



JUL 18 2011

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

**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # N-266
Project # N-1110749**

Dear Mr. Belair:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Delicato Vineyards 12001 S Highway 99, Manteca, CA. This project is to install ten new 200,000 gallon (each) stainless steel fermentation/storage tanks.


After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, 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.

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

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:JK/dg

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer



JUL 18 2011

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

Re: Notice of Preliminary Decision - ATC / Certificate of Conformity
Facility # N-266
Project # N-1110749

Dear Mr. Rios:

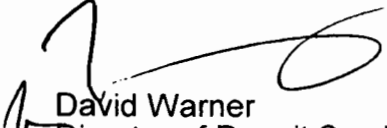
Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Delicato Vineyards 12001 S Highway 99, Manteca, CA, which has been issued a Title V permit. Delicato Vineyards is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. This project is to install ten new 200,000 gallon (each) stainless steel fermentation/storage tanks.

Enclosed is the engineering evaluation of this application and proposed Authorities to Construct # N-266-667-0 to '-676-0 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:JK/dg

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
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JUL 18 2011

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

Re: **Notice of Preliminary Decision - ATC / Certificate of Conformity**
Facility # N-266
Project # N-1110749

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Delicato Vineyards 12001 S Highway 99, Manteca, CA. This project is to install ten new 200,000 gallon (each) stainless steel fermentation/storage tanks.

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

Thank you for your cooperation in this matter. If you have any questions, please contact Mr. Ruphi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,



 David Warner
Director of Permit Services

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**NOTICE OF PRELIMINARY DECISION
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND
THE PROPOSED MINOR 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 issuance of Authority To Construct to Delicato Vineyards for its winery 12001 S Highway 99, Manteca, California. This project is to install ten new 200,000 gallon (each) stainless steel fermentation/storage tanks.

The analysis of the regulatory basis for these proposed actions, Project #N-1110749, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. Written comments on 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.**

California Health & Safety Code 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 S Highway 99, Manteca, California. This location is not within 1,000 feet of any K-12 school. Therefore, public notice under the California Health & Safety Code 42301.6 is not required.

IV. PROCESS DESCRIPTION

Delicato Vineyards operates a wine fermentation and storage facility. During the 'crush season', typically from 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 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 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 (red or white) 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 (CO₂) plus releasing heat. Temperature is controlled by refrigeration to maintain a temperature of 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 for the end of fermentation. Finished ethanol concentration is no more than 20%. Batch fermentation requires 5 days per batch of red wine and 1-2 weeks for white wine. VOCs are emitted during the fermentation process along with the CO₂. The VOCs consist primarily of ethanol along with minor fermentation byproducts.

Following the completion of fermentation, the wine is transferred directly to storage tanks. The grape skins from the red wine fermentation are sent to a press for recovery of contained wine which is also transferred to the wine storage tanks. Wine is stored year-round for bottling under refrigeration. Further VOC emissions occur as a result of the storage tank operation. All tanks in the winery typically operate as two separate emissions units: (1) a fermentation operation during which the tank is vented through pressure/vacuum relief valves to the atmosphere to release the evolved CO₂ by-product 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

The draft ATCs includes the post-project equipment description. The following table summarizes the number of tanks and wine processing capacity at this winery after this project.

Category	Category	Tanks	Capacity (gallons)
Pre-Project	White/red wine fermentation and storage tanks	587	44,961,598
Addition of 10 tanks		10	2,000,000
Post-Project	Total:	597	46,961,598

VI. EMISSION CONTROL TECHNOLOGY EVALUATION

VOCs (ethanol) are emitted from 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 new tanks will be equipped with pressure/vacuum valves to reduce release of VOCs 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.

The new wine tanks will not be equipped with any add-on emission control technology. Therefore, technology evaluation is not necessary.

VII. CALCULATIONS

A. Assumptions

- VOC is the only pollutant of concern related to this project.
- A storage tank throughput will not exceed four times the maximum nominal tank capacity.
- There will be a maximum of 2 fermentation cycles per year for each tank.
- Other assumptions will be stated as they are made for this project.

B. Emission Factors (EF)

1. Pre-Project Emission Factors (EF1)

The proposed winery tanks are new tanks; therefore, EF1 does not exist at this point.

2. Post-Project Emission Factors (EF2)

Type	Operation	EF2 (lb-VOC/1,000 gal of wine)		Source
		Daily	Annual	
White	Fermentation	1.62	2.5	District FYI -114
	Storage	0.432	0.297	
Red	Fermentation	3.46	6.2	
	Storage	0.432	0.297	

C. Potential to Emit

1. Pre-Project Potential to Emit (PE1)

PE1 = 0 for all new tanks

2. Post-Project Potential to Emit (PE2)

Fermentation:

PE2 (lb/day) = (3.46 lb/1,000 gal)(Tank Capacity, gal)

PE2 (lb/yr) = (6.2 lb/1,000 gal)(Tank Capacity, gal)(2turnovers/yr)

Storage:

PE2 (lb/day) = (0.432 lb/1,000 gal)(Tank Capacity, gal)(4turnovers/day)

PE2 (lb/yr) = (0.297 lb/1,000 gal)(Storage Throughput, gal/yr)

Permit	Tank Capacity (gal)	Storage Throughput (gal/yr)	Fermentation		Storage	
			PE2 (lb/day)	PE2 (lb/yr)	PE2 (lb/day)	PE2 (lb/yr)
N-266-667-0	200,000	1,600,000	692	2,480	345.6	475
N-266-668-0	200,000	1,600,000	692	2,480	345.6	475
N-266-669-0	200,000	1,600,000	692	2,480	345.6	475
N-266-670-0	200,000	1,600,000	692	2,480	345.6	475
N-266-671-0	200,000	1,600,000	692	2,480	345.6	475
N-266-672-0	200,000	1,600,000	692	2,480	345.6	475
N-266-673-0	200,000	1,600,000	692	2,480	345.6	475
N-266-674-0	200,000	1,600,000	692	2,480	345.6	475
N-266-675-0	200,000	1,600,000	692	2,480	345.6	475
N-266-676-0	200,000	1,600,000	692	2,480	345.6	475

3. Quarterly Emissions Changes (QEC)

This calculation is required for application's emission profile, which is used for the District's internal tracking purposes. Typically QEC are calculated as follows: $QEC = (PE2 - PE1) \text{ lb/year} \div 4 \text{ quarters/yr}$. The facility-wide VOC SLC remains unchanged. Therefore, QEC would be zero for each quarter.

4. Adjusted Increase in Permitted Emissions (AIPE)

AIPE is used to determine if BACT is required for emission units that are being modified. AIPE is calculated using the equations mentioned in Section 4.3 and 4.4 of Rule 2201.

$$AIPE = PE2 - \left(\frac{EF2}{EF1} \right) (PE1)$$

These tanks are new emission units. Therefore, AIPE calculations are not necessary.

D. Facility Emissions

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

Pursuant to Section 4.9 of District Rule 2201, SSPE1 is the Potential to Emit 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 (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions (AERs) that have occurred at the source, and which have not been used on-site.

VOC emissions from the fermentation and storage operations alone are above the Major Source thresholds of 20,000 pounds per year for VOC. Thus, this facility is a Major Source for VOC emissions.

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

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

VOC emissions from the fermentation and storage operations alone are above the Major Source thresholds of 20,000 pounds per year for VOC. Thus, this facility will remain a Major Source for VOC emissions.

3. Stationary Source Increase in Permitted Emissions (SSIPE)

There is no change in the facility's SLC. Therefore, SSIPE is equated to zero.

4. SB 288 Major Modification

The purpose of Major Modification calculations is to determine the following:

- A. If Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification (District Rule 2201, §4.1.3); and
- B. If a public notification is triggered (District Rule 2201, §5.4.1).

This facility is a Major Source for VOC emissions. In order to determine whether a Major Modification can be triggered, the Net Emissions Increase (NEI) is calculated and is compared with the Major Modification threshold limit of 50,000 lb-VOC/year.

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 (PE_{2N}) 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.

$$NEI = PE_{2N} - HE$$

Since the tanks are new, historical emissions (HE) are equal to zero.

$$NEI = PE_{2N}$$

Per Appendix IV of this document, PE_{2N} based on the collective physical capacity of the processing equipment is equal to zero. Thus,

$$NEI = 0$$

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

5. Federal Major Modification

The purpose of Federal Major Modification calculations is to determine the following:

- A. If a Rule-compliance project qualifies for District Rule 2201's Best Available Control Technology (BACT) and offset exemptions (District Rule 2201, §4.2.3.5); and
- B. If an Alternate Siting analysis must be performed (District Rule 2201, §4.15.1);
- C. 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
- D. If a public notification is triggered. (District Rule 2201, §5.4.1).

This facility is a Major Source for VOC emissions. In order to determine whether a Major Modification can be triggered, the Net Emissions Increase (NEI) is calculated and is compared with the Major Modification threshold limit of 0 lb-VOC/year.

Per 40 CFR 51.165 (a)(2)(ii)(D) for new emissions units in this project,

$$NEI = PE_{2N} - BAE$$

Since these are new units, BAE for these units is zero and,

$$NEI = PE_{2N}$$

Per Appendix IV of this document, PE_{2N} based on the collective physical capacity of the processing equipment is equal to zero. Thus,

$$NEI = 0$$

NEI is not greater than 0 lb-VOC/yr. Therefore, the proposed project is not a Federal Major Modification for VOCs.

VIII. COMPLIANCE

Rule 2201 New and Modified Stationary Source Review Rule

1. Best Available Control Technology (BACT)

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

- Any new emissions unit or relocation from one Stationary Source to another of an existing emissions unit with a Potential to Emit (PE2) exceeding 2.0 pounds in any one day;
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 pounds in any one day;
- Any new or modified emissions unit, in a stationary source project, which results in a Major Modification, as defined in this rule.

This project is a Major Modification to the winery. Therefore, each tank triggers the BACT for storage as well as for fermentation process.

Wine Storage Tanks:

Pursuant to the "Top-Down BACT Analysis" in Appendix II of this document, BACT has been satisfied with the following:

VOC: Insulated tank, 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 DEL for wine storage tanks will be stated in the equipment description as an "insulated" tank and by placing the following conditions on the ATCs:

- 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]

Fermentation Tanks

Pursuant to the "Top-Down BACT Analysis" in Appendix II of this document, BACT has been satisfied with the following:

VOC: Open tank vented to the atmosphere with the average fermentation temperature not exceeding 95°F.

The following conditions will be placed on the ATCs 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

This facility's total VOCs are above the offset threshold of 20,000 pounds per year. Therefore, offset calculations are required for this project.

Section 4.7.1 states that for pollutants with SSPE1 greater than the emission offset threshold levels, emission offsets shall be provided for all increases in Stationary Source emissions, calculated as the differences of post-project Potential to Emit (PE2) and the Baseline Emissions (BE) of all new and modified emissions units, plus all increases in Cargo Carrier emissions. Thus,

$EOQ = \Sigma(PE2 - BE) + ICCE$, where

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

BE = Baseline Emissions (lb/yr)

ICCE = Increase in Cargo Carrier emissions (lb/yr)

There is no increase in Cargo Carrier emissions from this project. Thus,

$$EOQ = \Sigma(PE2 - BE)$$

The existing tanks, when operated in wine storage or fermentation mode, are Clean Emission Units since they meet the achieved-in-practice BACT requirements for wine storage and fermentation process. Thus, BE is set equal to PE1 for each tank.

$$EOQ = \Sigma(PE2 - PE1)$$

VOC emissions from the facility's fermentation and storage operations are limited to 394,298 pounds per year. Therefore,

$$\begin{aligned} EOQ &= (PE2_{SLC} - PE1_{SLC}) \\ &= 394,298 \text{ lb-VOC/yr} - 394,298 \text{ lb-VOC/yr} \\ &= 0 \text{ lb-VOC/yr} \end{aligned}$$

Therefore, no offsets are required for this project.

3. Public Notification

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

- New Major Sources
- Federal Major Modifications
- 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 SSPE exceeding 20,000 lb/yr for any one pollutant

Per section VII.C.2 of this document, the potential emissions (PE2) from each new tank are greater than 100 pounds per day. Therefore, a 30-day public notice is required for this project.

4. Daily Emission Limits (DELs)

The daily emissions limitations (DELs) and other enforceable conditions are required by Section 3.17 to restrict a unit's maximum daily emissions. The following conditions will be included in each permit:

- The daily VOC emissions rate for fermentation shall not exceed 3.46 lb/1000 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 four 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.

Recordkeeping

For each storage tank, the facility will be required to keep 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, is required to be maintained along with records of the total gallons of wine contained in a tank and the maximum temperature of the stored wine.

For each batch of must fermented, the operation is required to keep records of 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 is required to be recorded by the tank Permit to Operate number and by wine type, stated as either red wine or white wine.

In addition, separate annual records each 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, is required to be maintained.

These records are required to be retained on-site for a period of at least five years and made available for District inspection upon request.

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 Sources and Federal Major Modifications

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

Compliance Certification

The owner of a new Major Source or a source undergoing a Federal 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. The compliance certification from the facility is included in Appendix III of this document.

Alternative Siting Analysis

The current project occurs at an existing winery with a pre-project total wine tank volume of 44,961,598 gallons. The applicant proposes to install new winery tanks totaling 46,961,598 gallons in volume, which represents an increase of 4.4% of the existing total wine tank volume. 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 is expected to result in the least possible impact to the environment 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.

Compliance is expected with this Rule.

Rule 2520 Federally Mandated Operating Permits

Delicato Vineyards possesses a Title V permit. The proposed project is considered a Minor Modification to the Title V permit. The following conditions will be included in each permit:

- 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]
- 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 III 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. Delicato Vineyards is expected to notify the District by filing TV Form-008 upon implementing the ATCs. The District Compliance Division is expected to submit a change order to implement ATC into Permit to Operate.

Compliance is expected with this Rule.

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 and storage tank operations.

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

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

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. The following condition will be placed on each permit:

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

California Health & Safety Code 41700 - Health Risk Assessment

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

Ethanol is not HAP as defined in Section 44321 of the California Health and Safety Code. Therefore, health risk assessment is not necessary.

Compliance is expected with this Rule.

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. The storage tank provisions of this rule apply to all tanks with capacity in excess of 5,000 gallons.

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 1st beginning in 2006.

On May 23, 2006, this facility submitted the RAER plan to achieve at least 35% of the winery's BFE. They have been complying with this requirement by installing a regenerative thermal oxidizer on the brandy storage operations. Therefore, the facility is operating in 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 Section 5.2.1:

- 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 Section 5.2.2:

- 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]

Section 6.1 and 6.2 and 6.3 require the facility to submit a Three-Year Compliance Plan and 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 to 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 the ATCs 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 Rule 4694]

Section 6.4.1 requires that records be kept for each fermentation batch. The following condition will be placed on the ATCs to ensure compliance:

- 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 Rules 2201 and 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, condition 47, enforces on-going compliance with this section.

Compliance is expected with this Rule.

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.
- 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 Significance Determination

Terrestrial carbon sequestration is the process through which carbon dioxide (CO₂) from the atmosphere is absorbed by trees, plants and crops through photosynthesis, and stored as carbon in biomass (tree trunks, branches, foliage and roots) and soils. The term "sinks" is also used to refer to forests, croplands, and grazing lands, and their ability to sequester carbon. Agriculture and forestry activities can also release CO₂ to the atmosphere. Therefore, a carbon sink occurs when carbon sequestration is greater than carbon releases over some time period.

Grape vines sequester CO₂ from the atmosphere to produce biomass, including grapes. Much of the CO₂ sequestered in grapes is in the form of glucose, which has a molecular weight of 180.16 g mol⁻¹. CO₂ has a molecular weight of 44.01 g mol⁻¹. Fermentation yields two molecules of CO₂ per each molecule of glucose, resulting in a conversion ratio of 48.86 percent, by weight. While these emissions are real, the amounts of carbon remaining sequestered in biomass

and residual sugars in wine result in an overall long-term carbon balance which is considered to be a carbon sink.

Furthermore, CO₂ emissions resulting from fermentation processes and CO₂ emissions released when grape biomass decays at a future date originates from atmospheric CO₂, which was absorbed by grape vines through photosynthesis. The, re-release of this short-term sequestered CO₂ into the atmosphere would not result in an overall increase in atmospheric CO₂. Thus, these biogenic CO₂ emissions are considered to be carbon neutral.

District CEQA Findings

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

IX. RECOMMENDATION

Compliance with all applicable regulations is expected. Therefore, issuance of ATCs is recommended upon addressing comments from the public, EPA, CARB, and the applicant.

X. BILLING INFORMATION

There is no change to the annual permit fees for the existing tanks. The new tanks billing information is summarized below.

Permit Number	Fee Schedule	Fee Description	Previous Fee Schedule
N-266-667-0 to '676-0	3020-05 E	200,000 gal	None

APPENDICES

- Appendix I: Draft ATC Permits
- Appendix II: BACT Guidelines and Top-Down BACT Analysis
- Appendix III: Compliance Certification
- Appendix IV: Potential Emissions Calculations

Appendix I
Draft ATC Permits

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-266-667-0

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 303 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

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-266-667-0; Jul 5 2011 2:48PM - KAHLOHJ : Joint Inspection NOT Required

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7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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-266-668-0

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 304 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

N-266-668-0: Jul 6 2011 2:48PM - KAH/LONJ : Joint Inspection NOT Required

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7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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-266-669-0

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 305 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
N-266-669-0; Jul 6 2011 2:48PM - KAHLOM; Joint Inspection NOT Required

7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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-266-670-0

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 306 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services
N-266-670-0: Jul 5 2011 2:48PM - KAH/LOU : Joint Inspection NOT Required

7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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-266-671-0

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 307 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

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-266-671-0 : Jul 5 2011 2:48PM - KAHLOJ : Joint Inspection NOT Required

7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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-266-672-0

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 313 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

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 VAPCO

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DAVID WARNER, Director of Permit Services

N-266-672-0: Jul 5 2011 2:48PM - KAHLOHJ : Joint Inspection NOT Required

7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-266-673-0

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 314 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

N-266-673-0 : Jul 5 2011 2:48PM - KAHLONJ : Joint Inspection NOT Required

7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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-266-674-0

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 315 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

N-266-674-0; Jul 5 2011 2:48PM - KAH-LONJ : Joint Inspection NOT Required

7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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-266-675-0

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 316 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

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-266-675-0: Jul 5 2011 2:48PM - KAHLOUJ : Joint Inspection NOT Required

7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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

PERMIT NO: N-266-676-0

ISSUANCE DATE: DRAFT

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:
200,000 GALLON, INSULATED, STEEL ENCLOSED TOP, RED AND WHITE WINE FERMENTATION AND WINE STORAGE TANK 317 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 NSR Rule] 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 fermentation shall not exceed 3.46 lb/1,000 gallons. [District Rule 2201] Federally Enforceable Through Title V Permit
5. 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
6. 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

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-266-676-0 : Jul 5 2011 2:48PM - KAH-LONJ : Joint Inspection NOT Required

7. 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
8. 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
9. 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
10. When this tank is used for wine storage, the daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201] Federally Enforceable Through Title V Permit
11. 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]
12. 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]
13. 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
14. 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
15. 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
16. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor based on the average ethanol content of the annual wine throughput; or using the throughputs for different batches of wine and batch-specific storage emissions factors based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
17. 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
18. 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
19. 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

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Appendix II
BACT Guidelines and Top-Down BACT Analysis

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 - Permit Specific BACT Determinations on Next Page(s)**

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, 3rd quarter 2009, 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 ¹
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 %

¹ 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 tank²). 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 4.74 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_r (industry standard) = 0.297 lb-VOC/1000 gal of wine throughput

Uncontrolled emissions for Twelve-Tank Battery

Uncontrolled Emissions	= Gallons Throughput/year × 0.297 lb-VOC/1000 gallons
	= (39.6 × 10 ⁶ gal/year) × (0.297 lb-VOC/1000 gal)
Uncontrolled Emissions	= 11,761 lb/year

² 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.

$$\begin{aligned}\text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.98 \\ &= 11,761 \text{ lb-VOC/year} \times 0.98 \\ &= 11,526 \text{ lb-VOC/year} \\ &= 5.76 \text{ tons-VOC/year}\end{aligned}$$

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 4694.³ 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 & Timmerhaus⁴.
- Capital costs taken from the Eichleay estimate are 2005 dollars. These are escalated to 2011 based on 3% overall escalation per year.

Capital Investment (for ductwork and steel supports)

Fixed Capital Investment is summarized in the following table:

³ Eichleay Engineers of California, Fermenter VOC Emissions Control Cost Estimate (Revision 1), Eichleay Project Numbers 30892 and 30913, June 30, 2005

⁴ Peters & Timmerhaus, Plant Design and Economics for Chemical Engineers, 2nd 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
Direct Cost									
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
Direct Cost Subtotals				\$355,575		\$107,049		\$32,000	\$494,624
Sales Tax				\$28,446					\$28,446
Total Direct Cost				\$384,021		\$107,049		\$32,000	\$523,070
Indirect Costs									
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
Fixed Capital Investment (2005 Cost)									\$830,759
Escalation to 2011 @ 3%/year									\$161,211
Fixed Capital Investment (2010 Cost)									\$991,970

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 = \$991,970 × 0.163 = \$161,691

Cost Effectiveness = Annualized Cost/Annual Emission Reductions

Cost Effectiveness = \$161,691/5.76 tons-VOC = \$28,071/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	<ol style="list-style-type: none"> 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 - Permit Specific BACT Determinations on Next Page(s)**

Top-Down BACT Analysis for Fermentation Operations

Step 1 - Identify All Possible Control Technologies

The SJVUAPCD BACT Clearinghouse guideline 5.4.14, 3rd quarter 2009, identifies achieved in practice and technologically feasible BACT for wine fermentation tanks as follows:

- 1) Temperature-controlled open top tank with maximum average fermentation temperature of 95°F.
- 2) Capture of VOCs and thermal oxidation or equivalent (88% control)
- 3) Capture of VOCs and carbon adsorption or equivalent (86% control)
- 4) Capture of VOCs and absorption or equivalent (81% control)
- 5) Capture of VOCs and condensation or equivalent (81% control)

Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

Step 3 - Rank Remaining Control Technologies by Control Effectiveness

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

On October 6, 2009, project C-1090293, the District prepared a BACT analysis for the fermentation process and evaluated the cost effectiveness analysis for each of the above mentioned technologies. Using 3% escalation from 2009 to 2010, the total annual capital cost would be:

Category	Case 1	Case 2	Case 3	Case 4	Case 5
	Thermal Ox	RTO	Refrigerated Cond.	Water Scrubber	Carbon Adsorption
Total capital Investment (2010 dollars), A	22,267,776	24,743,690	27,313,540	19,822,350	22,664,120
Total annualized cost, B = A x 0.163	3,629,647	4,033,221	4,452,107	3,231,043	3,694,252
Total annual (direct + indirect) costs, C	3,862,397	3,029,745	3,464,920	4,525,408	2,983,601
Total annual cost, D = B + C	7,492,044	7,062,966	7,917,027	7,756,451	6,677,853
Net Emission Reduction, E	351.67	358.42	330.24	330.24	350.62
Cost of Reduction (\$/ton)	21,304	19,706	23,974	23,487	19,046

For each technology, the cost of emission reduction (\$/ton) is more than the cost effectiveness threshold limit of \$17,500/ton. Thus, none of the control technologies is cost-effective at this time.

Note: The above cost effectiveness analysis is for a Gallo Winery project. If a control technology is not cost-effective in their case, it is likely that the control technology would not be cost effective for Delicato Vineyards.

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 III
Compliance Certification**



Mr. Jagmeet Kahlon
San Joaquin Valley Air Pollution Control District
4800 Enterprise Way
Modesto CA 95356-8718

Subject: Compliance Statement for the Delicato Family Vineyards New Storage Tanks

Dear Mr. Kahlon:

In accordance with Rule 2201, Section 4.15, "Additional Requirements for New Major Sources and Federal Major Modifications," Delicato Family Vineyards (DFV) is pleased to provide this compliance statement regarding its proposed winery project.

DFV would like to improve the quality and business model of the stored wine here at the Manteca Winery by seeking to increase the storage capacity. This would help the winery remain a viable business in the international wine market.

The tanks will be designed with the district approved BACT parameters.

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

Manteca Winery (SJVAPCD ID # N-266)

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

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

Sincerely,

John Yarborough, VP Winery Operations
Delicato Family Vineyards

San Joaquin Valley Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

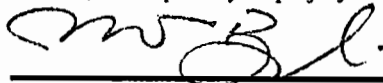
- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

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

4/15/11

Date

Matthew Belair

Name of Responsible Official (please print)

Dir. of Technical Operations

Title of Responsible Official (please print)

Appendix IV
Potential Emissions Calculations

Potential to Emit 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

White wine production capacity is determined as the lesser of the production capacities of either the crushing or pressing equipment or wine fermentation tanks at the facility:

W_W = White wine production capacity (gallons per year as measured immediately after pressing) is the lesser of the following three calculations:

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

Where,

$$\begin{aligned} C &= \text{grape crushing capacity} \\ &= 4,000 \text{ tons/day} \\ D_w &= \text{days in a white wine crush season} \\ &= 120 \text{ days} \\ M &= \text{amount of juice produced per ton of grapes crushed} \\ &= 200 \text{ gal/ton} \\ P &= \text{pressing capacity} \\ &= 7,920 \text{ tons/day} \\ W_{FW} &= \text{white fermentation period} \\ &= 10 \text{ days} \\ R_{TW} &= \text{total winery retention time for white wine} \\ &= 40 + 10 \\ &= 50 \text{ days} \\ V_{FW} &= \text{total volume of white wine fermenters} \\ &= 44,961,598 \text{ gal (obtained from section V of this document)} \\ V_T &= \text{total winery cooperage} \\ &= 44,961,598 \text{ gal (obtained from section V of this document)} \end{aligned}$$

Using the above parameters,

$$\begin{aligned} W1 &= 96.00 \text{ MG/year} \\ W2 &= 190.08 \text{ MG/year} \\ W3 &= 539.54 \text{ MG/year} \\ W4 &= 107.91 \text{ MG/year} \\ W_W &= W1 \text{ (lesser of } W1, W2, W3, W4) \\ &= 96 \text{ MG/year} \end{aligned}$$

The potential white wine fermentation emissions would be:

$$PE1_{\text{white}} = E_{\text{fw}} \times W_{\text{w}}$$

Where:

$$E_{\text{fw}} = \text{white wine emission factor} \\ = 2.5 \text{ lb-VOC/1,000 gal (Source: District FYI-114)}$$

$$PE1_{\text{white}} = (2.5 \text{ lb-VOC/1,000 gal}) \times (96 \times 10^6 \text{ gal/yr}) \\ = 240,000 \text{ lb-VOC/year}$$

White Wine Storage Emissions:

Storage emissions are calculated as follows:

$$PE1_{\text{white}} = E_{\text{s}} \times T \times W_{\text{w}}$$

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 0.297 lb-VOC/1,000 gal.

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

$W_{\text{w}} = 96 \text{ MG/year (determined above)}$

$$PE1_{\text{white}} = (0.297 \text{ lb-VOC/1,000 gal}) \times (8) \times (96 \times 10^6 \text{ gal/year}) \\ = 228,096 \text{ lb-VOC/year}$$

Total PE for White Wine Production:

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

$$PE1_{\text{white}} = PE1_{\text{white fermentation}} + PE1_{\text{white storage}} \\ = 240,000 \text{ lb-VOC/year} + 228,096 \text{ lb-VOC/year} \\ = 468,096 \text{ lb-VOC/year}$$

Red Wine Fermentation Emissions:

Red wine production capacity is determined as the lesser of the production capacities of either the crushing, pressing or tank capacity.

W_{R} = Red wine production capacity (gallons per year as measured immediately after pressing) and is the lesser of the following four calculations:

$$W1 = C \times D_{\text{r}} \times M \text{ (limited by crusher capacity)}$$

$$W2 = P \times D_{\text{r}} \times M \text{ (limited by pressing capacity)}$$

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

$$W4 = (V_{\text{T}} \times D_{\text{r}}) / R_{\text{TS}} \text{ (limited by overall tank processing)}$$

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
= 44,961,598 gal
- V_T = total winery cooperage
= 44,961,598 gal

Using the above parameters,

- W1 = 96.00 MG/year
W2 = 103.68 MG/year
W3 = 863.26 MG/year
W4 = 119.90 MG/year

- W_R = W1 (lesser of W1, W2, W3, W4)
= 96.00 MG/year

The potential red wine fermentation emissions would be:

$$PE_{1_{red}} = E_{fr} \times W_R$$

Where,

- E_{fr} = red wine emission factor
= 6.2 lb-VOC/1,000 gal (District Rule 4694)

$$PE_{1_{red}} = (6.2 \text{ lb-VOC/1,000 gal}) \times (96.00 \times 10^6 \text{ gal/yr})$$
$$= 595,200 \text{ lb-VOC/year}$$

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 0.297 lb-VOC/1,000 gal.

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

W_R = 96.00 MG/year (determined above)

$$\begin{aligned} PE1_{red} &= (0.297 \text{ lb-VOC}/1,000 \text{ gal}) \times (8) \times (96 \times 10^6 \text{ gal/yr}) \\ &= 228,096 \text{ lb-VOC/year} \end{aligned}$$

Total PE for Red Wine Production:

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

$$\begin{aligned} PE1_{red} &= PE1_{red \text{ fermentation}} + PE1_{red \text{ storage}} \\ &= 595,200 \text{ lb-VOC/year} + 228,096 \text{ lb-VOC/year} \\ &= 823,296 \text{ lb-VOC/year} \end{aligned}$$

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.

$$\begin{aligned} PE1 &= \text{greater of } PE1_{white} \text{ and } PE1_{red} \\ &= 823,296 \text{ lb-VOC/year} \end{aligned}$$

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

White wine production capacity is determined as the lesser of the production capacities of either the crushing or pressing equipment or wine fermentation tanks at the facility:

W_W = White wine production capacity (gallons per year as measured immediately after pressing) is the lesser of the following three calculations:

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

Where,

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

D_w = days in a white wine crush season
= 120 days

M = amount of juice produced per ton of grapes crushed
= 200 gal/ton

P = pressing capacity
= 7,920 tons/day

W_{FW} = white fermentation period
= 10 days

R_{TW} = total winery retention time for white wine
= 40 + 10
= 50 days

V_{FW} = total volume of white wine fermenters
= 46,961,598 gal

V_T = total winery cooperage
= 46,961,568 gal

Using the above parameters,

W1 = 96.00 MG/year

W2 = 190.08 MG/year

W3 = 563.54 MG/year

W4 = 112.71 MG/year

W_w = W1 (lesser of W1, W2, W3, W4)
= 96 MG/year

The potential white wine fermentation emissions would be:

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

Where:

E_{fw} = white wine emission factor
= 2.5 lb-VOC/1,000 gal (Source: District FYI-114)

$$PE2_{white} = (2.5 \text{ lb-VOC/1,000 gal}) \times (96 \times 10^6 \text{ gal/yr}) \\ = 240,000 \text{ lb-VOC/year}$$

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 0.297 lb-VOC/1,000 gal.

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

W_w = 96 MG/year (determined above)

$PE_{2_{white}}$ = (0.297 lb-VOC/1,000 gal) \times (8) \times (96 \times 10⁶ gal/year)
= 228,096 lb-VOC/year

Total PE for White Wine Production:

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

$PE_{2_{white}}$ = $PE_{2_{white \text{ fermentation}}} + PE_{2_{white \text{ storage}}}$
= 240,000 lb-VOC/year + 228,096 lb-VOC/year
= 468,096 lb-VOC/year

Red Wine Fermentation Emissions:

Red wine production capacity is determined as the lesser of the production capacities of either the crushing, pressing or tank capacity.

W_R = Red wine production capacity (gallons per year as measured immediately after pressing) and is the lesser of the following four calculations:

$W1 = C \times D_r \times M$ (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
= 46,961,568 gal
 V_T = total winery cooperage
= 46,961,568 gal

Using the above parameters,

W_1 = 96.00 MG/year
 W_2 = 103.68 MG/year
 W_3 = 901.66 MG/year
 W_4 = 125.23 MG/year

W_R = W_1 (lesser of W_1 , W_2 , W_3 , W_4)
= 96.00 MG/year

The potential red wine fermentation emissions would be:

$$PE_{2_{red}} = E_{fr} \times W_R$$

Where,

E_{fr} = red wine emission factor
= 6.2 lb-VOC/1,000 gal (District Rule 4694)

$$PE_{2_{red}} = (6.2 \text{ lb-VOC/1,000 gal}) \times (96.00 \times 10^6 \text{ gal/yr})$$
$$= 595,200 \text{ lb-VOC/year}$$

Red Wine Storage Emissions:

Storage emissions are calculated as follows:

$$PE_{2_{red}} = E_s \times T \times W_R$$

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 0.297 lb-VOC/1,000 gal.

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

W_R = 96.00 MG/year (determined above)

$$PE_{2_{red}} = (0.297 \text{ lb-VOC/1,000 gal}) \times (8) \times (96 \times 10^6 \text{ gal/yr})$$
$$= 228,096 \text{ lb-VOC/year}$$

Total PE for Red Wine Production:

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

$$PE_{2_{red}} = PE_{2_{red \text{ fermentation}}} + PE_{2_{red \text{ storage}}}$$

$$\begin{aligned}
 &= 595,200 \text{ lb-VOC/year} + 228,096 \text{ lb-VOC/year} \\
 &= 823,296 \text{ lb-VOC/year}
 \end{aligned}$$

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.

$$\begin{aligned}
 \text{PE2} &= \text{greater of PE2}_{\text{white}} \text{ and PE2}_{\text{red}} \\
 &= \mathbf{823,296 \text{ lb-VOC/year}}
 \end{aligned}$$

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	Storage	Total
Pre Project	595,200	228,096	823,296
Post Project	595,200	228,096	823,296
PE2 _N	0	0	0