



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

JUN 05 2012

Mr. Matthew Belair  
Delicato Vineyards  
12001 South Highway 99  
Manteca, CA 95336

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # N-266  
Project # N-1120591**

Dear Mr. Belair:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is to install eight 25,000 gallon (each), eight 13,000 gallon (each), and four 7,000 gallon (each), stainless steel wine fermentation and storage tanks.

After addressing any EPA comments made during the 45-day comment period, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner  
Director of Permit Services

DW:WMS/st

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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**Northern Region**  
4800 Enterprise Way  
Modesto, CA 95356-8718  
Tel: (209) 557-6400 FAX: (209) 557-6475

**Central Region (Main Office)**  
1990 E. Gettysburg Avenue  
Fresno, CA 93726-0244  
Tel: (559) 230-6000 FAX: (559) 230-6061  
[www.valleyair.org](http://www.valleyair.org)

**Southern Region**  
34946 Flyover Court  
Bakersfield, CA 93308-9725  
Tel: (661) 392-5500 FAX: (661) 392-5585



# San Joaquin Valley

## AIR POLLUTION CONTROL DISTRICT

JUN 05 2012

Gerardo C. Rios, Chief  
Permits Office  
Air Division  
U.S. EPA - Region IX  
75 Hawthorne St.  
San Francisco, CA 94105

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # N-266  
Project # N-1120591**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Delicato Vineyards located at 12001 South Highway 99, Manteca, which has been issued a Title V permit. Delicato Vineyards is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. This project is to install eight 25,000 gallon (each), eight 13,000 gallon (each), and four 7,000 gallon (each), stainless steel wine fermentation and storage tanks.

Enclosed is the engineering evaluation of this application with a copy of the proposed Authorities to Construct # N-266-722-0 to N-266-741-0 with Certificates of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner  
Director of Permit Services

DW:WMS/st

Enclosures

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# San Joaquin Valley

## AIR POLLUTION CONTROL DISTRICT

JUN 05 2012

Mike Tollstrup, Chief  
Project Assessment Branch  
Air Resources Board  
P O Box 2815  
Sacramento, CA 95812-2815

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)  
District Facility # N-266  
Project # N-1120591**

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is to install eight 25,000 gallon (each), eight 13,000 gallon (each), and four 7,000 gallon (each), stainless steel wine fermentation and storage tanks.

Enclosed is the engineering evaluation of this application with a copy of the proposed Authorities to Construct # N-266-722-0 to N-266-741-0 with Certificates of Conformity. After demonstrating compliance with the Authorities to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner  
Director of Permit Services

DW:WMS/st

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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**NOTICE OF PRELIMINARY DECISION  
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND  
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY  
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Delicato Vineyards for its winery located at 12001 South Highway 99, Manteca, California. This project is to install eight 25,000 gallon (each), eight 13,000 gallon (each), and four 7,000 gallon (each), stainless steel wine fermentation and storage tanks.

The District's analysis of the legal and factual basis for this proposed action, project #N-1120591, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and the District office at the address below. There are no emission increases associated with this proposed action. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356-8718.

# San Joaquin Valley Air Pollution Control District Authority to Construct

## *Install 20 new fermentation/storage wine tanks*

Facility Name: Delicato Vineyards Date: May 2, 2012  
Mailing Address: 12001 South Hwy 99 Engineer: Wai-Man So  
Manteca, CA 95336 Lead Engineer: Rupi Gill  
Contact Person: Matthew Belair (Director of Technical Operations)  
Telephone: (209) 824 – 3612  
Fax: (209) 824 – 3400  
Email: [matt.belair@delicato.com](mailto:matt.belair@delicato.com)  
Application #(s): N-266-722-0 through -741-0  
Project #: N-1120591  
Deemed Complete: April 16, 2012

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### **I. PROPOSAL**

Delicato Vineyards (DV) is requesting Authorities to Construct (ATC) to install eight 25,000 gallon (each), eight 13,000 gallon (each), and four 7,000 gallon (each), stainless steel, insulated, wine tanks. These twenty new tanks will be used for fermentation and storage of red and white wine.

DV has a facility-wide specific limiting condition (SLC) of 394,298 pounds of VOC per year for wine fermentation and storage operations. The facility is not proposing any changes to this limit.

DV possesses a Title V permit. The proposed project is a Significant Modification to the Title V permit, as this project is a Federal Major Modifications under Rule 2201. The applicant has requested to issue the ATCs with a Certificate of Conformity (COC), which is EPA's 45-day review of the project prior to the issuance of the final ATCs. This project will be published in the local newspaper, Stockton Record, for public review and comment. The public comment period will last 30-days from the date of publication. Both COC and public notice will run concurrently.

### **II. APPLICABLE RULES**

District Rule 2201 New and Modified Stationary Source Review (04/21/11)  
District Rule 2520 Federally Mandated Operating Permits (06/21/01)  
District Rule 4001 New Source Performance Standards (04/14/99)  
District Rule 4002 National Emissions Standards for Hazardous Air Pollutants (05/02/04)  
District Rule 4101 Visible Emissions (02/17/05)  
District Rule 4102 Public Nuisance (12/17/92)

District Rule 4694 Wine Fermentation and Storage Tanks (12/15/05)  
CH & SC 41700 Public Nuisance  
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 12001 South Highway 99, in Manteca, California. The District has verified that this facility is not located within 1,000 feet of the outer boundary of any K-12 school. Therefore, the school noticing requirements of California Health and Safety Code, Section 42301.6 do not apply.

### **IV. PROCESS DESCRIPTION**

DV produces both red and white table wines, as well as other specialty wine products, from the fermentation of grapes. During the "crush season," typically from late August to late November, both red and white grapes are received by truck and delivered to a crusher-stemmer which serves to crush the grapes and remove the stems. In the case of red wines, the resultant juice (termed "must" and containing the grape skins, pulp and seeds) is pumped to red wine fermentation tanks for fermentation, a batch process. The red wine fermentation tanks are specifically designed to ferment the must in contact with the skins and to allow the separation of the skins and seeds from the wine after fermentation. In the case of white wines, the must is sent to screens and presses for separation of grape skins and seeds prior to fermentation. After separation of the skins and seeds, the white must is transferred to a fermentation tank. White wine fermentation can be carried out in a tank without design provisions for solids separation since the skins and seeds have already been separated.

After transfer of the must (for red or white wine) to the fermentation tank, the must is inoculated with yeast which initiates the fermentation reactions. During fermentation, the yeast metabolizes the sugar in the grape juice, converting it to ethanol and carbon dioxide (CO<sub>2</sub>) while releasing heat. Temperature is typically controlled by refrigeration, and is maintained at 45–65 °F for white wine fermentation and 70–95 °F for red wine fermentation. The sugar content of the fermentation mass is measured in °Brix (weight %) and is typically 22–26° for unfermented grape juice, dropping to 4° or less at the end of fermentation. Finished ethanol concentration is no more than 20 percent by volume. Batch fermentation requires 5 days per batch for red wine and 1-2 weeks per batch for white wine. VOCs are emitted during the fermentation process along with the CO<sub>2</sub>. The VOCs consist primarily of ethanol along with small quantities of other fermentation byproducts.

Following the completion of fermentation, white wine is transferred directly to storage tanks. Red wine is first directed to the presses for separation of solids and then routed to the storage tanks. All tanks in the winery typically operate as two separate emissions units: (1) a fermentation operation during which the tank is vented directly to the atmosphere to

release the evolved CO<sub>2</sub> byproduct from the fermentation reaction; and (2) a storage operation during which the tank is closed to minimize contact with air and refrigerated to preserve the wine. Post-fermentation operations such as cold stabilization, racking, and filtration are conducted in the tanks, resulting in a number of inter-tank transfers during the period between the end of fermentation and bottling or bulk shipment. Storage operations are conducted year-round. VOC emissions occur primarily as a result of the inter-tank transfers which are necessitated by the post fermentation operations.

**V. EQUIPMENT LISTING**

***Pre-Project Equipment Description:***

This facility currently has 579 red and white wine fermentation and storage tanks with a total capacity of 46,907,839 gallons. Including the additional 44 new tanks proposed to install under project N-1113968, the facility will have 623 red and white wine fermentation and storage tanks with a total capacity of 52,003,839 gallons<sup>1</sup>.

***Post-Project Equipment Description:***

The draft ATCs includes the post-project equipment description with detail tank identification number.

Permit Unit	Equipment Description
N-266-722-0 through -729-0 (8 tanks)	25,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK (S-1 through S-8) EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE
N-266-730-0 through -737-0 (8 tanks)	13,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK (S-9 through S-16) EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE
N-266-738-0 through -741-0 (4 tanks)	7,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK (S-17 through S-20) EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

With the installation of 20 new tanks, the facility will have total of 643 red and white wine fermentation and storage tanks with a total capacity of 52,335,839 gallons (52,003,839 + 332,000).

<sup>1</sup> These values were taken from engineering evaluation N-1113968.

## VI. EMISSION CONTROL TECHNOLOGY EVALUATION

VOCs (ethanol) are emitted from the wine storage tanks as a result of both working losses (which occur when the liquid level in the tank changes) and breathing losses (expansion and contraction effects due to temperature variations). The proposed pressure/vacuum valve limits these emissions by requiring the maximum amount of variation in tank pressure before allowing the tank to vent to the atmosphere or allowing air admission to the tank. When wine storage tanks are insulated or located in a climate controlled building, breathing losses are considered to be negligible.

VOCs (ethanol) are emitted from the wine fermentation process. The proposed temperature-controlled open top tanks limit the emissions by requiring the maximum average fermentation temperature to 95°F, which is the achieved in practice control technologically for this type of operation.

## VII. EMISSIONS CALCULATIONS

### A. Assumptions

- VOC is the only pollutant concern associated to this project.
- The wine processed in the proposed tanks contains a maximum of 20% alcohol by volume.
- A daily storage tank throughput for will not exceed four times the maximum nominal tank capacity for each tank (per applicant).
- A storage tank throughput will not exceed ten times the maximum nominal tank capacity for each tank (per applicant).
- There will be a maximum of two fermentation cycles per year for each tank (per applicant).
- Other assumptions will be stated as they are made.

### B. Emission Factors (EF)

#### ***Pre-Project Emissions Factor (EF1)***

N-266-722-0 through -741-0

These are new emissions units. Therefore, EF1 is equal to zero for each unit.

#### ***Post-Project Emissions Factor (EF2)***

N-266-722-0 through -741-0

#### **Fermentation Tank:**

Emissions factors are taken from District FYI-114, *VOC Emission Factors for Wine Fermentation and Storage Tanks*, as follows:

Wine Type	EF2 (lb-VOC/1,000 gallon of wine)		Source
	Daily	Annual	
White	1.62	2.5	FYI-114
Red	3.46	6.2	FYI-114

**Storage Tank:**

Emissions factors are taken from District FYI-114, *VOC Emission Factors for Wine Fermentation and Storage Tanks*, for facility located in the Northern Region with ethanol concentration of 20% volume, as follows:

Wine Type	EF2 (lb-VOC/1,000 gallon of wine)		Source
	Daily	Annual	
White/Red	0.303	0.194	FYI-114, Table 1

**C. Potential to Emit (PE)**

**1. Daily and Annual PE**

***Pre-Project Potential Emissions (PE1)***

N-266-722-0 through -741-0

These are new emissions units. Therefore, PE1 is equal to zero for each unit.

***Post-Project Potential Emissions (PE2)***

N-266-722-0 through -741-0

**Fermentation Tank:**

Either red or white wine, the fermentation process takes longer than a day (5 days for red wine and 10 to 14 days for white wine). Therefore, maximum one turnover per day will be used to determine the potential daily emissions.

The potential daily and annual VOC emissions are determined using the red wine emissions factor, tank capacity, and turnover rate as follows:

$$\begin{aligned} \text{Daily PE2} &= EF_{\text{red}} (\text{lb-VOC}/1,000 \text{ gal}) \times \text{tank capacity} (\text{gal}/\text{tank}) \times \text{turnover rate} (\text{tank}/\text{day}) \\ \text{Annual PE2} &= EF_{\text{red}} (\text{lb-VOC}/1,000 \text{ gal}) \times \text{tank capacity} (\text{gal}/\text{tank}) \times \text{turnover rate} (\text{tank}/\text{yr}) \end{aligned}$$

Delicato Family Vineyards  
N-266-722-0 through -741-0; N-1120591

Permit Unit	Daily EF	Annual EF	Tank Capacity	Turnover rate	Turnover rate	Daily	Annual
	(lb-VOC/1,000 gal)		(gallon)	(tank/day)	(tank/yr)	(lb/day)	(lb/yr)
N-266-722-0	3.46	6.2	25,000	1	2	86.5	310
N-266-723-0			25,000			86.5	310
N-266-724-0			25,000			86.5	310
N-266-725-0			25,000			86.5	310
N-266-726-0			25,000			86.5	310
N-266-727-0			25,000			86.5	310
N-266-728-0			25,000			86.5	310
N-266-729-0			25,000			86.5	310
N-266-730-0	3.46	6.2	13,000	1	2	45.0	161
N-266-731-0			13,000			45.0	161
N-266-732-0			13,000			45.0	161
N-266-733-0			13,000			45.0	161
N-266-734-0			13,000			45.0	161
N-266-735-0			13,000			45.0	161
N-266-736-0			13,000			45.0	161
N-266-737-0			13,000			45.0	161
N-266-738-0	3.46	6.2	70,000	1	2	24.2	87
N-266-739-0			70,000			24.2	87
N-266-740-0			70,000			24.2	87
N-266-741-0			70,000			24.2	87

**Storage Tank:**

The potential daily and annual VOC emissions are determined as follows:

Daily PE2 = EF (lb-VOC/1,000 gal) x tank capacity (gal/tank) x turnover rate (tank/day)

Annual PE2 = EF (lb-VOC/1,000 gal) x tank capacity (gal/tank) x turnover rate (tank/yr)

Permit Unit	Daily EF	Annual EF	Tank Capacity	Turnover rate	Turnover rate	Daily	Annual
	(lb-VOC/1,000 gal)		(gallon)	(tank/day)	(tank/yr)	(lb/day)	(lb/yr)
N-266-722-0	0.303	0.194	25,000	4	10	30.3	49
N-266-723-0			25,000			30.3	49
N-266-724-0			25,000			30.3	49
N-266-725-0			25,000			30.3	49
N-266-726-0			25,000			30.3	49
N-266-727-0			25,000			30.3	49
N-266-728-0			25,000			30.3	49
N-266-729-0			25,000			30.3	49
N-266-730-0	0.303	0.194	13,000	4	10	15.8	25
N-266-731-0			13,000			15.8	25
N-266-732-0			13,000			15.8	25
N-266-733-0			13,000			15.8	25
N-266-734-0			13,000			15.8	25
N-266-735-0			13,000			15.8	25
N-266-736-0			13,000			15.8	25
N-266-737-0			13,000			15.8	25
N-266-738-0	0.303	0.194	70,000	4	10	8.5	14
N-266-739-0			70,000			8.5	14
N-266-740-0			70,000			8.5	14
N-266-741-0			70,000			8.5	14

However, the facility currently has a SLC of 394,298 lb-VOC/year for wine fermentation and storage operations, and the applicant is not proposing any changes to this limit.

## **2. Quarterly Emission Changes ( $\Delta$ PE)**

The Quarterly Emissions Changes (QEC) is calculated for each pollutant, for each unit, as the difference between the quarterly PE2 and the quarterly baseline emissions (BE). The annual emissions are evenly distributed throughout each quarter using the following equation:

$$\text{QEC (lb/quarter)} = [\text{Annual PE2} - \text{Annual PE1}] \text{ (lb/year)} / 4 \text{ (quarter/year)}$$

No changes to the facility-wide SLC of VOC are proposed. Therefore, QEC is equal to zero for each quarter for each permit unit.

## **3. Adjusted increase in Permitted Emissions (AIPE)**

AIPE is used to determine if Best Available Control Technology (BACT) is required for emission units that are being modified.

These are new emissions unit. Therefore, AIPE calculations are not required.

## **D. Facility Emissions**

### **1. Pre-Project Stationary Source Potential to Emit (SSPE1)**

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

This project involves only VOC emissions, and the current VOC emissions from this facility are already above the Offset and Major Source Thresholds for VOC emissions. Therefore, SSPE1 calculations are not necessary.

### **2. Post-Project Stationary Source Potential to Emit (SSPE2)**

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

This project involves only VOC emissions, and the VOC emissions of this facility are already above the Offset and Major Source Thresholds for VOC emissions. Therefore, SSPE2 calculations are not necessary.

### **3. Stationary Source Increase in Permitted Emissions (SSIPE)**

SSIPE calculations are used to determine if the project triggers public notice pursuant to District Rule 2201, § 5.4.5. If SSIPE results greater than 20,000 lb/yr for any one pollutant then project requires public notification. At this time, it is District Practice to define the SSIPE as the difference of SSPE2 to SSPE1.

This project involves only VOC emissions, and there is no change to the facility-wide SLC of VOC as a result of this project. Therefore, SSIPE<sub>VOC</sub> is equal to zero, and public notification for this purpose is not required.

### **4. Major Source Determination**

Pursuant to District Rule 2201, Section 3.24, a major source is a stationary source a Post-Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the Major Source threshold values (excluding ERCs banked onsite that have not been used onsite).

This facility is an existing Major Source of VOC emissions and will remain a Major Source of VOC emissions as a result of this project.

### **5. SB 288 Major Modification**

SB 288 Major Modification calculation is to determine the following:

- a. Pursuant to District Rule 2201, section 4.1.3, if Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification; and
- b. Pursuant to District Rule 2201, section 5.4.1, if a public notification is triggered.

As shown in Section VII.D.4 of this document, this facility is an existing Major Source for VOC emissions. In order to determine whether a SB 288 Major Modification can be triggered, the Net Emissions Increase (NEI) is calculated and is compared with the SB 288 Major Modification threshold limit of 50,000 lb-VOC/year listed on Table 3-5 of Rule 2201, section 3.36.

Tanks operating in a winery are not truly independent emissions units. Therefore, the potential annual emissions must be established with consideration of all the other associated tanks in the facility. The potential to emit from the new tanks (PE2<sub>New</sub>) is therefore determined as the difference between the post project and the pre project potential emissions from the wine production operation based on the collective physical capacity of the processing equipment at the facility. Thus,

$$NEI = \sum(PE2 - HE)$$

Since this project involves only new emissions units, and no change to the existing emission units. The historical emissions for these units are each equal to zero.

$$NEI = \sum(PE2 - HE)_{New}$$

Where:

$$HE_{New} = 0$$

$$NEI = \sum(PE2)_{New}$$

Based on the collective physical capacity of the processing equipment in this facility,  $PE2_{New}$  is calculated to 6,822 pounds VOC per year. See detail potential emissions calculations in Appendix II of this document. Thus,

$$NEI = \sum(PE2)_{New} = 6,822 \text{ lb-VOC/yr}$$

NEI is not greater than 50,000 lb-VOC/yr. Therefore, the proposed project is not considered an SB 288 Major Modification for VOC emissions.

## 6. Federal Major Modification

Federal Major Modification is to determine the following:

- a. Pursuant to Rule 2201, section 4.2.3.5, if a Rule-compliance project qualifies for District Rule 2201's Best Available Control Technology (BACT) and offset exemptions and
- b. Pursuant to Rule 2201, section 4.15.1, if an Alternate Siting analysis must be performed; and if the applicant must provide certification that all California stationary sources owned, operated, or controlled by the applicant that are subject to emission limits are in compliance with those limits or are on a schedule for compliance with all applicable emission limits and standards; and
- c. Pursuant to Rule 2201, section 5.4.1, if a public notification is triggered.

This facility is an existing Major Source for VOC emissions. In order to determine whether a Federal Major Modification can be triggered, the Net Emissions Increase (NEI) is calculated and is compared with the significant threshold limit of 0 lb-VOC/year listed on Table 3-1 of Rule 2201, section 3.18.1.4.

NEI can be calculated as the sum of the difference of the project actual emissions (PAE) and baseline actual emissions (BAE) for the emissions units involved in this project. Thus,

$$NEI = \sum(PAE - BAE)$$

Since this project involves only new emissions units, and no change to the existing emissions units. The baseline actual emissions for the new units are each equal to zero. Thus,

$$NEI = \sum(PAE - BAE)_{New}$$

Where:

$$BAE_{New} = 0$$

$$NEI = \sum(PAE)_{New}$$

As discussed above, emissions from the new tanks is equal to 6,822 pounds VOC per year. Thus,  $NEI = 6,822 \text{ lb-VOC/yr}$ .

NEI is greater than 0 lb-VOC/yr. Therefore, the proposed project is a Federal Major Modification for VOC emissions.

## VIII. COMPLIANCE

### District Rule 2201 New and Modified Stationary Source Review Rule

#### 1. Best Available Control Technology (BACT)

Pursuant to District Rule 2201, § 4.1.1, BACT requirements are triggered in a pollutant-by-pollutant basis for new emissions unit with a Potential to Emit (PE) exceeding 2.0 lb/day, unless the unit is otherwise exempt per section 4.2. Section 4.2.1 provides an exemption from BACT requirements for CO emissions if the facility is located in a CO attainment area and the  $SSPE_{2CO}$  is less than 200,000 lb/yr. As well, BACT may be triggered if the modification is an SB 288 Major Modification or Federal Major Modification per section 4.1.3.

As shown in section VII.C.1, PE of VOC emission from each new fermentation tank exceeds 2.0 lb/day. In addition, as shown in section VII.D.6, this project constitutes a Federal Major Modification. Therefore, BACT is triggered and required for each tank associated with this project.

#### Wine Storage Tanks:

BACT Guideline 5.4.13 lists VOC emissions control requirements for Wine Storage Tanks. The requirement is listed in the following table:

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible
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; and continuous storage temperature not exceeding 75 degrees F, achieved within 60 days of completion of fermentation	<ol style="list-style-type: none"> <li>1. Capture of VOC and thermal or catalytic oxidation or equivalent (98% control)</li> <li>2. Capture of VOC and carbon adsorption or equivalent (95% control)</li> <li>3. Capture of VOC and absorption or equivalent (90% control)</li> <li>4. Capture of VOC and condensation or equivalent (70% control)</li> </ol>

The "Top-Down BACT Analysis" for VOC emissions is performed in Appendix III of this document.

Pursuant to the analysis, BACT for VOC emissions has been satisfied with the following: insulated or installed indoor, pressure vacuum valve set within 10% of the maximum allowable working pressure of the tank, "gas-tight" tank operation and continuous storage temperature not exceeding 75°F, achieved within 60 days of completion of fermentation.

The following conditions will be listed on each ATC to ensure compliance with the BACT requirements:

- *When used for wine storage, 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 Rules 2201 and 4694]*
- *When this tank is used for wine storage, 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 Rules 2201 and 4694]*
- *The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694]*

Wine Fermentation Tanks:

BACT Guideline 5.4.14 lists VOC emissions control requirements for Wine Fermentation Tanks. The requirement is listed in the following table:

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible
VOC	Temperature-Controlled Open Top Tank with Maximum Average Fermentation Temperature of 95 °F	<ol style="list-style-type: none"> <li>1. Capture of VOCs and Thermal Oxidation or Equivalent (88% control)</li> <li>2. Capture of VOCs and Carbon Adsorption or Equivalent (86% control)</li> <li>3. Capture of VOCs and Absorption or Equivalent (81% control)</li> <li>4. Capture of VOCs and Condensation or Equivalent (81% control)</li> </ol>

The "Top-Down BACT Analysis" for VOC emissions is performed in Appendix III of this document.

Pursuant to the analysis, BACT for VOC emissions has been satisfied with the following: Open tank vented to the atmosphere with the average fermentation temperature not exceeding 95 °F.

The following conditions will be placed on each ATC to ensure compliance with the BACT requirements:

- *The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95°F, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201]*
- *For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and any fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rules 2201 and 4694]*

**2. Offsets**

Offsets are examined on a pollutant-by-pollutant basis, and are triggered for any pollutant with a SSPE2 equal to or greater than the values listed in § 4.5.3, table 4-1.

As discussed above, this facility is an existing Major Source for VOC emissions, and the SSPE2 of VOC exceeds the offsets threshold. Therefore, offset calculations are required, and pursuant to § 4.7.1, emission offset is calculated as the sum of differences between

the PE2 and the BE of all the new and modified emissions units, plus all increases in Cargo Carrier emissions. The emissions offset are calculated as follow:

$$\text{Emission offset} = \Sigma (\text{PE2} - \text{BE}) \times \text{DOR} + \text{ICCE}$$

Where, PE2 is post project potential to emit  
BE is baseline emissions  
DOR is the distance offset ratio determined under Rule 2201, § 4.8  
ICCE is Increase in Cargo Carrier emissions

There are no increases in Cargo Carrier emissions as result of this project, and the proposed new emissions units are located in the same stationary source, which result DOR = 1.0. Then,

$$\text{Emission offset} = \Sigma (\text{PE2} - \text{BE}) \times 1.0 + 0$$

$$\text{Emission offset} = \Sigma (\text{PE2} - \text{BE})$$

According to engineering evaluation N-1110749, all existing tanks were considered Clean Emission Units since they meet the achieved-in-practice BACT requirements for wine storage and fermentation process. All forty-four new tanks that were proposed to install under District project N-1113968 each trigger BACT. Equipment install with BACT requirements will be considered Clean Emissions Units. Thus, BE is set equal to PE1 for each existing tank. Thus,

$$\text{Emission offset} = \Sigma (\text{PE2} - \text{PE1})$$

The facility has an existing SLC of 394,298 pounds of VOC per year for wine fermentation and storage operations, and the applicant is not proposing any change to this limit as a result of this project. Therefore,

$$\begin{aligned} \text{Emission offset} &= (394,298 - 394,298) \text{ lb-VOC/yr} \\ &= 0 \text{ lb-VOC/yr} \end{aligned}$$

As indicated above, offsets are not required for this project.

### 3. Public Notification

District Rule 2201, § 5.4, requires a public notification for the affected pollutants from the following types of projects:

- New Major Sources
- Federal Major Modifications and SB 288 Major Modifications
- New emission units with a PE >100 lb/day of any one pollutant
- Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis

- New stationary sources with SSPE2 exceeding Offset thresholds
- Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant

The proposed project triggers Federal Major Modification under Rule 2201. Therefore, a 30-day public notice is required for this project.

#### **4. Daily Emission Limits (DELs)**

Daily Emissions Limitations (DELs) and other enforceable conditions are required by § 3.15 to restrict a unit's maximum daily emissions. Therefore, the following conditions will be listed on each permit:

- *The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201]*
- *The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201]*
- *The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201]*
- *When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201]*

#### **5. Compliance Assurance**

##### Source Testing

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

##### Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

##### Record Keeping

Recordkeeping is required to demonstrate compliance with the offsets, public notification and daily emission limit requirements of Rule 2201. In addition, recordkeeping is also required for winery tanks per Rule 4694. Therefore, the following conditions will be listed on each permit:

- *For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and the uncontrolled fermentation emissions and fermentation*

*emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]*

- *Records of total annual fermentation emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201]*
- *Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 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 Rules 1070, 2201 and 4694]*

#### Reporting

No reporting is required to demonstrate compliance with Rule 2201.

#### **6. Ambient Air Quality Analysis**

Per Section 4.14 of Rule 2201, ambient air quality analysis (AAQA) shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse the violation of an Ambient Air Quality Standard (AAQS).

This project involves only VOCs (mainly ethanol) for which AAQS does not exist; therefore, AAQA is not performed for this project.

#### **7. Additional Requirements for new Major Source and Federal Major Modifications**

Per Section 4.15 of Rule 2201, "Alternative Siting" and "Compliance Certification" is required for any project which constitutes a new Major Source or a Federal Major Modification.

##### Per section 4.15.1, Alternative Siting Analysis:

The current project occurs at an existing winery with a pre-project total wine tank volume of 52,335,839 gallons. The applicant proposes to install new winery tanks totaling 3,320,000 gallons in volume, which represents an increase of 0.006% of the existing total wine tank volume. In addition to winery tanks, the operation of a winery requires a large number support equipment, services and structures such as raw material receiving stations, crushers, piping, filtering and refrigeration units, warehouses, laboratories, bottling and shipping facilities, and administration buildings.

Since the current project involves only a minimal increase in the winery's total tank volume and no change to any other facets of the operation, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures and facilities on a much greater scale, and would therefore result in a much greater impact.

Per section 4.15.2, Compliance Certification:

A source undergoing a Major 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.

This project constitutes a Federal Major Modification. Therefore, compliance certification is required, and a copy of compliance certification from the facility is included in Appendix IV of this document.

Therefore, compliance with the requirements of this Rule is expected.

**District Rule 2520 Federally Mandated Operating Permits**

DV possesses a Title V permit. The proposed project is considered a Significant Modification to the Title V. Therefore, the following conditions will be listed on each permit:

- *{1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule]*
- *{1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]*

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permit (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix IV of this document)

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change except when allowed by the operational flexibility provisions of section 6.4 of this rule.

DV is expected to notify the District by filing TV Form-008 upon implementing the ATCs.

Therefore, compliance with the requirements of this Rule is expected.

#### **District 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 wine fermentation tank operations.

#### **District 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 wine fermentation tank operations.

#### **District Rule 4101 Visible Emissions**

District Rule 4101, Section 5.0, indicates that 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 dark or darker than Ringlemann 1 or equivalent to 20% opacity. Therefore, the following conditions will be listed on each permit:

- *{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]*

Compliance with the requirements of this Rule is expected.

#### **District Rule 4102 Nuisance**

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

- *{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 1905-1 (March 2, 2001) - 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.

Ethanol is not an HAP as defined by Section 44321 of the California Health and Safety Code. Therefore, a health risk assessment is not necessary and no further risk analysis is required.

Compliance with the requirements of this Rule is expected.

**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 all facilities with fermentation emissions in excess of 10 tons-VOC/year.

Section 5.1 requires the winery operator achieve Required Annual Emissions Reductions (RAER) equal to at least 35% of the winery's Baseline Fermentation Emissions (BFE). Per the definition of RAER in Section 3.25 of the Rule, the RAER may be achieved by any combination of Fermentation Emission Reductions (FER), Certified Emission Reductions (CER) or District Obtained Emission Reductions (DOER) as established in the facility's District-approved Rule 4694 Compliance Plan, due every three years on December 1<sup>st</sup> beginning in 2006. The facility has submitted the required plan to the District and is currently satisfying the required emission reductions in the form of Certified Emission Reductions.

The facility-wide permit N-266-0-0, conditions 44 enforce on-going compliance with this section.

Section 5.2 places specific restrictions on wine storage tanks with 5,000 gallons or more in capacity when such tanks are not constructed of wood or concrete. Section 5.2.1 requires these tanks to be equipped and operated with a pressure-vacuum relief valve meeting all of the following requirements:

- The pressure-vacuum relief valve shall operate within 10% of the maximum allowable working pressure of the tank,
- The pressure-vacuum relief valve shall operate in accordance with the manufacturer's instructions, and
- The pressure-vacuum relief valve shall be permanently labeled with the operating pressure settings.
- 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.

Therefore, the following conditions will be placed on the permit for each storage tank with capacity greater than 5,000 gallons and not constructed of concrete or wood to ensure compliance with the requirements of this section:

- *When used for wine storage, 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 4694]*
- *When this tank is used for wine storage, 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 4694]*

Section 5.2.2 requires that the temperature of the stored wine be maintained at or below 75°F.

The following conditions will be placed on the permit for each storage tank with capacity greater than 5,000 gallons and not constructed of concrete or wood to ensure compliance with the requirements of this section:

- *The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rule 4694]*

Every three years, Section 6.1 and 6.2 require the facility to submit a Three-Year Compliance Plan and a Three-Year Compliance Plan Verification respectively. Section 6.3 requires that an Annual Compliance Plan Demonstration be submitted to the District no later than February 1 of each year to show compliance with the applicable requirements of the Rule.

The facility-wide permit N-266-0-0, conditions 44 through 46 enforce on-going compliance with these sections.

Section 6.4 requires that records required by this rule be maintained, retained on-site for a minimum of five years, and made available to the APCO upon request. The following condition will be placed on each permit to ensure on-going compliance with this section:

- *All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694]*

Section 6.4.1 requires that records be kept for each fermentation batch. The following condition will be placed on each permit to ensure compliance with this section:

- *For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, uncontrolled fermentation emissions, and fermentation emissions reductions. The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694]*

Section 6.4.2 requires that weekly records be kept of wine volume and temperature in each storage tank. Therefore, the following conditions will be placed on the ATCs to ensure compliance with this section:

- *When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rule 4694]*
- *When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694]*

Section 6.4.3 requires that all monitoring be performed for any Certified Emission Reductions as identified in the facility's Three-Year Compliance Plan and that the records of all monitoring be maintained.

The facility-wide permit N-266-0-0, conditions 47 enforce on-going compliance with this section.

Compliance with the requirements of this Rule is expected.

#### **California Health & Safety Code 42301.6 (School Notice)**

As discussed in Section III of this document, the California Health and Safety Code 42301.6 requirement does not apply to this project.

#### **California Environmental Quality Act (CEQA)**

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

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

### **Greenhouse Gas (GHG) Significance Determination**

It is determined that another agency has prepared an environmental review document for the project. 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), (CEQA Guidelines §15381). As a Responsible Agency, the District is limited to mitigating or avoiding impacts for which it has statutory authority. The District does not have statutory authority for regulating greenhouse gas emissions. The District has determined that the applicant is responsible for implementing greenhouse gas mitigation measures, if any, imposed by the Lead Agency.

### **District CEQA Findings**

The County of San Joaquin (County) is the public agency having principal responsibility for approving the Project. As such, the County served as the Lead Agency for the project. Consistent with CEQA Guidelines §15070, a Negative Declaration was prepared and certified by the County.

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), (CEQA Guidelines §15381). As a Responsible Agency the District complies with CEQA by considering the Negative Declaration prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project (CEQA Guidelines §15096). The District has considered the Negative Declaration certified by the County.

The District's engineering evaluation of the project (this document) demonstrates that compliance with District rules and permit conditions would reduce Stationary Source emissions from the project to levels below the District's thresholds of significance for criteria pollutants. Thus, the District concludes that through a combination of project design elements and permit conditions, project specific stationary source emissions will be reduced to less than significant levels. The District has determined that no additional findings are required (CEQA Guidelines §15096(h)).

**IX. RECOMMENDATION**

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authorities to Construct N-266-722-0 through N-266-741-0 subject to the permit conditions listed on the attached draft Authorities to Construct in Appendix I.

**X. BILLING INFORMATION**

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-266-722-0 Through N-266-729-0 (total 8 tanks)	3020-05-C (20,000 or Greater but less than 50,000 gallon)	25,000 gallons	\$ 135 (each)
N-266-730-0 Through N-266-737-0 (total 8 tanks)	3020-05-B (5,000 or Greater but less than 20,000 gallon)	13,000 gallons	\$ 93 (each)
N-266-738-0 Through N-266-741-0 (total 4 tanks)	3020-05-B (5,000 or Greater but less than 20,000 gallon)	7,000 gallons	\$ 93 (each)

**APPENDICES**

- Appendix I: Draft Authorities to Construct (ATC)*
- Appendix II: Potential Emissions Calculations*
- Appendix III: BACT Guidelines & Top-Down BACT Analyses*
- Appendix IV: Compliance Certification*

## **Appendix I**

Draft Authorities to Construct (ATC)

N-266-678-0 through N-266-721-0

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-722-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

**EQUIPMENT DESCRIPTION:**

25,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-1 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

**DAVID WARNER**, Director of Permit Services

N-266-722-0; May 17 2012 3:05PM - BDW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT

PERMIT NO: N-266-723-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
25,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-2 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director YAPCO

DAVID WARNER, Director of Permit Services

N-266-723-0 : May 17 2012 3:06PM - SOW : Joint inspection NOT Required

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718 • (209) 557-6400 • Fax (209) 557-6475

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-724-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
25,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-3 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DRAFT**

DAVID WARNER, Director of Permit Services  
N-266-724-0; May 17 2012 3:06PM - SCW : Joint Inspection NOT Required

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718 • (209) 557-6400 • Fax (209) 557-6475

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**DRAFT**  
ISSUANCE DATE: DRAFT

PERMIT NO: N-266-725-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

**EQUIPMENT DESCRIPTION:**

25,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-4 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCD

**DRAFT**

DAVID WARNER, Director of Permit Services

N-266-725-0 - May 17 2012 3:05PM - SOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-726-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
25,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-5 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DRAFT**

DAVID WARNER, Director of Permit Services

N-266-726-0; May 17 2012 3:05PM - BOW ; Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-727-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
25,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-6 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DRAFT**

DAVID WARNER, Director of Permit Services  
N-266-727-0; May 17 2012 3:05PM - SOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-728-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
25,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-7 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DRAFT**

DAVID WARNER, Director of Permit Services

N-266-728-0 : May 17 2012 3:05PM - 50W : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-729-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
25,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-8 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

**DRAFT**

DAVID WARNER, Director of Permit Services

N-266-729-0 : May 17 2012 3:05PM - SOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-730-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
13,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-9 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DRAFT**  
DAVID WARNER, Director of Permit Services

N-266-730-0; May 17 2012 3:05PM - SOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-731-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
13,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-10 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCD

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DAVID WARNER, Director of Permit Services

N-266-731-0; May 17 2012 3:05PM - SOW ; Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT

PERMIT NO: N-266-732-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
13,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-11 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

N-266-732-0 : May 17 2012 3:05PM - SOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-733-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
13,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-12 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DRAFT**

DAVID WARNER, Director of Permit Services

N-266-733-0 : May 17 2012 3:05PM - ROW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-734-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
13,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-13 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DRAFT**

DAVID WARNER, Director of Permit Services

N-266-734-0; May 17 2012 3:05PM - SCW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-735-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

**EQUIPMENT DESCRIPTION:**

13,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-14 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

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DAVID WARNER, Director of Permit Services  
N-266-735-0 : May 17 2012 3:05PM - 6CW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-736-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

**EQUIPMENT DESCRIPTION:**

13,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-15 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of Issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

**DAVID WARNER**, Director of Permit Services

N-266-736-0 - May 17 2012 3:05PM -- SOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT

PERMIT NO: N-266-737-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

**EQUIPMENT DESCRIPTION:**

13,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-16 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

N-266-737-0 : May 17 2012 3:05PM - BOW : Joint Inspection NOT Required

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718 • (209) 557-6400 • Fax (209) 557-6475

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT

PERMIT NO: N-266-738-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
7,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-17 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCD

DAVID WARNER, Director of Permit Services

N-266-738-0 : May 17 2012 3:09PM - BOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-739-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

EQUIPMENT DESCRIPTION:  
7,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-18 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

**DRAFT**

DAVID WARNER, Director of Permit Services

N-266-739-0; May 17 2012 3:06PM - SOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

DRAFT  
CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-266-740-0

**LEGAL OWNER OR OPERATOR:** DELICATO VINEYARDS  
**MAILING ADDRESS:** 12001 S HIGHWAY 99  
MANTECA, CA 95336

**LOCATION:** 12001 S HIGHWAY 99  
MANTECA, CA 95336

**EQUIPMENT DESCRIPTION:**  
7,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-19 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The daily VOC emissions rate for white wine fermentation shall not exceed 1.62 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

**YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT.** This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

**DRAFT**

DAVID WARNER, Director of Permit Services

N-266-740-0; May 17 2012 3:00PM - SOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
9. The temperature of the wine stored in this tank shall be maintained at or below 75 degrees Fahrenheit. The temperature of the stored wine shall be determined and recorded at least once per week. For each batch of wine, the operator shall achieve the storage temperature of 75 degrees Fahrenheit or less within 60 days after completing fermentation, and shall maintain records to show when the required storage temperature of 75 degrees Fahrenheit or less was achieved. [District Rules 2201 and 4694, 5.2.2] Federally Enforceable Through Title V Permit
10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-266-741-0

LEGAL OWNER OR OPERATOR: DELICATO VINEYARDS  
MAILING ADDRESS: 12001 S HIGHWAY 99  
MANTECA, CA 95336

LOCATION: 12001 S HIGHWAY 99  
MANTECA, CA 95336

**EQUIPMENT DESCRIPTION:**

7,000 GALLON, INSULATED, STAINLESS STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK S-20 EQUIPPED WITH PRESSURE/VACUUM RELIEF VALVE

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
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4. The daily VOC emissions rate for red wine fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
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6. The average fermentation temperature of each batch of must fermented in this tank shall not exceed 95 degrees Fahrenheit, calculated as the average of all temperature measurements for the batch taken at least every 12 hours over the course of the fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCD

**DRAFT**

DAVID WARNER, Director of Permit Services

N-266-741-0: May 17 2012 3:06PM - SOW : Joint Inspection NOT Required

7. When used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
8. When this tank is used for wine storage, 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 Rules 2201 and 4694, 5.2.1] Federally Enforceable Through Title V Permit
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10. The ethanol content of wine stored in this tank shall not exceed 20 percent by volume. [District Rule 2201] Federally Enforceable Through Title V Permit
11. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed ten times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
12. For each batch of must fermented in this tank, the operator shall record the fermentation completion date, the total gallons of must fermented, the average fermentation temperature and uncontrolled fermentation emissions and fermentation emission reductions (calculated per the emission factors given in District Rule 4694). The information shall be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine. [District Rule 4694, 6.4.1]
13. When this tank is used for wine storage, the operator shall record, on a weekly basis, the total gallons of wine contained in the tank and the maximum temperature of the stored wine. [District Rule 4694, 6.4.2]
14. When this tank is used for wine storage, daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 394,298 pounds. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Total annual VOC emissions from wine fermentation operations shall be determined by the following formula: Total annual VOC emissions = (Total Annual Red Wine Production - gallons) x (6.2 lb-VOC/1,000 gallons) + (Total Annual White Wine Production - gallons) x (2.5 lb-VOC/1,000 gallons). [District Rule 2201] Federally Enforceable Through Title V Permit
17. Total annual VOC emissions from wine storage operations shall be determined either as the sum of the emissions for each individual wine movement based on the volume transferred in each wine movement and the batch-specific wine storage emission factor calculated using the equation(s) specified within this permit; or as the emissions for total annual wine movements and a single storage emissions factor, calculated using the equation(s) specified within this permit, based on the average ethanol content of the total annual wine movements. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume %,  $a = -4.5139E-5$ ,  $b = 0.01088$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
19. Records of total annual fermentation and total annual storage emissions, including calculation methods and parameters used, shall be maintained. [District Rule 1070 and 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Separate annual records of total red wine and total white wine produced by fermentation at this facility, based on values reported to the Alcohol and Tobacco Tax and Trade Bureau (TTB), U.S. Department of the Treasury, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
21. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

**DRAFT**

## **Appendix II**

### Potential Emissions Calculations

# Potential Emissions Calculations

## 1. Potential to Emit (existing tanks)

The potential annual VOCs from fermentation and storage operations at this winery are determined as follows:

### White Wine Fermentation

$$\begin{aligned} W1 &= C \times D_w \times M \text{ (limited by crusher capacity)} \\ W2 &= P \times D_w \times M \text{ (limited by pressing capacity)} \\ W3 &= (V_{FW} \times D_w) / W_{FW} \text{ (limited by white fermenter volume)} \\ W4 &= (V_T \times D_w) / R_{TW} \text{ (limited by overall tank processing)} \end{aligned}$$

Where,

$$\begin{aligned} C &= \text{grape crushing capacity} \\ &= 4,000 \text{ tons/day} \\ D_w &= \text{days in a white wine crush season} \\ &= 120 \text{ days} \\ M &= \text{amount of juice produced per ton of grapes crushed} \\ &= 200 \text{ gal/ton} \\ P &= \text{pressing capacity} \\ &= 7,920 \text{ tons/day} \\ W_{FW} &= \text{white fermentation period} \\ &= 10 \text{ days} \\ R_{TW} &= \text{total winery retention time for white wine} \\ &= 40 + 10 \\ &= 50 \text{ days} \\ V_{FW} &= \text{total volume of white wine fermenters} \\ &= 46,907,839 \text{ gal (Per Section V of this document)} \\ V_T &= \text{total winery cooperage} \\ &= 46,907,839 \text{ gal (Per Section V of this document)} \end{aligned}$$

Using the above parameters,

$$\begin{aligned} W1 &= (4,000 \times 120 \times 200) &= & 96.00 \text{ MG/year} \\ W2 &= (7,920 \times 120 \times 200) &= & 190.08 \text{ MG/year} \\ W3 &= (52,003,839 \times 120) / 10 &= & 624.05 \text{ MG/year} \\ W4 &= (52,003,839 \times 120) / 50 &= & 124.81 \text{ MG/year} \end{aligned}$$

Delicato Vineyards is requesting to install 20 new tanks. These tanks will result an increase facility's storage and fermentation capacities. Therefore, crushing capacity and pressing capacity (W1 and W2) are not considered from the analysis. Only the fermenter volume and overall tank processing (W3 and W4) are compared.

$$\begin{aligned} W_w &= W4 \text{ (lesser of } W3, W4) \\ &= 124.81 \text{ MG/year} \end{aligned}$$

The potential white wine fermentation emissions would be:

$$PE1_{white} = E_{fw} \times W_w$$

Where:

$$E_{fw} = \text{white wine emission factor} \\ = 2.5 \text{ lb-VOC/1,000 gal (Per Section VII.B of this document)}$$

$$PE1_{white} = (2.5 \text{ lb-VOC/1,000 gal}) \times (124.81 \times 10^6 \text{ gal/yr}) \\ = 312,025 \text{ lb-VOC/year}$$

#### White Wine Storage Emissions:

Storage emissions are calculated as follows:

$$PE1_{white} = E_s \times T \times W_w$$

Where,

$E_s$  = wine storage emission factor based on District FYI-114 (Revised 8/10/11). The existing tanks allow them to use store 20% alcohol by volume. Thus,  $E_s$  is equal to 0.194 lb-VOC/1,000 gal.

$T$  = total post fermentation inter-tank transfers per batch of wine  
= 8

$W_w$  = 124.81 MG/year (determined above)

$$PE1_{white} = (0.194 \text{ lb-VOC/1,000 gal}) \times (8) \times (124.81 \times 10^6 \text{ gal/year}) \\ = 193,705 \text{ lb-VOC/year}$$

#### Total PE for White Wine Production:

Potential emissions from 100% white wine production scenario are then determined as follows:

$$PE1_{white} = PE1_{white \text{ fermentation}} + PE1_{white \text{ storage}} \\ = 312,025 \text{ lb-VOC/year} + 193,705 \text{ lb-VOC/year} \\ = 505,730 \text{ lb-VOC/year}$$

#### Red Wine Fermentation Emissions:

$W1 = C \times D_r \times M$  (limited by crusher capacity)

$W2 = P \times D_r \times M$  (limited by pressing capacity)

$W3 = (V_{FR} \times F \times D_r)/R_{FR}$  (limited by red fermenter volume)

$W4 = (V_T \times D_r)/R_{TS}$  (limited by overall tank processing)

Where,

$C$  = grape crushing capacity  
= 4,000 tons/day

$D_r$  = days in a red wine crush season  
 = 120 days  
 $F$  = Fill factor for red wine fermentation  
 = 80%  
 $M$  = amount of juice produced per ton of grapes crushed  
 = 200 gal/ton  
 $P$  = pressing capacity  
 = 4,320 tons/day  
 $R_{FR}$  = red fermentation period  
 = 5 days  
 $R_{TS}$  = total winery retention time for red wine,  
 = 40 + 5  
 = 45 days  
 $V_{FR}$  = total volume of red wine fermenters  
 = 52,003,839 gal  
 $V_T$  = total winery cooperage  
 = 52,003,839 gal

Using the above parameters,

$W1 = (4,000 \times 120 \times 200) = 96.00 \text{ MG/year}$   
 $W2 = (4,320 \times 120 \times 200) = 103.68 \text{ MG/year}$   
 $W3 = (52,003,839 \times 0.8 \times 120) / 5 = 998.47 \text{ MG/year}$   
 $W4 = (52,003,839 \times 120) / 45 = 138.68 \text{ MG/year}$

Delicato Vineyards is requesting to install 20 new tanks. These tanks will result an increase facility's storage and fermentation capacities. Therefore, crushing capacity and pressing capacity ( $W1$  and  $W2$ ) are not considered from the analysis. Only the fermenter volume and overall tank processing ( $W3$  and  $W4$ ) are compared.

$W_R = W4$  (lesser of  $W3$ ,  $W4$ )  
 = 138.68 MG/year

The potential red wine fermentation emissions would be:

$$PE1_{red} = E_{fr} \times W_R$$

Where,

$E_{fr}$  = red wine emission factor  
 = 6.2 lb-VOC/1,000 gal (Per Section VII.B of this document)

$$\begin{aligned}
 PE1_{red} &= (6.2 \text{ lb-VOC/1,000 gal}) \times (138.68 \times 10^6 \text{ gal/yr}) \\
 &= 859,816 \text{ lb-VOC/year}
 \end{aligned}$$

Red Wine Storage Emissions:

Storage emissions are calculated as follows:

$$PE1_{red} = E_s \times T \times W_R$$

Where:

$E_s$  = wine storage emission factor based on District FYI-114. The existing tanks allow them to use store 20% alcohol by volume. Thus,  $E_s$  is equal to 0.194 lb-VOC/1,000 gal.

$T$  = total post fermentation inter-tank transfers per batch of wine  
= 8

$W_R$  = 138.68 MG/year (determined above)

$$\begin{aligned} PE1_{red} &= (0.194 \text{ lb-VOC}/1,000 \text{ gal}) \times (8) \times (138.68 \times 10^6 \text{ gal/yr}) \\ &= 215,231 \text{ lb-VOC/year} \end{aligned}$$

Total PE for Red Wine Production:

Potential emissions from 100% red wine production scenario are then determined as follows:

$$\begin{aligned} PE1_{red} &= PE1_{red \text{ fermentation}} + PE1_{red \text{ storage}} \\ &= 859,816 \text{ lb-VOC/year} + 215,231 \text{ lb-VOC/year} \\ &= 1,075,047 \text{ lb-VOC/year} \end{aligned}$$

Summary:

The facility's emissions potential for fermentation and storage operations is then taken to be the greater of the white or red emissions potential determined above.

$$\begin{aligned} PE1 &= \text{greater of } PE1_{white} \text{ and } PE1_{red} \\ &= \mathbf{1,075,047 \text{ lb-VOC/year}} \end{aligned}$$

## 2. Potential to Emit (existing plus new tanks)

The potential annual VOCs from fermentation and storage operations at this winery are determined as follows:

### White Wine Fermentation

$$\begin{aligned} W1 &= C \times D_w \times M \text{ (limited by crusher capacity)} \\ W2 &= P \times D_w \times M \text{ (limited by pressing capacity)} \\ W3 &= (V_{FW} \times D_w) / W_{FW} \text{ (limited by white fermenter volume)} \\ W4 &= (V_T \times D_w) / R_{TW} \text{ (limited by overall tank processing)} \end{aligned}$$

Where,

$$\begin{aligned} C &= \text{grape crushing capacity} \\ &= 4,000 \text{ tons/day} \\ D_w &= \text{days in a white wine crush season} \\ &= 120 \text{ days} \\ M &= \text{amount of juice produced per ton of grapes crushed} \\ &= 200 \text{ gal/ton} \\ P &= \text{pressing capacity} \\ &= 7,920 \text{ tons/day} \\ W_{FW} &= \text{white fermentation period} \\ &= 10 \text{ days} \\ R_{TW} &= \text{total winery retention time for white wine} \\ &= 40 + 10 \\ &= 50 \text{ days} \\ V_{FW} &= \text{total volume of white wine fermenters} \\ &= 52,335,839 \text{ gal} \\ V_T &= \text{total winery cooperage} \\ &= 52,335,839 \text{ gal} \end{aligned}$$

Using the above parameters,

$$\begin{aligned} W1 &= (4,000 \times 120 \times 200) &= & 96.00 \text{ MG/year} \\ W2 &= (7,920 \times 120 \times 200) &= & 190.08 \text{ MG/year} \\ W3 &= (52,335,839 \times 120) / 10 &= & 628.03 \text{ MG/year} \\ W4 &= (52,335,839 \times 120) / 50 &= & 125.61 \text{ MG/year} \end{aligned}$$

Delicato Vineyards is requesting to install 44 new tanks. These tanks will result an increase facility's storage and fermentation capacities. Therefore, crushing capacity and pressing capacity (W1 and W2) are not considered from the analysis. Only the fermenter volume and overall tank processing (W3 and W4) are compared.

$$\begin{aligned} W_w &= W4 \text{ (lesser of } W3, W4) \\ &= 125.61 \text{ MG/year} \end{aligned}$$

The potential white wine fermentation emissions would be:

$$PE2_{white} = E_{fw} \times W_W$$

Where:

$$E_{fw} = \text{white wine emission factor} \\ = 2.5 \text{ lb-VOC/1,000 gal (Per Section VII.B of this document)}$$

$$PE2_{white} = (2.5 \text{ lb-VOC/1,000 gal}) \times (125.61 \times 10^6 \text{ gal/yr}) \\ = 314,025 \text{ lb-VOC/year}$$

#### White Wine Storage Emissions:

Storage emissions are calculated as follows:

$$PE2_{white} = E_s \times T \times W_w$$

Where,

$E_s$  = wine storage emission factor based on District FYI-114. The existing tanks allow them to use store 20% alcohol by volume. Thus,  $E_s$  is equal to 0.194 lb-VOC/1,000 gal.

$T$  = total post fermentation inter-tank transfers per batch of wine  
= 8

$W_w = 125.61 \text{ MG/year (determined above)}$

$$PE2_{white} = (0.194 \text{ lb-VOC/1,000 gal}) \times (8) \times (125.61 \times 10^6 \text{ gal/year}) \\ = 194,947 \text{ lb-VOC/year}$$

#### Total PE for White Wine Production:

Potential emissions from 100% white wine production scenario are then determined as follows:

$$PE2_{white} = PE2_{white \text{ fermentation}} + PE2_{white \text{ storage}} \\ = 314,025 \text{ lb-VOC/year} + 194,947 \text{ lb-VOC/year} \\ = 508,972 \text{ lb-VOC/year}$$

#### Red Wine Fermentation Emissions:

$W1 = C \times D_r \times M$  (limited by crusher capacity)

$W2 = P \times D_r \times M$  (limited by pressing capacity)

$W3 = (V_{FR} \times F \times D_r)/R_{FR}$  (limited by red fermenter volume)

$W4 = (V_T \times D_r)/R_{TS}$  (limited by overall tank processing)

Where,

$C$  = grape crushing capacity  
= 4,000 tons/day

$D_r$  = days in a red wine crush season  
 = 120 days  
 $F$  = Fill factor for red wine fermentation  
 = 80%  
 $M$  = amount of juice produced per ton of grapes crushed  
 = 200 gal/ton  
 $P$  = pressing capacity  
 = 4,320 tons/day  
 $R_{FR}$  = red fermentation period  
 = 5 days  
 $R_{TS}$  = total winery retention time for red wine,  
 = 40 + 5  
 = 45 days  
 $V_{FR}$  = total volume of red wine fermenters  
 = 52,335,839 gal  
 $V_T$  = total winery cooperage  
 = 52,335,839 gal

Using the above parameters,

$W1 = (4,000 \times 120 \times 200) = 96.00 \text{ MG/year}$   
 $W2 = (4,320 \times 120 \times 200) = 103.68 \text{ MG/year}$   
 $W3 = (52,335,839 \times 0.8 \times 120) / 5 = 1,004.85 \text{ MG/year}$   
 $W4 = (52,335,839 \times 120) / 45 = 139.56 \text{ MG/year}$

Delicato Vineyards is requesting to install 44 new tanks. These tanks will result an increase facility's storage and fermentation capacities. Therefore, crushing capacity and pressing capacity ( $W1$  and  $W2$ ) are not considered from the analysis. Only the fermenter volume and overall tank processing ( $W3$  and  $W4$ ) are compared.

$W_R = W4$  (lesser of  $W3$ ,  $W4$ )  
 = 139.56 MG/year

The potential red wine fermentation emissions would be:

$$PE2_{red} = E_{fr} \times W_R$$

Where,

$E_{fr}$  = red wine emission factor  
 = 6.2 lb-VOC/1,000 gal (Per Section VII.B of this document)

$$\begin{aligned}
 PE2_{red} &= (6.2 \text{ lb-VOC/1,000 gal}) \times (139.56 \times 10^6 \text{ gal/yr}) \\
 &= 865,272 \text{ lb-VOC/year}
 \end{aligned}$$

Red Wine Storage Emissions:

Storage emissions are calculated as follows:

$$PE2_{red} = E_s \times T \times W_R$$

Where:

$E_s$  = wine storage emission factor based on District FYI-114. The existing tanks allow them to use store 20% alcohol by volume. Thus,  $E_s$  is equal to 0.194 lb-VOC/1,000 gal.

$T$  = total post fermentation inter-tank transfers per batch of wine  
= 8

$W_R$  = 139.56 MG/year (determined above)

$$PE2_{red} = (0.194 \text{ lb-VOC}/1,000 \text{ gal}) \times (8) \times (139.56 \times 10^6 \text{ gal/yr})$$
$$= 216,597 \text{ lb-VOC/year}$$

Total PE for Red Wine Production:

Potential emissions from 100% red wine production scenario are then determined as follows:

$$PE2_{red} = PE2_{red \text{ fermentation}} + PE2_{red \text{ storage}}$$
$$= 865,272 \text{ lb-VOC/year} + 216,597 \text{ lb-VOC/year}$$
$$= 1,081,869 \text{ lb-VOC/year}$$

Summary:

The facility's emissions potential for fermentation and storage operations is then taken to be the greater of the white or red emissions potential determined above.

$$PE2 = \text{greater of } PE2_{white} \text{ and } PE2_{red}$$
$$= 1,081,869 \text{ lb-VOC/year}$$

**3. Potential to Emit (new tanks)**

The potential emissions from new tanks would be calculated as the difference between the post project and pre project potential emissions based on physical capacity. Thus,

Potential Emissions Based on Physical Capacity of Wine Processing Equipment			
Category	Fermentation (lb-VOC/yr)	Storage (lb-VOC/yr)	Total (lb-VOC/yr)
Pre Project	859,816	215,231	1,075,047
Post Project	865,272	216,597	1,081,869
PE2 <sub>N</sub>	5,456	1,366	6,822

## **Appendix III**

### **BACT Guidelines & Top-Down BACT Analyses**

San Joaquin Valley  
Unified Air Pollution Control District

**Best Available Control Technology (BACT) Guideline 5.4.13\***

Last Update 10/6/2009

**Wine Storage Tank**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	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; and continuous storage temperature not exceeding 75 degrees F, achieved within 60 days of completion of fermentation.	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 absorption or equivalent (90% control)  4. Capture of VOCs and condensation or equivalent (70% control)	

\*\*Tanks made of heat-conducting materials such as stainless steel may be insulated or stored indoors (in a completely enclosed building, except for vents, doors and other essential openings) to limit exposure of diurnal temperature variations. Tanks made entirely of non-conducting materials such as concrete and wood (except for fittings) are considered self-insulating.

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

**\*This is a Summary Page for this Class of Source**

## Top-Down BACT Analysis for VOCs from Wine Storage Operations

### Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse guideline 5.4.13, 2nd quarter 2012, identifies achieved in practice and technologically feasible BACT for wine storage tanks as follows:

- 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; and continuous storage temperature not exceeding 75 degrees F, achieved within 60 days of completion of fermentation.
- 2) Capture of VOCs and thermal or catalytic oxidation or equivalent (98% control)
- 3) Capture of VOCs and carbon adsorption or equivalent (95% control)
- 4) Capture of VOCs and absorption or equivalent (90% control)
- 5) Capture of VOCs and condensation or equivalent (70% control)

*\*\*Tanks made of heat-conducting materials such as stainless steel 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. Tanks made entirely of non-conducting materials such as concrete and wood (except for fittings) are considered self-insulating.*

### Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

### Step 3 - Rank Remaining Control Technologies by Control Effectiveness

Rank by Control Effectiveness			
Rank	Option	Control	Overall Capture & Control Efficiency <sup>2</sup>
1	2	Capture of VOCs and thermal or catalytic oxidation	98 %
2	3	Capture of VOCs and carbon adsorption	95 %
3	4	Capture of VOCs and absorption.	90 %
4	5	Capture of VOCs and condensation	70 %
5	1	Insulated tank, pressure/vacuum valve set within 10% of the maximum allowable working pressure of the tank, "gas tight" tank operation and 75°F tank temperature control as defined in District Rule 4694. (Achieved in Practice and Industry Standard)	0 %

<sup>2</sup> Relative to "industry standard"

#### Step 4 - Cost Effectiveness Analysis

A cost-effective analysis is performed for each control technology which is more effective than meeting the requirements of District Rule 4694 plus tank insulation (achieved-in-practice BACT), as proposed by Delicato. The cost-effectiveness analysis will be performed based on the following:

- Since the most cost effective approach will be achieved by installing a common control device for multiple tanks, the analysis will be based on this approach.
- To expand the scope and generality of this BACT, the cost-effectiveness analysis will be based on a hypothetical "industry-typical" storage tank operation consisting of a battery of twelve (12) storage tanks each with a capacity of 200,000 gallons. Total annual throughput for the hypothetical tank battery is 39.6 million gallons per year based on an individual annual throughput of 3,300,000 gallons per year each (equivalent to almost 17 turns per year of each storage tank versus an estimated industry average of 6 turns per tank<sup>3</sup>). Total throughput subject to VOC control by a common VOC control device is thus 39.6 MMgal/year. Based on economies of scale, it is obvious that any control found to not be cost-effective at this level of throughput would be even less cost-effective at lower capacities (such as proposed for this project with a total annual throughput of 3.32 million gallons per year).

#### Industry Standard

During the development of District Rule 4694, it was determined that use of pressure/vacuum valves and some level of refrigeration on wine storage tanks is a standard operation for large wineries in the San Joaquin Valley. Additionally, essentially all storage tanks are insulated. This was directly confirmed with four large wineries: Mission Bell (Madera), Gallo-Livingston, Bronco, and Robert Mondavi. Based on this, the wine storage tank VOC control requirements of District Rule 4694 and tank insulation are also determined to be "industry standard".

The emission factor for "industry standard" operation is determined based on Table 1 of the District's FYI-114, Estimating Emissions from Wine Storage Tanks, for an insulated storage tank with up to 20% ethanol content in the wine being stored:

$E_f$  (industry standard) = 0.194 lb-VOC/1000 gal of wine throughput

#### Uncontrolled emissions for Twelve-Tank Battery

Uncontrolled Emissions	= Gallons Throughput/year × 0.194 lb-VOC/1000 gallons
	= (39.6 × 10 <sup>6</sup> gal/year) × (0.194 lb-VOC/1000 gal)
Uncontrolled Emissions	= 7,682 lb/year

<sup>3</sup> Per discussions with the Wine Institute (Bob Calvin of Constellation Wines) during Rule 4694 development (8/16/05)

## Capture of VOCs with Thermal or Catalytic Oxidation/ Carbon Adsorption/Absorption or Condensation (Options 2,3,4, and 5)

A common feature of all of these options is that they require installation of a collection system for delivering the VOCs from the tanks to the common control device. The analysis below indicates that these options are not cost effective by showing that just the annualized direct cost for the ductwork of the collection system and supporting structural steel and foundations alone is too large, when considered at the District's cost effectiveness threshold for VOC BACT, to justify the capital investment required by these options. This approach ignores additional major costs for the actual control device and its installation and for equipment sterilization systems for ductwork and control device, instrumentation and control systems for isolation of individual tanks in the battery, site specific factors due to limited plot space (known to be a significant factor at all wineries), and operating and maintenance costs for each system. Should all these additional cost factors be included, the calculated cost effectiveness would be substantially higher than indicated below.

### **a. Control Efficiency**

Option 2 is capable of a 98% reduction in VOC emissions while the remaining options under consideration have lesser control efficiencies. Showing that all of the options under consideration are not cost effective at a 98% reduction level based on capital investment requirements of ductwork and steel alone is adequate since options other than thermal/catalytic oxidation would be even less cost effective at their actual (lower) reduction levels.

$$\begin{aligned}\text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.98 \\ &= 7,682 \text{ lb-VOC/year} \times 0.98 \\ &= 7,528 \text{ lb-VOC/year} \\ &= 3.76 \text{ tons-VOC/year}\end{aligned}$$

### **b. Capital Investment for Installation of a VOC Collection System**

#### Design and Estimate Basis:

- The basis and approach for the capital cost estimate for ductwork and support steel is summarized in BACT Attachment 1.
- The collection system consists of stainless steel plate ductwork (stainless steel is required due to cleanliness and sterilization requirements for wine quality considerations and due to the food grade product status) with isolation valving, connecting twelve 200,000 gallon 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, will not be included in the cost estimate.
- A minimum duct size is established at 6 inches diameter at each tank to ensure minimal backpressure of the tank during filling operations and to provide adequate strength for spanning between supports. The main header is 12" diameter to handle the potential for simultaneously venting all tanks based on a potential fill rate of 1000 gpm for each tank (per applicant) and a duct velocity of 2000 feet per minute.

- The ductwork is designed with features to facilitate clean-in-place (CIP) operation to allow for periodic sterilization procedures as required for food grade products. The CIP system includes strategically placed spray nozzles on the ductwork for injecting sterilizing solutions into the system. Cost impacts to install CIP systems to clean the ducting are not included in the cost estimate.
- The ductwork is supported on a structural steel piperack mounted on drilled concrete piers, running through the new tank battery. Ducting elevations are established to allow continuous free draining to the separator located at the control device.
- Unit Installed Costs for Ductwork: A direct cost estimate for 12" diameter stainless steel ductwork, installed in a San Joaquin Valley winery, was taken from a study prepared by Eichleay Engineering for the Wine Institute in conjunction with development of District Rule 4694.<sup>4</sup> 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. BACT Attachment 1 presents the development of unit installed costs for stainless steel ducting based on the costs derived from the Eichleay estimate.
- Linear feet of ducting required was extracted from the Eichleay Estimate for a similar system at Gallo-Livingston (See BACT Attachment 1 in project C1090293).
- Costs for structural steel supports and foundations were extracted from the Eichleay Estimate for a similar system at Gallo-Livingston (See BACT Attachment 1 in project C1090293).
- Sales tax of 8% was applied to all materials.
- Indirect costs include Engineering, Construction Expense and Contractor's Fee and Contingency. Factors for these costs are taken from Peters & Timmerhaus<sup>5</sup>.
- Capital costs taken from the Eichleay estimate are 2005 dollars. These are escalated to 2012 based on 3% overall escalation per year.

#### Capital Investment (for ductwork and steel supports)

Fixed Capital Investment is summarized in the following table:

<sup>4</sup> Eichleay Engineers of California, Fermenter VOC Emissions Control Cost Estimate (Revision 1), Eichleay Project Numbers 30892 and 30913, June 30, 2005

<sup>5</sup> Peters & Timmerhaus, Plant Design and Economics for Chemical Engineers, 2<sup>nd</sup> Edition, McGraw-Hill, 1968, p.140.

**Fixed Capital Investment for Options 2, 3, 4 and 5**

Item	Qty	Unit	Unit Material Cost	Total Item Material Cost	Unit Labor Cost	Total Item Labor Cost	Unit Subcontract Price	Total Item Subcontract Cost	Total Item Direct Cost
<b>Direct Cost</b>									
6" Dia. Ducting	75	ft	\$32.11	\$2,408	\$29.20	\$2,190			\$4,598
12" Dia. Ducting	870	ft	\$75.33	\$65,537	\$68.49	\$59,586			\$125,123
Drilled Piers	32	ea.					\$1,000.00	\$32,000	\$32,000
Structural Steel Supports	1	lot	\$45,273	\$287,630	\$45,273	\$45,273			\$332,903
<b>Direct Cost Subtotals</b>				\$355,575		\$107,049		\$32,000	\$494,624
Sales Tax				\$28,446					\$28,446
<b>Total Direct Cost</b>				\$384,021		\$107,049		\$32,000	\$523,070
<b>Indirect Costs</b>									
Engineering @ 15% of Direct Cost									\$78,461
Construction Expense and Contractor's Fee @ 20% of Direct Cost									\$104,614
Contingency @ 15% of Fixed Capital Investment									\$124,614
<b>Fixed Capital Investment (2005 Cost)</b>									\$830,759
Escalation to 2012 @ 3%/year									\$190,970
<b>Fixed Capital Investment (2012 Cost)</b>									\$1,021,730

Annualized Capital Investment and Cost Effectiveness (based on ductwork):

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

Amortization Factor = 0.163 per District policy, amortizing over 10 years at 10%

Therefore,

Annualized Capital Investment = \$1,021,730 × 0.163 = \$166,542

Cost Effectiveness = Annualized Cost/Annual Emission Reductions

**Cost Effectiveness = \$166,542/3.76 tons-VOC = \$44,293/ton-VOC**

As shown above, the cost of VOC reduction by capture of VOCs with thermal or catalytic oxidation, carbon adsorption, absorption or condensation would be greater than the \$17,500/ton cost effectiveness threshold for VOC in the District BACT policy, based only on the direct cost required for the collection ducting. Therefore these options are not cost-effective and will not be considered for this project.

**Step 5 - Select BACT**

All identified feasible options with control efficiencies higher than the option proposed by the facility have been shown to not be cost effective. The facility has proposed Option 1, insulated tank, pressure/vacuum valve set within 10% of the maximum allowable working pressure of the tank, "gas tight" tank operation and achieve and maintain a continuous storage temperature not exceeding 75°F within 60 days of completion of fermentation. These BACT requirements will be placed on the ATC as enforceable conditions.

San Joaquin Valley  
Unified Air Pollution Control District

**Best Available Control Technology (BACT) Guideline 5.4.14\***

Last Update 10/6/2009

**Wine Fermentation Tank**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	Temperature-Controlled Open Top Tank with Maximum Average Fermentation Temperature of 95 deg F	1. Capture of VOCs and Thermal Oxidation or Equivalent (88% control)  2. Capture of VOCs and Carbon Adsorption or Equivalent (86% control)  3. Capture of VOCs and Absorption or Equivalent (81% control)  4. Capture of VOCs and Condensation or Equivalent (81% 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**

## Top-Down BACT Analysis for VOC emissions for Fermentation Operations

The following VOC emission control technologies are listed in BACT guideline 5.4.14, 2<sup>nd</sup> quarter of 2011 for Wine Fermentation Tank:

### Step 1 - Identify all control technologies

#### Achieved in Practice or contained in the SIP:

Temperature-controlled open top tank with maximum average fermentation temperature of 95°F.

#### Technologically Feasible:

- 1) Capture of VOCs and thermal oxidation or equivalent (88% control)
- 2) Capture of VOCs and carbon adsorption or equivalent (86% control)
- 3) Capture of VOCs and absorption or equivalent (81% control)
- 4) Capture of VOCs and condensation or equivalent (81% control)

#### Alternate Basic Equipment:

There is no alternate basic equipment listed on this guideline.

### **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 and thermal oxidation	88%
2	3	Capture of VOCs and carbon adsorption	86%
3	4	Capture of VOCs and absorption	81%
4	5	Capture of VOCs and condensation	81%
5	1	Temperature-controlled open top tank with maximum average fermentation temperature of 95°F	0 %

#### Step 4 - Cost Effectiveness Analysis

In 2009, the District prepared a BACT analysis, under engineering evaluation C-1090293, for the fermentation process and evaluated the cost effectiveness analysis for each of the above mentioned technologies.

The fundamental capital and annual costs information of the above BACT analysis was extracted from a case study prepared by the Eichleay Engineering Inc for this E & J Gallo Winery facility in 2005. The cost information from the Eichleay study along with the inflation rate of 3% per year were entered into the EPA Cost Model to estimate the cost effectiveness for each capture and control case, the summary sheets of these estimations are included in the following pages. According to this 2009 BACT analysis, the effectiveness costs for each control device are summarized below:

Control Device	Thermal Oxidize	RTO	Refrigerated Cond.	Water Scrubber	Carbon Adsorption
Cost Effectiveness (\$/ton)	20,700	19,100	23,300	22,800	18,500

As a conservative assumption, the District will use an inflation rate of 3% per year to the above evaluated cost values to estimate the 2012 cost effectiveness values as follow:

$$\text{Inflation multiplier (IM)} = (1 + i)^n$$

Where, i is the inflation rate of 3%  
n is the number of year

$$\text{IM}_{2009-2012} = (1 + 0.03)^3 = 1.0927$$

In 2012, the effectiveness costs for each control device are calculated and summarized below:

$$\text{Effectiveness cost}_{2012} = \text{Effectiveness cost}_{2009} \times \text{IM}_{2009-2012}$$

Control Device	Thermal Oxidize	RTO	Refrigerated Cond.	Water Scrubber	Carbon Adsorption
Cost Effectiveness (\$/ton)	23,275	21,527	25,461	24,914	20,215

As shown above, the updated lowest evaluated value of \$20,215/ton exceeds the District's current cost effectiveness threshold of \$17,500/ton of VOC. Therefore, none of these technologies are cost-effective, and are not required at this time.

#### Step 5 - Select BACT

Temperature-controlled open top tank with maximum average fermentation temperature of 95°F would be the BACT for this process.

**Appendix IV**  
Compliance Certification

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM**

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

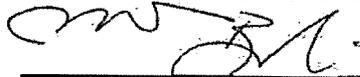
- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                                       AMENDMENT

COMPANY NAME: Delicato Family Vineyards	FACILITY ID: N-266
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Chris Indelicato	
3. Agent to the Owner: Matthew Belair	

**II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):**

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

  
 Signature of Responsible Official

3/20/12  
 Date

Matthew Belair  
 Name of Responsible Official (please print)

Director of Technical Operations  
 Title of Responsible Official (please print)