 per year

APPENDIX D BAE Calculation

BAE Calculation for District Project S-1133409

Basis:

- The minimum ethanol content of the distilled spirits received and stored in the tanks during the Baseline Period was 95.2% (per applicant). The emission increase will be conservatively estimated based on this concentration.
- Annual Emission Factor = 0.0.694 lb-VOC/1000 gallons throughput for 94% ethanol per FYI-114.
- Annual Emission Factor = 0.0.742 lb-VOC/1000 gallons throughput for 96% ethanol per FYI-114.
- The interpolated emission factor for 95.2% ethanol is 0.723 lb-VOC/1000 gallons throughput.
- Per the applicant, the combined annual storage throughput for both tanks during the Baseline Period was:

2011: 612,633 gallons 2012: 740,938 gallons Average: 676,786 gallons

Calculation:

BAE = Emission Factor x Historical Throughput for the Baseline Period

S-1201-46-1 and '-56-1:

BAE = 0.723 lb-VOC/1000 gallons x 676,786 gallons/year

= 489 lb-VOC/year

APPENDIX E QNEC

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

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

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

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

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

The combined annual emissions for the two tanks will be apportioned by tank volume for purposes of the QNEC.

PE2 for '46-2:

743 lb-VOC/year

PE2 for '56-2

436 lb-VOC/year

<u>'-46-2:</u>

PE2_{quarterly}

= PE2_{annual} ÷ 4 quarters/year

= 743 lb/year ÷ 4 gtr/year

= 186 lb-VOC/qtr

PE1_{quarterly}

= PE1_{annual} ÷ 4 quarters/year

= 393 lb/year ÷ 4 qtr/year

= 98 lb VOC/qtr

<u>'-56-2:</u>

PE2_{quarterly}

= PE2_{annual} ÷ 4 quarters/year

= 436 lb/year ÷ 4 qtr/year

= 109 lb-VOC/qtr

PE1_{quarterly}

= PE1_{annual} ÷ 4 quarters/year

= 118 lb/year ÷ 4 qtr/year

= 30 lb-VOC/qtr

S-1201-46-2: Quarterly NEC [QNEC]					
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)		
NO _X	0	0	0		
SO _X	0	0	0		
PM ₁₀	0	0	0		
CO	0	0	0		
VOC	186	98	88		
S-1201-56-2: Quarterly NEC [QNEC]					
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)		
NO _X	0	0	0		
SO _X	0	0	0		
PM ₁₀	0	0	0		
CO	0	0	0		
VOC	109	30	79		

APPENDIX F BACT Guideline

San Joaquin Valley Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 5.4.15*

Last Update 11/2/2011

Distilled Spirits Storage Tank

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Insulation or Equivalent**, Pressure Vacuum Relief Valve (PVRV) set within 10% of the maximum allowable working pressure of the tank, "gas-tight" tank operation	1) Capture of VOCs and thermal or catalytic oxidation or equivalent (98% control); 2) Capture of VOCs and carbon adsorption or equivalent (95% control); 3) Capture of VOCs and adsorption or equivalent (90% control); 4) Refrigerated Storage (70% control)	

^{**} Tank may be insulated or stored indoors (in a completely enclosed building except for vents, doors and other essential openings) to limit exposure to diurnal temperature variations.

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 s 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 G BACT Analysis

Top-Down BACT Analysis for VOC emissions

The following VOC emission control technologies are listed in BACT guideline 5.4.15, for Distilled Spirits Storage Tank.

Step 1 - Identify all control technologies

BACT Guideline 5.4.15, Distilled Spirits Storage Tank, lists the following control technologies,

- Insulation or Equivalent**, Pressure Vacuum Relief Valve (PVRV) set within 10% of the maximum allowable working pressure of the tank; "gas-tight" tank operation. – Achieved in Practice
- Capture of VOCs and thermal or catalytic oxidation or equivalent (98% control) Technologically Feasible
- 3) Capture of VOCs and carbon adsorption or equivalent (95% control) -Technologically Feasible
- 4) Capture of VOCs and absorption or equivalent (90% control) -Technologically Feasible
- 5) Refrigerated Storage (70% control) Technologically Feasible

Step 2 - Eliminate technologically infeasible options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank remaining options by control effectiveness

Rank by Control Effectiveness				
Rank	Option	Control	Overall Capture & Control Efficiency	
1	2	Capture of VOCs & thermal or catalytic oxidation, or equivalent	98%	
2	3	Capture of VOCs & carbon adsorption, or equivalent	95%	
3	4	Capture of VOCs & absorption, or equivalent	90%	
4	5	Refrigerated Storage	70%	
5	1	Insulation or Equivalent**, Pressure Vacuum Relief Valve (PVRV) set within 10% of the maximum allowable working pressure of the tank; "gas-tight" tank operation	0 %	

Step 4 - Cost Effectiveness Analysis

A cost effectiveness analysis is performed for each control technology which is more effective than achieved-in-practice BACT. The cost-effectiveness analysis will be performed based on the most cost effective approach by installing a common control device for both distilled spirit tanks evaluated in this project.

Basis:

- Options 1, 2 and 3 all require the same collection system consisting of ductwork which collect s the vapor from both tanks and delivers it to the control device.
- Options 1, 2 and 3 all require a collection vessel installed upstream of the control device to intercept potential slugs of liquid ethanol from the storage tanks which would be harmful to the control device. An equipment purchase allowance of \$5,000 is included for this item.
- Only one tank is assumed to be filled at a time.
- Fill flowrate is 870 gallons per mionute based on use of a 20 hp pump operating at a 20 psi differential pressure (typical for winery transfer operations):

870 gpm ÷ 7.48 gal/cf = 116 cfm

Collection System Capital Investment (based on ductwork):

A common feature of all technically feasible options except tank refrigeration (options 1, 2 and 3) is that they require installation of a collection system for delivering the VOCs from the tanks to the common control device. This analysis ignores additional major costs for equipment sterilization systems for ductwork and control device and site specific factors due to limited plot space (known to be a significant factor at all wineries). Should all these additional cost factors be included, the calculated cost effectiveness would be substantially higher than indicated below.

Collection system to consist of:

- The collection system consists of stainless steel place ductwork (stainless steel is required due to food grade product status) with isolation valving, connecting two tanks to a common manifold system which ducts the combined vent to the common control device. The cost of dampers and isolation valving, installed in the ductwork, plus costs for pressure/vacuum relief valves, will be included in the cost estimate.
- A minimum duct size is established at six inches diameter at each tank to provide adequate strength for spanning between supports.
- A minimum estimated length 250 feet. (Allow 50' branch for each tank and 200' for main header run to control device = 50' + 50' + 200' = 300 linear feet)

Ductwork Capital Cost

6" Stainless Steel Duct.

A direct cost estimate for 6 inch diameter stainless steel ductwork, installed in a San Joaquin Valley winery, was taken from Fermenter VOC Emission Control Cost Estimate, prepared by Eichleay Engineering for the Wine Institute in conjunction with development of District Rule 4694. The estimate is based on 2nd quarter 2005 dollars, and includes fittings, miscellaneous duct supports and other materials plus field labor costs required to install the ductwork, but does not include other associated indirect costs such as construction management, engineering, owner's cost, contingency, etc.

Unit installed cost for 6 inch Stainless Steel ducting: \$61.30/linear foot¹

¹ The cost information is taken from engineering evaluation N-1113407.

Installed cost = \$61.30 linear foot x 300 feet = 18,390

Adjusting from 2005 dollars to 2013 dollars (multiply by 1.242, 2.75% inflation/yr).

Installed costs = $$18,390 \times 1.242 = $22,800$

Valve Allowance:

Unit installed cost for 6 inch isolation butterfly valve = \$2,000/valve
Unit installed cost pressure/vacuum valve and tank nozzle = \$2,000/tank

Installed costs = $(2 \times \$2,000/\text{valve} \times 2 \text{ tanks}) = \$8,000$ Total installed cost for duct system = \$22,800 + \$8,000 = \$30,800

Collection Vessel Capital Cost

Control Equipment Capital Cost:

Thermal or Catalytic Oxidation:

Cost for a thermal oxidizer with a 50% recuperator, rated at 116 cfm, are based on a 3/6/2009 quotation received from Baker Furnace:

Purchase $Cost_{2009} = $40,400$

Escalating this cost to 2013 based on 2.75% inflation per year:

Purchase $Cost_{2009} = $45,000$

Carbon Absorption:

Capital cost for this system will be ignored and and it will be assumed that the carbon cannister system will be included in a carbon supply contract for the facility.

Water Scrubber.

Cost for a water scrubber, rated at 116 cfm, are based on 2003 budgetary pricing obtained by Sonoma Technologies:

Purchase $Cost_{2009} = $12,400$

Escalating this cost to 2013 based on 2.75% inflation per year:

Purchase $Cost_{2009} = $16,300$

Storage Refrigeration System:

Basis:

Since the emissions from these tanks are all working losses which occur during filling operations, the refrigeration unit must be rated to cool the delivery of ethanol from the delivery truck to the tank. On an annual basis, the tanks vent 1,500,000 gallons of air + ethanol vapor per year as a result of filling operations. At 70% control, the vent stream contains 1,179 lb x (1-70%) = 354 lb/year. This corresponds to an ethanol vapor partial pressure of 128 mmHg in the vent. Pure ethanol reaches this vapor pressure at a temperature of approximately 11 F. Therefore the unit must be designed to cool 870 gpm of ethanol from an assumed truck temperature of 65 F to a tank delivery temperature of 11 F.

```
870 gpm x 60 min/hr x 6.61 lb/gal x 0.505 Btu/lb x (65 - 11) F + 12,000 Btu/ton = 784 tons
```

1990 cost for a 784 ton single stage vapor compression unit is taken from the data presented in the EPA cost Manual:

Purchase Cost₁₉₉₀= \$640,000

Escalating this cost to 2013 based on 2.75% inflation per year:

Purchase $Cost_{2009} = $1,194,000$

Total Capital Investment (TCI)

Table 1 presents the developed TCI for each option using EPA's cost model given in the Cost Manual. The developed TCI is based only on the installed cost of the control device and the collection ductwork. Other items not considered are noted in Table 1.

Table 1

	Option 2 Thermal Ox	Option 3 Carbon Adsorption	Option 4 Water Scrub	Option 5 Refrigerated Condenser
Direct Costs				
Purchased Equipment Costs			•	
Control Device	\$45,000	\$0	\$16,300	\$1,194,000
Knock Out Vessels	\$5,000	\$5,000	\$5,000	\$148,000
Subtotal Equipment (A)	\$50,000	\$5,000	\$21,300	\$1,342,000
Instrumentation (0.10 x A)	\$5,000	\$1,000	\$2,000	\$134,000
Sales Tax (0.08 x A)	\$4,000 \$4,000	\$0	\$2,000	\$107,000
Freight (0.05 x A)	\$3,000	<u>\$0</u>	\$1,000	\$67,000
- '				·
Purchased Equipment Cost (PEC)	\$62,000	\$6,000	\$26,300	\$1,650,000
Direct Installation Costs for P{urchased Equipment				
Foundations and Supports, 8%PEC	\$5,000	\$0	\$2,000	\$132,000
Handling & Erection, 14% PEC	\$9,000	\$1,000	\$4,000	\$231,000
Electrical, 4% PEC	\$2,000	\$0	\$1,000	\$66,000
Piping, 2% PEC	\$1,000	\$0	\$1,000	\$33,000
Direct Costs Not Included Above		·		
Structural Steel Pipeway	not considered	not considered	not considered	not considered
Ductwork	\$30,800	\$30,800	\$30,800	\$0
Pipeway Foundations	not considered	not considered	not considered	not considered
Site Prep	not considered	not considered	not considered	not considered
CIP System	not considered	not considered	not considered	not considered
Electrical Utility	not considered	not considered	not considered	not considered
Tank Modifications	not considered	not considered	not considered	not considered
Foam Over Control System	not considered	not considered	not considered	not considered
Heavy Lift Equipment	not considered	not considered	not considered	not considered
Subtotal Direct Cost DC	\$109,800	\$37,800	\$65,100	\$2,112,000
Construction Expense, 8% DC	\$9,000	\$3,024	\$5,208	\$168,960
Contractor's Fee, 10% DC	\$11,000	\$3,780	\$6,510	\$211,200
Total Direct Costs, TDC	\$129,800	\$44,604	\$76,818	\$2,492,160
Indirect Costs Engineering 15% TDC	\$19,000	\$7,000	\$12,000	\$374,000
Construction Management Expense,				
3% TDC	\$4,000	\$1,000	\$2,000	\$75,000
Start Up, 2% PEC	\$1,000	\$0	\$1,000	\$33,000
Performance Test, 1% PEC	\$1,000	\$0	\$0	\$17,000
Contingencies, 10%	<u>\$15,000</u>	\$5,000	\$9,000	\$299,000
Total Indirect Costs	\$40,000	\$13,000	\$24,000	\$798,000
Total Capital Investment	\$149,800	\$50,800	\$89,100	\$2,910,000

Direct Annual Operating Cost

An direct annual operating cost will only be included for the carbon absorption case since it has been assume that the control device costs are included with a carbon suppy contract. Therefore, the annual cost for activated carbon will be included. This option has a 95% control efficiency and therefore, on an annual basis, sufficient activated carbon must be utilized to absorb:

 $95\% \times 1,179 = 1,120 \text{ lb-ethanol/year}$

Assuming that the carbon will absorb half its weight in ethanol, annual carbon consumption is 2,240 lb per year. Conservatively assuming that carbon will only cost \$1.00 per pound, annual carbon cost will be \$2,240.

Cost Effectiveness Analysis

Table 2 presents the cost effectiveness analysis for all options considered. As shown, the cost effectiveness of all options exceeds the District's BACT cost effectiveness threshold of \$17,500 per ton for VOC. Therefore, none of the evaluated options are cost effective.

Step 5 - Select BACT

Insulated tank, and Pressure Vacuum Relief Valve (PVRV) set within 10% of the maximum allowable working pressure of the tank, and "gas-tight" tank operation would be the BACT for this operation.

Table 2

	DIC 2		
Option 2 Thermal Ox	Option 3 Carbon Adsorption	Option 4 Water Scrub	Option 5 Refrigerated Condenser
\$149,800	\$50,800	\$89,100	\$2,910,000
\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0
\$0 :	\$0 °	\$0 :	\$0
			\$0
			\$0
\$0	\$0	\$0	\$0
\$3,000	\$1,000	\$1,800	\$58,200
\$3,000	\$1,000	\$1,800	\$58,200
\$1,500	\$500	\$900	\$29,100
<u>\$24,400</u>	<u>\$8,300</u>	<u>\$14,500</u>	\$474,300
\$31,900	\$10,800	\$19,000	\$619,800
\$31,900	\$13,000	\$19,000	\$619,800
		- · · · · · · · · · · · · · · · · · · ·	
0.597	0.597	0.597	0.597
98%	95%:	95%	70%
0.585			0.418
\$54,524	\$22,922	\$33,501	\$1,483,130
	Option 2 Thermal Ox \$149,800 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$1,500 \$31,900 \$31,900 \$31,900 \$0 \$0,597 98%	Thermal Ox Adsorption \$149,800 \$50,800 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$2,240 \$0 \$2,240 \$0 \$2,200 \$1,000 \$3,000 \$1,000 \$1,500 \$500 \$24,400 \$8,300 \$31,900 \$10,800 \$31,900 \$13,000 \$0,597 0.597 98% 95%	Option 2 Thermal Ox Option 3 Carbon Adsorption Option 4 Water Scrub \$149,800 \$50,800 \$89,100 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$2,240 \$0 \$0 \$2,240 \$0 \$0 \$2,200 \$0 \$0 \$1,000 \$1,800 \$3,000 \$1,000 \$1,800 \$3,000 \$1,000 \$1,800 \$31,900 \$10,800 \$19,000 \$31,900 \$13,000 \$19,000 \$31,900 \$13,000 \$19,000 \$0.597 0.597 0.597 98% 95% 95% 0.585 0.567 0.567

APPENDIX H Compliance Certification

9/4/2013

Mr. Dennis Roberts
San Joaquin Valley Air Pollution Control District
1990 E Gettysburg Avenue
Fresno CA 93726

Subject: Compliance Statement for Franzia-Tulare S-1201

Dear Mr. Roberts:

In accordance with Rule 2201, Section 4.15, "Additional Requirements for New Major Sources and Federal Major Modifications," **Franzia-Tulare** is pleased to provide this compliance statement regarding its proposed winery project **S-1133409**.

All major stationary sources in California owned or operated by **Franzia-Tulare**, or by any entity controlling, controlled by, or under common control with **Franzia-Tulare**, and which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitations and standards. These sources include one or more of the following facilities:

Facility #1: Franzia-Tulare 1887 N. Mooney Blvd., Tulare, CA 93274

Based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Please contact me if you have any questions regarding this certification.

Sincerely.

Gary Nakagawa, General Manager

Franzia - Tulare

APPENDIX I Draft ATC's

San Joaquin Valley Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSU

PERMIT NO: S-1201-46-2

LEGAL OWNER OR OPERATOR: FRANZIA WINERY LLC

MAILING ADDRESS:

PO BOX 90

TRACY, CA 95378

LOCATION:

1887 N MOONEY BLVD TULARE, CA 93274

EQUIPMENT DESCRIPTION:

MODIFICATION OF 42,330 GALLON STEEL DISTILLED SPIRITS STORAGE TANK (TANK #99) WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD A SPECIFIC LIMITING CONDITION TO INCREASE ANNUAL THROUGHPUT

CONDITIONS

- 1. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter 250 lb, 2nd quarter 250 lb, 3rd quarter 251 lb, and fourth quarter 251 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- 2. ERC Certificate Number S-3842-1 (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]
- 3. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rule 2201]
- 4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rule 2201]
- 5. Daily tank throughput shall not exceed 42,330 gallons per day. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Directory APCO

DAVID WARNER Director of Permit Services

- 6. Combined annual throughput of permit units S-1201-46 and S-1201-56 shall not exceed 1,500,000 gallons per year.

 [District Rule 2201]
- 7. Ethanol content of the distilled spirits stored in this tank shall not exceed 98%. [District Rule 2201]
- 8. Daily throughput records, including records of filling and emptying operations, the dates of such operations, the volume percent ethanol in the batch, and the volume of spirits transferred, shall be maintained. [District Rule 2201]
- 9. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]



San Joaquin Valley Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: S-1201-56-2

LEGAL OWNER OR OPERATOR: FRANZIA WINERY LLC

MAILING ADDRESS:

PO BOX 90

TRACY, CA 95378

LOCATION:

1887 N MOONEY BLVD TULARE, CA 93274

EQUIPMENT DESCRIPTION:

MODIFICATION OF 25,430 GALLON STEEL DISTILLED SPIRITS STORAGE TANK (TANK #109) WITH PRESSURE/VACUUM VALVE AND INSULATION: ADD A SPECIFIC LIMITING CONDITION TO INCREASE ANNUAL THROUGHPUT

CONDITIONS

- 1. Prior to operating equipment under this Authority to Construct, permittee shall surrender VOC emission reduction credits for the following quantity of emissions: 1st quarter 250 lb, 2nd quarter 250 lb, 3rd quarter 251 lb, and fourth quarter 251 lb. These amounts include the applicable offset ratio specified in Rule 2201 Section 4.8 (as amended 4/21/11) for the ERC specified below. [District Rule 2201]
- 2. ERC Certificate Number S-3842-1 (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]
- 3. This tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rule 2201]
- 4. The pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21. [District Rule 2201]
- 5. Daily tank throughput shall not exceed 25,430 gallons per day. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Directory APCO

DAVID WARNER Director of Permit Services

- 6. Combined annual throughput of permit units S-1201-46 and S-1201-56 shall not exceed 1,500,000 gallons per year. [District Rule 2201]
- 7. Ethanol content of the distilled spirits stored in this tank shall not exceed 98%. [District Rule 2201]
- 8. Daily throughput records, including records of filling and emptying operations, the dates of such operations, the volume percent ethanol in the batch, and the volume of spirits transferred, shall be maintained. [District Rule 2201]
- 9. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]

