



APR 02 2014

Ms. Wendy Garcia  
CBUS Ops Inc (dba Woodbridge Winery)  
P.O. Box 1260  
Woodbridge, CA 95258

**Re: Notice of Preliminary Decision – ATC / Certificate of Conformity  
District Facility # N-2321  
Project # N-1133189**

Dear Ms. Garcia:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The applicant proposes to install four wine storage tanks.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authorities to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

David Warner  
Director of Permit Services

Enclosures

cc: Mike Tollstrup, CARB (w/enclosure) via email  
cc: Gerardo C. Rios, EPA (w/enclosure) via email

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**San Joaquin Valley Air Pollution Control District**  
**Authority to Construct Application Review**  
**Install Four Wine Storage Tanks**

Facility Name: CBUS OPS Inc (dba Woodbridge Winery)    Date: March 11, 2014  
Mailing Address: PO Box 1260    Engineer: Jesse A. Garcia  
Woodbridge, CA 95258    Lead Engineer: Joven Refuerzo  
Contact Person: Wendy Garcia  
Telephone: (559) 661-5534  
Email: Wendy.Garcia@cbrands.com  
Application #(s): N-2321-797-0 through -800-0  
Project #: N-1133189  
Deemed Complete: October 3, 2013

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**I. Proposal**

CBUS OPS Inc (dba Woodbridge Winery) submitted an application for Authority to Construct (ATC) permits on October 3, 2013 to permit four existing 17,893 gallon wine storage and fermentation tanks.

The applicant amended the original proposal on March 4, 2014 to remove the ability of the tanks to ferment. The amended proposal is now to install four 17,893 gallon wine storage only tanks.

Woodbridge Winery received their Title V Permit. This modification can be classified as a Title V significant modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Woodbridge Winery must apply to administratively amend their Title V permit.

**II. Applicable Rules**

Rule 2201            New and Modified Stationary Source Review Rule (4/21/11)  
Rule 2410            Prevention of Significant Deterioration (6/16/11)  
Rule 2520            Federally Mandated Operating Permits (6/21/01)  
Rule 4001            New Source Performance Standards (4/14/99)  
Rule 4002            National Emissions Standards for Hazardous Air Pollutants (5/20/04)  
Rule 4102            Nuisance (12/17/92)  
Rule 4694            Wine Fermentation and Storage Tanks (12/15/05)  
CH&SC 41700        Health Risk Assessment  
CH&SC 42301.6      School Notice  
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)

California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

### **III. Project Location**

The facility is located at 5950 E Woodbridge Road in Acampo, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

### **IV. Process Description**

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

After transfer of the must (for red or white wine) to the fermentation tank, the must is inoculated with yeast which initiates the fermentation reactions. During fermentation, the yeast metabolizes the sugar in the grape juice, converting it to ethanol and carbon dioxide (CO<sub>2</sub>) while releasing heat. Temperature is typically controlled by refrigeration, and is maintained at 45–65 °F for white wine fermentation and 70–95 °F for red wine fermentation. The sugar content of the fermentation mass is measured in °Brix (weight %) and is typically 22–26° for unfermented grape juice, dropping to 4° or less at the end of fermentation. Finished ethanol concentration is approximately 10 to 14 percent by volume. Batch fermentation requires 3-5 days per batch for red wine and 1-2 weeks per batch for white wine. VOCs are emitted during the fermentation process along with the CO<sub>2</sub>. The VOCs consist primarily of ethanol along with small quantities of other fermentation byproducts.

Following the completion of fermentation, white wine is transferred directly to storage tanks. Red wine is first directed to the presses for separation of solids and then routed to the storage tanks. Tanks can potentially operate in either: (1) a fermentation operation during which the tank is vented directly to the atmosphere to release the evolved CO<sub>2</sub> byproduct from the fermentation reaction; (2) a storage operation during which the tank is closed to minimize contact with air and refrigerated to preserve the wine; (3) or both fermentation and storage operations. Post-fermentation operations such as cold stabilization, racking, and filtration are conducted in the tanks, resulting in a number of inter-tank transfers during the period between the end of fermentation and bottling or bulk shipment. Storage operations are conducted year-

round. VOC emissions occur primarily as a result of the inter-tank transfers which are necessitated by the post fermentation operations.

## V. Equipment Listing

### *Pre-Project Equipment Description:*

This facility currently has 738 red and white wine fermentation and storage tanks with a total capacity of 55,433,318 gallons<sup>1</sup>.

### *Post-Project Equipment Description:*

Permit #	Equipment Description
N-2321-797-0	17,893 GALLON STAINLESS STEEL RED AND WHITE WINE STORAGE TANK 837 WITH PRESSURE/VACUUM VALVE AND INSULATION
N-2321-798-0	17,893 GALLON STAINLESS STEEL RED AND WHITE WINE STORAGE TANK 838 WITH PRESSURE/VACUUM VALVE AND INSULATION
N-2321-799-0	17,893 GALLON STAINLESS STEEL RED AND WHITE WINE STORAGE TANK 839 WITH PRESSURE/VACUUM VALVE AND INSULATION
N-2321-800-0	17,893 GALLON STAINLESS STEEL RED AND WHITE WINE STORAGE TANK 840 WITH PRESSURE/VACUUM VALVE AND INSULATION

With the installation of 4 new tanks, the facility will have total of 742 red and white wine fermentation and storage tanks with a total capacity of 55,504,890 gallons (55,433,318 gallons fermentation and storage + 71,572 gallons storage only).

## 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 proposed pressure/vacuum valve limits these emissions by requiring the maximum amount of variation in tank pressure before allowing the tank to vent to the atmosphere or allowing air admission to the tank.

## VII. General Calculations

### A. Assumptions

- The proposed tanks will only be used for red and white wine storage
- Typically, for enclosed tanks with refrigeration and/or insulation (or equivalent) and P/V valves, breathing losses from storage of wine are assumed to be negligible.
- Maximum daily liquid storage temperature = 81.0 °F (per FYI-295)

<sup>1</sup> This value was taken from engineering evaluation N-1130204.

- Annual average storage tank liquid storage temperature = 63.3 °F for all tanks (per FYI-295)
- Storage tank daily maximum ethanol content of stored wine is 23.9% (worse case)
- Storage tank annual average ethanol content of stored wine is 20% (per applicant)
- Maximum daily storage throughput = 71,572 gallons/day (per tank, per applicant)
- Maximum annual storage throughput = 16,461,560 gallons/year (per tank, per applicant)

**B. Emission Factors**

Emission factors are taken from District FYI-114, *VOC Emission Factors for Wine Fermentation and Storage Tanks (6/13/12)*, for facility located in the Northern Region, as follows:

Wine Type	EF2 (lb-VOC/1,000 gallon of wine)		Source
	Daily	Annual	
White/Red	0.303	0.175	FYI-114, Table 1

**C. Calculations**

**1. Pre-Project Potential to Emit (PE1)**

Since these are new emissions units, PE1 = 0 (all pollutants) for the storage operation in these tanks.

**2. Post Project Potential to Emit (PE2)**

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

Daily PE2 = EF (lb-VOC/1,000 gal) x throughput (gal/day)  
 Annual PE2 = EF (lb-VOC/1,000 gal) x throughput (gal/year)

Permit Unit	Daily EF	Annual EF	Throughput		Daily	Annual
	(lb-VOC/1,000 gal)	(lb-VOC/1,000 gal)	(gal/day)	(gal/year)	(lb/day)	(lb/year)
N-2321-797-0	0.303	0.175	71,572	16,461,560	21.7	2,881
N-2321-798-0					21.7	2,881
N-2321-799-0					21.7	2,881
N-2321-800-0					21.7	2,881

The PE2 for each tank is calculated above; however, the facility currently has a SLC of 1,167,178 lb-VOC/year for wine fermentation and storage operations and the applicant is not proposing any changes to this limit.

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

Pursuant to District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct

(ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

This project only concerns VOC emissions. This facility acknowledges that its VOC emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE1 calculations are not necessary.

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

Pursuant to 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.

This project only concerns VOC emissions. This facility acknowledges that its VOC emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, SSPE2 calculations are not necessary.

#### **5. Major Source Determination**

##### **Rule 2201 Major Source Determination**

This source is an existing Major Source for VOC emissions and will remain a Major Source for VOC. No change in other pollutants are proposed or expected as a result of this project.

##### **Rule 2410 Major Source Determination**

As expressed in Section VII.C.2 of this document, this facility has an existing specific limiting condition for VOC emission of 1,167,178 lb-VOC/year. Comparing those emissions only to the PSD Major Source Threshold below demonstrates that the facility is an existing Major Source for PSD.

PSD Major Source Determination (tons/year)	
	VOC
Facility PE before Project Increase	583
PSD Major Source Thresholds	250
PSD Major Source?	Yes

## 6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

Since these are new emission units, BE = PE1 = 0 for all pollutants for each unit.

## 7. SB 288 Major Modification

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

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

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

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

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

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

Where:

$$HE_{New} = 0$$

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

Based on the collective physical capacity of the wine tanks in this facility,  $PE2_{New}$  is calculated to 1,026 pounds VOC per year. See detail potential emissions calculations in Appendix C of this document. Thus,

$$NEI = \sum(PE2)_{New} = 1,026 \text{ lb-VOC/yr}$$

SB 288 Major Modification Thresholds and Determination			
Pollutant	NEI (lb/year)	Thresholds (lb/year)	SB 288 Major Modification?
VOC	1,026	50,000	No

As indicated in above table, this project does not constitute an SB 288 Major Modification.

### 8. Federal Major Modification

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA. SB 288 Major Modifications are not federal major modifications if they meet the criteria of the "Less-Than-Significant Emissions Increase" exclusion.

A Less-Than-Significant Emissions Increase exclusion is for an emissions increase for the project, or a Net Emissions Increase for the project (as defined in 40 CFR 51.165 (a)(2)(ii)(B) through (D), and (F)), that is not significant for a given regulated NSR pollutant, and therefore is not a federal major modification for that pollutant.

- To determine the post-project projected actual emissions from existing units, the provisions of 40 CFR 51.165 (a)(1)(xxviii) shall be used.
- To determine the pre-project baseline actual emissions, the provisions of 40 CFR 51.165 (a)(1)(xxv)(A) through (D) shall be used.
- If the project is determined not to be a federal major modification pursuant to the provisions of 40 CFR 51.165 (a)(2)(ii)(B), but there is a reasonable possibility that the project may result in a significant emissions increase, the owner or operator shall comply with all of the provisions of 40 CFR 51.165 (a)(6) and (a)(7).
- Emissions increases calculated pursuant to this section are significant if they exceed the significance thresholds specified in the table below.

Significant Threshold (lb/year)	
Pollutant	Threshold (lb/year)
VOC	0

The Net Emissions Increases (NEI) for purposes of determination of a "Less-Than-Significant Emissions Increase" exclusion will be calculated below to determine if this project qualifies for such an exclusion.



Net Emission Increase for New Units (NEI<sub>N</sub>)

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

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

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

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

Where:

$$BAE_{New} = 0$$

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

As discussed above, emissions from the new tanks is calculated to 1,026 pounds VOC per year. Thus, NEI = 1,026 lb-VOC/yr.

Federal Major Modification Thresholds and Determination			
Pollutant	NEI (lb/year)	Thresholds (lb/year)	Federal Major Modification?
VOC	1,444	0	Yes

As indicated in the above table, this project constitutes a Federal Major Modification.

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

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

- NO<sub>2</sub> (as a primary pollutant)
- SO<sub>2</sub> (as a primary pollutant)
- CO
- PM
- PM<sub>10</sub>
- Greenhouse gases (GHG): CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFCs, PFCs, and SF<sub>6</sub>

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

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

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

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

### I. Project Location Relative to Class 1 Area

As demonstrated in the “PSD Major Source Determination” Section above, the facility was determined to be a existing major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

### II. Significance of Project Emission Increase Determination

#### a. Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

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

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	0	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	N

As demonstrated above, because the project has a total potential to emit from all new and modified emission units below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 due to a significant emission increase and no further discussion is required.

### 10. Quarterly Net Emissions Change (QNEC)

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

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

No changes to the SLC of VOC for wine fermentation and storage operations are proposed. Therefore, QEC is equal to zero for each quarter for each permit unit.

## VIII. Compliance

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

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

##### 1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following\*:

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

\*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

##### a. New emissions units – PE > 2 lb/day

The applicant is proposing to install 4 new wine storage tanks with a PE greater than 2 lb/day for VOC for each tank. Thus BACT is triggered for VOC for these emissions units.

##### b. Relocation of emissions units – PE > 2 lb/day

There are no emissions units being relocated from one stationary source to another, hence BACT is not triggered under this category.

##### c. Modification of emissions units – AIPE > 2 lb/day

As discussed in Section I above, there are no modified emissions units associated with this project. Therefore BACT is not triggered.

##### d. SB 288/Federal Major Modification

As discussed in VII.C.8 above, this project constitutes a Federal Major Modification for VOC emissions. Therefore BACT is triggered for VOC for all emissions units in the project for which there is an emission increase.

## 2. BACT Guideline

BACT Guideline 5.4.13 applies to the wine storage tanks. [Wine Storage Tanks] (Appendix A)

## 3. Top-Down BACT Analysis

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

Pursuant to the attached Top-Down BACT Analysis (Appendix A), 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 achieve and maintain a continuous storage temperature not exceeding 75 °F within 60 days of completion of fermentation.

## B. Offsets

### 1. Offset Applicability

Offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

Facility emissions are already above the Offset and Major Source Thresholds for VOC emissions; therefore, offsets are triggered.

### 2. Quantity of Offsets Required

As discussed above, the facility is an existing Major Source for VOC and the SSPE2 is greater than the offset thresholds; therefore offset calculations will be required for this project.

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

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

Where,

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

BE = Baseline Emissions, (lb/year)

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

DOR = Distance Offset Ratio, determined pursuant to Rule 2201

BE = Pre-project Potential to Emit for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, Located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE)

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

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

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

According to engineering evaluation N-1120998, all existing tanks were considered 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 existing tank. Thus,

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

The facility has an existing SLC of 1,167,178 pounds of VOC per year for wine fermentation and storage operations, and the applicant is not proposing any change to this limit as a result of this project. Therefore,

$$\begin{aligned} \text{Emission offset} &= (1,167,178 - 1,167,178) \text{ lb-VOC/year} \\ &= 0 \text{ lb-VOC/year} \end{aligned}$$

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

## C. Public Notification

### 1. Applicability

Public noticing is required for:

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

d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

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

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

As demonstrated in Sections VII.C.8, this project is a Federal Major Modification for VOC; therefore, public noticing for Federal Major Modification purposes is required.

**b. PE > 100 lb/day**

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
VOC (fermentation)	21.7	100 lb/day	No

Therefore, public noticing for PE > 100 lb/day purposes is not required.

**c. Offset Threshold**

The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
VOC	> 20,000	> 20,000	20,000 lb/year	No

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

**d. SSIPE > 20,000 lb/year**

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

<b>Stationary Source Increase in Permitted Emissions [SSIFE] – Public Notice</b>					
Pollutant	$\Sigma$ PE2 (lb/year)	$\Sigma$ PE1 (lb/year)	SSIFE (lb/year)	SSIFE Public Notice Threshold	Public Notice Required?
VOC	1,167,178	1,167,178	0	20,000 lb/year	No

As demonstrated above, the SSIFEs for VOC was less than 20,000 lb/year; therefore public noticing for SSIFE purposes is not required.

**2. Public Notice Action**

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

**D. Daily Emission Limits (DELs)**

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions

For the proposed wine storage tank emission units in this project, the DEL is enforced with the following conditions:

- 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]
- The daily tank throughput, in gallons, shall not exceed four times the maximum nominal tank capacity stated in the equipment description. [District Rule 2201]

## **E. Compliance Assurance**

### **1. Source Testing**

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

### **2. Monitoring**

No monitoring is required to demonstrate compliance with Rule 2201.

### **3. Recordkeeping**

Recordkeeping is required to demonstrate compliance with the offsets, public notification and daily emission limit requirements of Rule 2201. Recordkeeping is also required for winery tanks pursuant to District Rule 4694, *Wine Fermentation and Storage Tanks*. For the proposed wine storage tanks, the following conditions will be listed on the permits to ensure compliance:

- 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]
- 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]
- 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]
- Records shall be maintained that demonstrate the date of each year's start of crush season. [District Rule 2201]

### **4. Reporting**

No reporting is required to demonstrate compliance with Rule 2201.

## **F. Ambient Air Quality Analysis**

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

## **G. Compliance Certification**

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a 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. As discussed in Sections VII.C.8, this source is undergoing a Federal Major Modification, therefore this requirement is applicable. Included in Appendix B is Woodbridge's compliance certification.

## **H. Alternative Siting Analysis**

Alternative siting analysis is required for any project, which constitutes a New Major Source or a Federal Major Modification.

In addition to winery tanks, the operation of a winery requires a large number support equipment, services and structures such as raw material receiving stations, crushers, piping, filtering and refrigeration units, warehouses, laboratories, bottling and shipping facilities, and administration buildings.

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

## **Rule 2410 Prevention of Significant Deterioration**

The prevention of significant deterioration (PSD) program is a construction permitting program for new major stationary sources and major modifications to existing major stationary sources located in areas classified as attainment or in areas that are unclassifiable for any criteria air pollutant.

As demonstrated above, this project is not subject to the requirements of Rule 2410 due to a significant emission increase and no further discussion is required.

## **Rule 2520 Federally Mandated Operating Permits**

This facility is subject to this Rule, and has received their Title V Operating Permit. Section 3.29 defines a significant permit modification as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

Section 3.20.5 states that a minor permit modification is a permit modification that does not meet the definition of modification as given in Section 111 or Section 112 of the Federal Clean Air Act. Since this project is a Title I modification (i.e. Federal Major Modification), the proposed project is considered to be a modification under the Federal Clean Air Act. As a result, the proposed project constitutes a Significant Modification to the Title V Permit pursuant to Section 3.29.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility shall not implement the changes requested until the final permit is issued.

### **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 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 storage tank operations.

### **Rule 4102 Nuisance**

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of the proposed operations provided the equipment is well maintained. Therefore, the following condition will be listed on each permit to ensure compliance:

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

### **California Health & Safety Code 41700 (Health Risk Assessment)**

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

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

### **District Rule 4694 Wine Fermentation and Storage Tanks**

The purpose of this rule is to reduce emissions of volatile organic compounds (VOC) from the fermentation and bulk storage of wine, or achieve equivalent reductions from alternative emission sources. This rule is applicable to all facilities with fermentation emissions in excess of 10 tons VOC per year.

Section 5.1 requires the winery operator achieve Required Annual Emissions Reductions (RAER) equal to at least 35% of the winery's Baseline Fermentation Emissions (BFE). Since the proposed tanks will be used for storage only, this section is not applicable; therefore, no further discussion is required.

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

- When used for wine storage, this tank shall be equipped with and operated with a pressure-vacuum relief valve, which shall operate within 10% of the maximum allowable working pressure of the tank, operate in accordance with the manufacturer's instructions, and be permanently labeled with the operating pressure settings. [District Rule 4694]
- When this tank is used for wine storage, the pressure-vacuum relief valve and storage tank shall remain in a gas-tight condition, except when the operating pressure of the tank exceeds the valve set pressure. A gas-tight condition shall be determined by measuring the gas leak in accordance with the procedures in EPA Method 21 [District Rule 4694]

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

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

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

Every three years, Section 6.1 and 6.2 require facilities with fermentation operations to submit a Three-Year Compliance Plan and a Three-Year Compliance Plan Verification respectively. The proposed tanks in this project are for wine storage only, and since these sections are not applicable to wine storage operations, no further discussion is required.

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 listed on each permit to ensure on-going compliance with this section:

- All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 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 listed on the ATCs to ensure compliance with this section:

- 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 CERs as identified in the facility's Three-Year Compliance Plan and that the records of all monitoring be maintained. Since this requirement is for operators mitigation fermentation emission and the proposed tanks are only for wine storage operations, this section is not applicable to wine tanks in this project. Therefore, no further discussion is required.

Compliance with the requirements of this Rule is expected.

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

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

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

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

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

## Greenhouse Gas (GHG) Significance Determination

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project. District FYI-260, *Greenhouse Gas Emissions from Wine Fermentation Processes*, establishes that for the purpose of calculating potential increases in greenhouse gas (GHG) emissions, CO<sub>2</sub> emissions from wine fermentation processes are considered carbon neutral. Therefore, the District concludes that the project would have a less than cumulatively significant impact on global climate change.

## District CEQA Findings

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

## IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authority to Construct permits N-2321-797-0 through -800-0 subject to the permit conditions on the attached draft Authority to Construct permits in Appendix C.

## X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-2321-797-0 through N-2321-800-0	3020-05-B	17,893 gallons	\$ 93 (each)

## XI. Appendices

- A: BACT Guidelines and Top Down BACT Analyses
- B: Compliance Certification
- C: Potential Emissions Calculations
- D: Draft ATC permits

## **Appendix A**

### **BACT Guidelines and Top Down BACT Analyses**

San Joaquin Valley  
Unified Air Pollution Control District

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

Last Update 10/6/2009

**Wine Storage Tank**

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1. Insulation or Equivalent**, Pressure Vacuum Relief Valve (PVRV) set within 10% of the maximum allowable working pressure of the tank; "gas-tight" tank operation; and continuous storage temperature not exceeding 75 degrees F, achieved within 60 days of completion of fermentation.	1. Capture of VOCs and thermal or catalytic oxidation or equivalent (98% control)  2. Capture of VOCs and carbon adsorption or equivalent (95% control)  3. Capture of VOCs and absorption or equivalent (90% control)  4. Capture of VOCs and condensation or equivalent (70% control)	

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

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

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

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

### Step 1 - Identify All Possible Control Technologies

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

- 1) Insulation or Equivalent\*\*, Pressure Vacuum Relief Valve (PVRV) set within 10% of the maximum allowable working pressure of the tank; "gas-tight" tank operation; and continuous storage temperature not exceeding 75 degrees F, achieved within 60 days of completion of fermentation.
- 2) Capture of VOCs and thermal or catalytic oxidation or equivalent (98% control)
- 3) Capture of VOCs and carbon adsorption or equivalent (95% control)
- 4) Capture of VOCs and absorption or equivalent (90% control)
- 5) Capture of VOCs and condensation or equivalent (70% control)

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

### Step 2 - Eliminate Technologically Infeasible Options

None of the above listed technologies are technologically infeasible.

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

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

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



#### Step 4 - Cost Effectiveness Analysis

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

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

#### Industry Standard

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

The emission factor for "industry standard" operation is determined based on Table 1 of the District's FYI-114 (6/13/12), Estimating Emissions from Wine Storage Tanks, for an insulated storage tank located in Northern region with up to 20% ethanol content in the wine being stored:

$E_f$  (industry standard) = 0.175 lb-VOC/1000 gal of wine throughput

#### Uncontrolled emissions for Twelve-Tank Battery

Uncontrolled Emissions = Gallons Throughput/year × 0.175 lb-VOC/1000 gallons  
=  $(39.6 \times 10^6 \text{ gal/year}) \times (0.175 \text{ lb-VOC/1000 gal})$

Uncontrolled Emissions = 6,930 lb/year

---

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

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

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

### **a. Control Efficiency**

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

$$\begin{aligned}\text{Annual Emission Reduction} &= \text{Uncontrolled Emissions} \times 0.98 \\ &= 6,930 \text{ lb-VOC/year} \times 0.98 \\ &= 6,791 \text{ lb-VOC/year} \\ &= 3.40 \text{ tons-VOC/year}\end{aligned}$$

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

#### **Design and Estimate Basis:**

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

- The ductwork is designed with features to facilitate clean-in-place (CIP) operation to allow for periodic sterilization procedures as required for food grade products. The CIP system includes strategically placed spray nozzles on the ductwork for injecting sterilizing solutions into the system. Cost impacts to install CIP systems to clean the ducting are not included in the cost estimate.
- The ductwork is supported on a structural steel piperack mounted on drilled concrete piers, running through the new tank battery. Ducting elevations are established to allow continuous free draining to the separator located at the control device.
- Unit Installed Costs for Ductwork: A direct cost estimate for 12" diameter stainless steel ductwork, installed in a San Joaquin Valley winery, was taken from a study prepared by Eichleay Engineering for the Wine Institute in conjunction with development of District Rule 4694.<sup>4</sup> The estimate is based on 2nd quarter 2005 dollars, and includes fittings, miscellaneous duct supports and other materials plus field labor costs required to install the ductwork, but does not include other associated indirect costs such as construction management, engineering, owner's cost, contingency, etc. BACT Attachment 1 presents the development of unit installed costs for stainless steel ducting based on the costs derived from the Eichleay estimate.
- Linear feet of ducting required was extracted from the Eichleay Estimate for a similar system at Gallo-Livingston (See BACT Attachment 1 in project C1090293).
- Costs for structural steel supports and foundations were extracted from the Eichleay Estimate for a similar system at Gallo-Livingston (See BACT Attachment 1 in project C1090293).
- Sales tax of 8% was applied to all materials.
- Indirect costs include Engineering, Construction Expense and Contractor's Fee and Contingency. Factors for these costs are taken from Peters & Timmerhaus<sup>5</sup>.
- Capital costs taken from the Eichleay estimate are 2005 dollars. These are escalated to 2013 based on 3% overall escalation per year.

Capital Investment (for ductwork and steel supports)

Fixed Capital Investment is summarized in the following table:

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

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

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

Item	Qty	Unit	Unit Material Cost	Total Item Material Cost	Unit Labor Cost	Total Item Labor Cost	Unit Subcontract Price	Total Item Subcontract Cost	Total Item Direct Cost
<b>Direct Cost</b>									
6" Dia. Ducting	75	ft	\$32.11	\$2,408	\$29.20	\$2,190			\$4,598
12" Dia. Ducting	870	ft	\$75.33	\$65,537	\$68.49	\$59,586			\$125,123
Drilled Piers	32	ea.					\$1,000.00	\$32,000	\$32,000
Structural Steel Supports	1	lot	\$45,273	\$287,630	\$45,273	\$45,273			\$332,903
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
<b>Indirect Costs</b>									
Engineering @ 15% of Direct Cost									\$78,461
Construction Expense and Contractor's Fee @ 20% of Direct Cost									\$104,614
Contingency @ 15% of Fixed Capital Investment									\$124,614
Fixed Capital Investment (2005 Cost)									\$830,759
Escalation to 2013 @ 3%/year									\$221,662
Fixed Capital Investment (2013 Cost)									\$1,052,380

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

Annualized Capital Investment = Initial Capital Investment x Amortization Factor

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

Therefore,

Annualized Capital Investment = \$1,052,380 × 0.163 = \$171,538

Cost Effectiveness = Annualized Cost/Annual Emission Reductions

**Cost Effectiveness = \$171,538/3.76 tons-VOC = \$50,452/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.

**Appendix B**  
**Compliance Certification**

# San Joaquin Valley Air Pollution Control District

## TITLE V COMPLIANCE CERTIFICATION FORM

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

**(4) 17,893 gallon SS tanks**

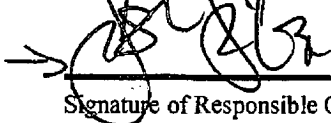
[ ] ADMIN. MODIFICATION                      [ X ] MINOR. MODIFICATION                      [ ] SIGNIFICANT MODIFICATION

COMPANY NAME: CBUS Ops Inc.(DBA Woodbridge Winery)	FACILITY ID: N - 2321
1. Type of Organization: [ X ] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: CONSTELLATION BRANDS U.S. OPERATIONS INC.	
3. Agent to the Owner: JOSH SCHULZE	

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

- Based on information and belief formed after reasonable inquiry, the source identified in this application will continue to comply with the applicable federal requirement(s) which the source is in compliance as identified in the Compliance Plan.
- Based on information and belief formed after reasonable inquiry, the source identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term as identified in the Compliance Plan, on a timely basis.
- Based on information and belief formed after reasonable inquiry, the source identified in this application is not in compliance at the time of permit issuance with the applicable federal requirement(s), as identified in the Compliance Plan, and I have attached a compliance schedule.
- 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

10/3/13  
Date

JOSH SCHULZE

\_\_\_\_\_  
Name of Responsible Official (please print)

GENERAL MANAGER

\_\_\_\_\_  
Title of Responsible Official (please print)

## **Appendix C**

### **Potential Emissions Calculations**



# Potential Emissions Calculations

The purpose of the following calculations is solely to determine if the proposed project will trigger SB 288 Major Modification and/or Federal Major Modification. The increase (or difference) in emissions are calculated below using the current FYI-114 emission factors. The facility has an existing SLC of 1,167,178 pounds of VOC per year for wine fermentation and storage operations<sup>6</sup>. This SLC will not be changed with the addition of 4 new tanks under this project.

## 1. Potential to Emit (existing tanks)

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

### White Wine Fermentation

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

Where,

$$\begin{aligned} C &= \text{grape crushing capacity} \\ &= 13,200 \text{ tons/day (per engineering evaluation N-1092377)} \\ D_w &= \text{days in a white wine crush season} \\ &= 120 \text{ days} \\ M &= \text{amount of juice produced per ton of grapes crushed} \\ &= 200 \text{ gal/ton} \\ P &= \text{pressing capacity} \\ &= 8,400 \text{ tons/day (per engineering evaluation N-1092377)} \\ W_{FW} &= \text{white fermentation period} \\ &= 10 \text{ days} \\ R_{TW} &= \text{total winery retention time for white wine} \\ &= 40 + 10 \\ &= 50 \text{ days} \\ V_{FW} &= \text{total volume of white wine fermenters} \\ &= 55,433,318 \text{ gal (per Section V of this document)} \\ V_T &= \text{total winery cooperage} \\ &= 55,433,318 \text{ gal (per Section V of this document)} \end{aligned}$$

Using the above parameters,

$$\begin{aligned} W1 &= (13,200 \times 120 \times 200) &= 316.80 \text{ Mega Gallon (MG)/year} \\ W2 &= (8,400 \times 120 \times 200) &= 201.60 \text{ MG/year} \\ W3 &= (55,433,318 \times 120) / 10 &= 665.20 \text{ MG/year} \\ W4 &= (55,433,318 \times 120) / 50 &= 133.04 \text{ MG/year} \end{aligned}$$

<sup>6</sup> The calculation presented in this appendix differs from the SLC due to revised emission factors in FYI-114.

Woodbridge Winery is requesting to install 4 new tanks. These tanks will result an increase facility's storage capacities, and no changes to the facility's fermentation, crushing or pressing capacities. Therefore crushing capacity and pressing capacity (W1 and W2) are not considered from the analysis. Only the fermenter volume and overall tank processing (W3 and W4) are compared.

$$W_w = W4 \text{ (lesser of } W3, W4) \\ = 133.04 \text{ MG/year}$$

The potential white wine fermentation emissions would be:

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

Where:

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

$$PE1_{white} = (2.5 \text{ lb-VOC/1,000 gal}) \times (133.04 \times 10^6 \text{ gal/yr}) \\ = 332,600 \text{ lb-VOC/year}$$

**White Wine Storage Emissions:**

Storage emissions are calculated as follows:

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

Where,

$E_s$  = wine storage emission factor based on District FYI-114 (6/13/12). The existing tanks allow them to store up to 20% alcohol by volume. Thus,  $E_s$  is equal to 0.175 lb-VOC/1,000 gal.

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

$W_w$  = 133.04 MG/year (determined above)

$$PE1_{white} = (0.175 \text{ lb-VOC/1,000 gal}) \times (8) \times (133.04 \times 10^6 \text{ gal/year}) \\ = 186,256 \text{ lb-VOC/year}$$

**Total PE for White Wine Production:**

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

$$PE1_{white} = PE1_{white \text{ fermentation}} + PE1_{white \text{ storage}} \\ = 332,600 \text{ lb-VOC/year} + 186,256 \text{ lb-VOC/year} \\ = 519,856 \text{ lb-VOC/year}$$

**Red Wine Fermentation Emissions:**

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

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

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

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

Where,

C = grape crushing capacity  
= 13,200 tons/day

D<sub>r</sub> = 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  
= 8,400 tons/day

R<sub>FR</sub> = red fermentation period  
= 5 days

R<sub>TS</sub> = total winery retention time for red wine,  
= 40 + 5  
= 45 days

V<sub>FR</sub> = total volume of red wine fermenters  
= 55,433,318 gal

V<sub>T</sub> = total winery cooperage  
= 55,433,318 gal

Using the above parameters,

$$W1 = (13,200 \times 120 \times 200) = 316.80 \text{ MG/year}$$

$$W2 = (8,400 \times 120 \times 200) = 201.60 \text{ MG/year}$$

$$W3 = (55,433,318 \times 0.8 \times 120) / 5 = 1,064.32 \text{ MG/year}$$

$$W4 = (55,433,318 \times 120) / 45 = 147.82 \text{ MG/year}$$

CBUS is requesting to install 4 new tanks. These tanks will result an increase facility's storage and fermentation capacities, and no changes to the facility's crushing and pressing capacities. Therefore, crushing capacity and pressing capacity (W1 and W2) are not considered from the analysis. Only the fermenter volume and overall tank processing (W3 and W4) are compared.

$$W_R = W4 \text{ (lesser of } W3, W4)$$

$$= 147.82 \text{ MG/year}$$

The potential red wine fermentation emissions would be:

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

Where,

E<sub>fr</sub> = red wine emission factor  
= 6.2 lb-VOC/1,000 gal (per District FYI-114)

$$PE1_{red} = (6.2 \text{ lb-VOC}/1,000 \text{ gal}) \times (147.82 \times 10^6 \text{ gal/yr})$$

$$= 916,484 \text{ lb-VOC/year}$$

**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 (6/13/12). The existing tanks allow them to store up to 20% alcohol by volume. Thus,  $E_s$  is equal to 0.175 lb-VOC/1,000 gal.

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

$W_R$  = 147.82 MG/year (determined above)

$$PE1_{red} = (0.175 \text{ lb-VOC}/1,000 \text{ gal}) \times (8) \times (147.82 \times 10^6 \text{ gal/yr})$$

$$= 206,948 \text{ lb-VOC/year}$$

**Total PE for Red Wine Production:**

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

$$PE1_{red} = PE1_{red \text{ fermentation}} + PE1_{red \text{ storage}}$$

$$= 916,484 \text{ lb-VOC/year} + 206,948 \text{ lb-VOC/year}$$

$$= 1,123,432 \text{ lb-VOC/year}$$

**Summary:**

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

$$PE1 = \text{greater of } PE1_{white} \text{ or } PE1_{red}$$

$$= 1,123,432 \text{ lb-VOC/year}$$

**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**

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

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

$W3 = (V_{FW} \times D_w)/W_{FW}$  (limited by white fermenter volume)

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

Where,

C = grape crushing capacity  
 = 13,200 tons/day  
 D<sub>w</sub> = 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  
 = 8,400 tons/day  
 W<sub>FW</sub> = white fermentation period  
 = 10 days  
 R<sub>TW</sub> = total winery retention time for white wine  
 = 40 + 10  
 = 50 days  
 V<sub>FW</sub> = total volume of white wine fermenters  
 = 55,504,890 gal  
 V<sub>T</sub> = total winery cooperage  
 = 55,504,890 gal

Using the above parameters,

$$\begin{aligned}
 W1 &= (13,200 \times 120 \times 200) &= 316.80 \text{ MG/year} \\
 W2 &= (8,400 \times 120 \times 200) &= 201.60 \text{ MG/year} \\
 W3 &= (55,504,890 \times 120) / 10 &= 666.06 \text{ MG/year} \\
 W4 &= (55,504,890 \times 120) / 50 &= 133.21 \text{ MG/year}
 \end{aligned}$$

CBUS is requesting to install 4 new tanks. These tanks will result an increase facility's storage and fermentation capacities, and no changes to the facility's crushing and pressing capacities. Therefore, crushing capacity and pressing capacity (W1 and W2) are not considered from the analysis. Only the fermenter volume and overall tank processing (W3 and W4) are compared.

$$\begin{aligned}
 W_w &= W4 \text{ (lesser of } W3, W4) \\
 &= 133.21 \text{ MG/year}
 \end{aligned}$$

The potential white wine fermentation emissions would be:

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

Where:

$$\begin{aligned}
 E_{\text{fw}} &= \text{white wine emission factor} \\
 &= 2.5 \text{ lb-VOC/1,000 gal (per District FYI-114)}
 \end{aligned}$$

$$\begin{aligned}
 PE2_{\text{white}} &= (2.5 \text{ lb-VOC/1,000 gal}) \times (133.21 \times 10^6 \text{ gal/yr}) \\
 &= 333,025 \text{ lb-VOC/year}
 \end{aligned}$$

#### **White Wine Storage Emissions:**

Storage emissions are calculated as follows:

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

Where,

$E_s$  = wine storage emission factor based on District FYI-114 (6/13/12). The existing tanks allow them to store up to 20% alcohol by volume. Thus,  $E_s$  is equal to 0.175 lb-VOC/1,000 gal.

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

$W_w$  = 133.21 MG/year (determined above)

$$\begin{aligned} PE_{2_{\text{white}}} &= (0.175 \text{ lb-VOC/1,000 gal}) \times (8) \times (133.21 \times 10^6 \text{ gal/year}) \\ &= 186,494 \text{ lb-VOC/year} \end{aligned}$$

### **Total PE for White Wine Production:**

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

$$\begin{aligned} PE_{2_{\text{white}}} &= PE_{2_{\text{white fermentation}}} + PE_{2_{\text{white storage}}} \\ &= 333,025 \text{ lb-VOC/year} + 186,494 \text{ lb-VOC/year} \\ &= 519,519 \text{ lb-VOC/year} \end{aligned}$$

### **Red Wine Fermentation Emissions:**

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

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

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

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

Where,

$C$  = grape crushing capacity  
= 13,200 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  
= 8,400 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  
= 55,504,890 gal

$V_T$  = total winery cooperage  
= 55,504,890 gal

Using the above parameters,

$$\begin{aligned}W1 &= (13,200 \times 120 \times 200) &= 316.80 \text{ MG/year} \\W2 &= (8,400 \times 120 \times 200) &= 201.60 \text{ MG/year} \\W3 &= (55,504,890 \times 0.8 \times 120) / 5 &= 1,065.69 \text{ MG/year} \\W4 &= (55,504,890 \times 120) / 45 &= 148.01 \text{ MG/year}\end{aligned}$$

CBUS is requesting to install 4 new tanks. These tanks will result an increase facility's storage and fermentation capacities, and no changes to the facility's crushing and pressing capacities. Therefore, crushing capacity and pressing capacity (W1 and W2) are not considered from the analysis. Only the fermenter volume and overall tank processing (W3 and W4) are compared.

$$\begin{aligned}W_R &= W4 \text{ (lesser of } W3, W4) \\&= 148.01 \text{ MG/year}\end{aligned}$$

The potential red wine fermentation emissions would be:

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

Where,

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

$$\begin{aligned}PE2_{red} &= (6.2 \text{ lb-VOC/1,000 gal}) \times (148.01 \times 10^6 \text{ gal/yr}) \\&= 917,662 \text{ lb-VOC/year}\end{aligned}$$

#### **Red Wine Storage Emissions:**

Storage emissions are calculated as follows:

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

Where:

$E_s$  = wine storage emission factor based on District FYI-114 (6/13/12). The existing tanks allow them to store up to 20% alcohol by volume. Thus,  $E_s$  is equal to 0.175 lb-VOC/1,000 gal.

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

$W_R$  = 148.01 MG/year (determined above)

$$\begin{aligned}PE2_{red} &= (0.175 \text{ lb-VOC/1,000 gal}) \times (8) \times (148.01 \times 10^6 \text{ gal/yr}) \\&= 207,214 \text{ lb-VOC/year}\end{aligned}$$

#### **Total PE for Red Wine Production:**

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

$$\begin{aligned}
 PE2_{red} &= PE2_{red \text{ fermentation}} + PE2_{red \text{ storage}} \\
 &= 917,662 \text{ lb-VOC/year} + 207,214 \text{ lb-VOC/year} \\
 &= 1,124,876 \text{ lb-VOC/year}
 \end{aligned}$$

**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.

$$\begin{aligned}
 PE2 &= \text{greater of } PE2_{white} \text{ or } PE2_{red} \\
 &= \mathbf{1,124,876 \text{ lb-VOC/year}}
 \end{aligned}$$

**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	Total (lb-VOC/yr)
Pre Project	1,123,432
Post Project	1,124,876
PE2 <sub>N</sub>	1,444



**Appendix D**  
**Draft ATC Permits**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**

**PERMIT NO:** N-2321-797-0

**LEGAL OWNER OR OPERATOR:** CBUS OPS INC (DBA WOODBRIDGE WINERY)

**MAILING ADDRESS:** P O BOX 1260  
WOODBRIDGE, CA 95258-1260

**LOCATION:** 5950 E WOODBRIDGE ROAD  
ACAMPO, CA 95220

**EQUIPMENT DESCRIPTION:**

17,893 GALLON STAINLESS STEEL RED AND WHITE WINE STORAGE TANK 837 WITH PRESSURE/VACUUM VALVE AND INSULATION

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This wine storage tank shall be used exclusively for wine storage operations only and not for fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. 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] Federally Enforceable Through Title V Permit
6. 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] 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-2321-797-0 : Mar 11 2014 8:15AM -- GARCIAJ : Joint Inspection NOT Required

7. 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 Rule 4694] Federally Enforceable Through Title V Permit
8. 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
9. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 1,167,178 lb/year, calculated on a twelve (12) month rolling basis. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor, calculated using the equation(s) specified within this permit, 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, calculated using the equation(s) specified within this permit, based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume % (when the ethanol content of wine is 20 volume %, P is equivalent to 0.20),  $a = -0.38194$ ,  $b = 0.97917$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall determine and 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] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Records shall be maintained that demonstrate the date of each year's start of crush season. [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 2201] Federally Enforceable Through Title V Permit
18. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**DRAFT**  
ISSUANCE DATE: DRAFT

**PERMIT NO:** N-2321-798-0

**LEGAL OWNER OR OPERATOR:** CBUS OPS INC (DBA WOODBRIDGE WINERY)

**MAILING ADDRESS:** P O BOX 1260  
WOODBRIDGE, CA 95258-1260

**LOCATION:** 5950 E WOODBRIDGE ROAD  
ACAMPO, CA 95220

**EQUIPMENT DESCRIPTION:**

17,893 GALLON STAINLESS STEEL RED AND WHITE WINE STORAGE TANK 838 WITH PRESSURE/VACUUM VALVE AND INSULATION

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This wine storage tank shall be used exclusively for wine storage operations only and not for fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. 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] Federally Enforceable Through Title V Permit
6. 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] 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-2321-798-0 : Mar 11 2014 8:15AM - GARCIAJ : Joint Inspection NOT Required

7. 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 Rule 4694] Federally Enforceable Through Title V Permit
8. 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
9. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 1,167,178 lb/year, calculated on a twelve (12) month rolling basis. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor, calculated using the equation(s) specified within this permit, 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, calculated using the equation(s) specified within this permit, based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume % (when the ethanol content of wine is 20 volume %, P is equivalent to 0.20),  $a = -0.38194$ ,  $b = 0.97917$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall determine and 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] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Records shall be maintained that demonstrate the date of each year's start of crush season. [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 2201] Federally Enforceable Through Title V Permit
18. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**DRAFT**  
ISSUANCE DATE: DRAFT

**PERMIT NO:** N-2321-799-0

**LEGAL OWNER OR OPERATOR:** CBUS OPS INC (DBA WOODBRIDGE WINERY)

**MAILING ADDRESS:** P O BOX 1260  
WOODBRIDGE, CA 95258-1260

**LOCATION:** 5950 E WOODBRIDGE ROAD  
ACAMPO, CA 95220

**EQUIPMENT DESCRIPTION:**

17,893 GALLON STAINLESS STEEL RED AND WHITE WINE STORAGE TANK 839 WITH PRESSURE/VACUUM VALVE AND INSULATION

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This wine storage tank shall be used exclusively for wine storage operations only and not for fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. 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] Federally Enforceable Through Title V Permit
6. 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] 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-2321-799-0 : Mar 11 2014 8:15AM -- GARCIAJ : Joint Inspection NOT Required

7. 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 Rule 4694] Federally Enforceable Through Title V Permit
8. 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
9. Total annual VOC emissions from all wine fermentation and wine storage operations at this facility shall not exceed 1,167,178 lb/year, calculated on a twelve (12) month rolling basis. [District Rule 2201] Federally Enforceable Through Title V Permit
10. If the throughput or ethanol content calculated for any rolling 12-month period exceeds the annual throughput or ethanol content limitations of this permit, in a crush season in which the start of the crush season (defined as the day on which the facility's seasonal crushing/fermentation operations commence) occurs less than 365 days after the start of the previous crush season, then no violation of the throughput or ethanol content limits for that rolling 12-month period will be deemed to have occurred so long as the calendar year throughput and ethanol content are below the annual throughput and ethanol content limitations. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Total annual VOC emissions from wine storage operations may be determined using the total annual wine throughput and a single storage emissions factor, calculated using the equation(s) specified within this permit, 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, calculated using the equation(s) specified within this permit, based on the ethanol content of each batch. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The annual VOC wine storage emission factor for each wine ethanol content shall be calculated using the following equation:  $EF = a * P^2 + b * P + c$ ; where EF is the VOC emission factor in pounds of VOC per 1,000 gallons of wine throughput; and P is the volume percent ethanol of the wine being transferred. For concentrations up to and including 24 volume % (when the ethanol content of wine is 20 volume %, P is equivalent to 0.20),  $a = -0.38194$ ,  $b = 0.97917$  and  $c = 0$ . [District Rule 2201] Federally Enforceable Through Title V Permit
13. The operator shall determine and 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] Federally Enforceable Through Title V Permit
14. Daily throughput records, including records of filling and emptying operations, the dates of such operations, a unique identifier for each batch, the volume percent ethanol in the batch, and the volume of wine transferred, shall be maintained. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit
15. The operator shall maintain records of the calculated 12 month rolling wine ethanol content and storage throughput rate (ethanol percentage by volume and gallons per 12 month rolling period, calculated monthly). [District Rule 2201] Federally Enforceable Through Title V Permit
16. Records shall be maintained that demonstrate the date of each year's start of crush season. [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 2201] Federally Enforceable Through Title V Permit
18. All records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 1070, 2201 and 4694] Federally Enforceable Through Title V Permit

DRAFT

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**DRAFT**  
ISSUANCE DATE: DRAFT

**PERMIT NO:** N-2321-800-0

**LEGAL OWNER OR OPERATOR:** CBUS OPS INC (DBA WOODBRIDGE WINERY)

**MAILING ADDRESS:** P O BOX 1260  
WOODBRIDGE, CA 95258-1260

**LOCATION:** 5950 E WOODBRIDGE ROAD  
ACAMPO, CA 95220

**EQUIPMENT DESCRIPTION:**

17,893 GALLON STAINLESS STEEL RED AND WHITE WINE STORAGE TANK 840 WITH PRESSURE/VACUUM VALVE AND INSULATION

**CONDITIONS**

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. This wine storage tank shall be used exclusively for wine storage operations only and not for fermentation. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. 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] Federally Enforceable Through Title V Permit
6. 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] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director, APCO

**DRAFT**

DAVID WARNER, Director of Permit Services  
N-2321-800-0 : Mar 11 2014 8:15AM - GARCIAJ : Joint Inspection NOT Required



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